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The Coupling of Second Language Learning Motivation and Achievement According to Gender

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Abstract—Despite research investigating gender differences in second language motivation, the examination of such differences with a coupling of motivation and achievement evidence is less common. Given that increased motivation is a contributory factor of achievement (e.g., Schmidt et al., 2001) where gender can also be an influencing variable, it is important to examine the influence of gender on motivation and proficiency in second language education. The following article explores the motivation of 87 Grade 6 early French immersion students through the means of a questionnaire, grounded in Gardner’s socio-educational (1985) and MacIntyre’s (1994) willingness to communicate models. Through multiple regression analysis, the questionnaire findings were examined to see, which if any, variables predicted French proficiency as measured through a multi-skills French test. The female participants outperformed the males in French reading, writing and speaking, whereas only one significant difference was found on the questionnaire items (i.e., language awareness). Although the multiple regression analyses showed both increases and decreases in French achievement according to questionnaire items, where there were significant differences being female was associated with increases in French achievement. These findings offer a gateway to further research, as educators strive to offer quality second language education to all.

Index Terms—second language motivation, second language education, French as a second language

I. INTRODUCTION

Recent statistics and trends evidence an overrepresentation of females in Canadian French second language (FSL) classrooms where the study of a second language is optional. In addition, these discrepancies in enrolment continue to grow as students progress in their studies (e.g., Ottawa District School Board, 2007; Toronto District School Board, 2010). Research has found that male disinterest and lack of motivation are influencing factors that lead to males to withdraw from FSL studies in Canada.

Numerous second language publications (e.g., Kissau & Wierzalis, 2008; van der Slik, van Hout & Schepens, 2015) have found that macro- level, societal, and micro-level, classroom related factors influence males differently than females. Males, for example, have revealed lesser integrative and instrumental orientations, intrinsic motivation, self-regulation, a weaker L2 self-concept, and an elevated willingness to communicate (WTC) (e.g., Henry, 2009; D’Haenens & De Fraine & Pinxten & Van Damme, 2013). Qualitative data have also showed that while societal perceptions may attract women towards languages, they can, at times, repel their male counterparts. In particular, the attraction towards a community of speakers, the escape of social inferiority, the view that French is a feminine language, and subsequently, that this domain of study is inherently unmanly and “girly” (Kissau & Wierzalis, 2008).

In response to the dearth of research pertaining to gendered achievement in FSL and its influential factors, this study examines male and females’ motivational variables and achievement amongst Grade 6 French immersion (FI) students in Ontario, Canada.

II. THEORETICAL FRAMEWORK

In this article, motivation, defined as a student’s inclination towards language learning, is recognized as being influenced by a variety of factors. There were two motivation theories used in the conception of this study’s questionnaire, presenting a comprehensive conceptual framework. The first being Gardner’s model (Gardner, 2010; Gardner & Lambert, 1959; 1972) that highlights integrative and instrumental orientations. An integrative motivational orientation considers the degree to which the learner has a desire to integrate into the community of that target language and has positive attitudes towards that target language group (Hashimoto, 2002). An instrumental motivation orientation represents the practical desire to learn a language, such as obtaining a job or receiving a higher salary. In addition, language anxiety was added as a variable as identified as influential by Gardner’s later work.

This study's questionnaire also considered Macintyre's WTC, a heuristic pyramid detailing the precursory variables to L2 communication; linguistic, social, psychological, and communicative. In this study, WTC was measured to quantify students' attitudes to the learning situation, oral, receptive, and writing WTC.

For the purposes of this study, gender will be defined in terms of the biological classification of male or female.

Enrolment and Attrition

Canadian Parents for French, a national organization devoted to the promotion of FSL, reported that all FI programs face attrition (Canadian Parents for French, 2005). Through the years of 1999-2004, FI attrition in Grade 9 was recorded as 11% for female students, while 13.8% for male students. Later in Grade 12, the attrition percentage amongst FI students climbed to 14.6% for males, while it decreased to 9% for females.

School boards have reported a similar trend in Ontario, the context of this present study. The Ottawa Carlton District School Board (2007) revealed 10% more female students enrolled in their early FI programs, a gender disparity ranging from 12 to 18% in middle FI and one of 26% in the late FI program. In southern Ontario, the Toronto District School Board (2010) also revealed a disparity in FSL enrolment according to gender. Through Kindergarten to Grade 6 there were 16% more females, in Grades 7 and 8, 20% more females and in Grades 9-12, 24% more females than males. These board statistics, accompanied by the Canadian Parents for French data, suggest that male participation in FSL programming is lower at the onset of the program and continues to decline. This reality can be attributed to a number of societal and classroom influences as discussed in the following research.

III. LITERATURE REVIEW

A. *Gendered Second Language Learning Motivations in Canada*

Kissau (2006a, 2006b, 2007, 2008) published a sequence of research articles from his doctoral research that explored the reasons for gender disparities in FSL programs in Canada. In particular, Kissau (2006a) used a questionnaire and semi-structured interviews with 490 Grade 9 core FSL¹ students to examine student motivation. Results were analyzed to find the best predictors of the gender of the student. The variable, desire to learn FSL, proved to be the best predictor of one's gender, as females responded more positively than males. Other variables that strongly predicted the gender of the respondent was one's motivational intensity and integrative orientation. Again, females responded much more positively to these two items. The interviews conducted with students and teachers confirmed findings in the questionnaire. In particular, the participants cited societal perceptions such as French being a female domain as influential to their decisions to continue second language studies.

The next research publication by Kissau (2006b) used the same participant pool and method to analyze the motivations of females and males to study of FSL. The results of this study revealed that females were more integratively, instrumentally, and intrinsically oriented than their male counterparts. Moreover, males identified having lower feelings of self-efficacy, more negative perceptions of FSL, and receiving less encouragement to continue studies.

Kissau (2007) explored if encouragement to pursue FSL studies varied in accordance with gender. The study looked at parental, peer, and teacher encouragement. In all three cases, females identified as receiving more parental, peer, and teacher encouragement than their male classmates. In fact, teacher and parental encouragement was functionally related to student's continuation plans of study. In addition, the majority of interviewed teachers revealed that guidance departments discouraged male students from FSL studies.

In a later study, Kissau and Wierzalis (2008) emphasized that for a male to openly like FSL would contradict the dominant model of hegemonic masculinity, especially as they quantified it a "girly" subject for "wusses." As such, Kissau and Wierzalis purported that macro-level factors, societal perceptions, have an immense effect on micro-level settings, the classroom.

Another work in Kissau's (2008) body of research measured motivation through three sub-scales: challenge, mastery, and curiosity. Each of these sub-scales was found to be functionally related to one's continuation plans of FSL study. The sub-scale of curiosity revealed a gender differential with females recording greater curiosity than males. With reference to intrinsic and extrinsic motivation, six of the eight students interviewed noted that males need greater enticement to work (i.e., external rewards of food and competition). In sum, Kissau's work demonstrated that the male students in this study manifested less intrinsic motivation and frequent extrinsically regulated behaviours.

Seeking to further explore male disinterest in language learning, Kissau and Turnbull (2008) examined various influential variables. The researchers purported that male disinterest stemmed from educational practice (i.e., repetition, grammar-translation, an audio-lingual approach, and study topics). With reference to environmental factors, Kissau and Turnbull asserted that the gross underrepresentation (i.e., 10.7%) (Elementary Teachers' Federation of Ontario, 2006), of males in the FSL teaching profession could also be a contributing factor to male students' disinterest. In order to respond to the issue of male disinterest in the FSL classroom, the authors emphasized the need for greater and immediate research in this area.

¹ Core French is the study of French for approximately one forty-minute class per day.

Further to the above research that examined motivational variables linked solely to Gardner's work, other researchers have added the WTC framework to inform their research in second language motivation. Baker and MacIntyre (2000) conducted a study of 71 FI and 124 non-immersion students in Grades 9 through 12 to analyze the linguistic outcomes and influencing WTC variables such as gender differences. They found that non-immersion males scored significantly lower on Gardner's Attitude Motivation Index than the non-immersion females. While, immersion males and females scored similarly. In particular, immersion males indicated a strong instrumental orientation toward the French language, in which their proficiency would help in job acquisition.

In another study, MacIntyre, Baker, Clément and Donovan (2003) further probed into the factors influencing WTC, and how variables gender and age interact with attitudes and motivations. In this study, a questionnaire was given to 268 FI students in Grades 7, 8, and 9. Firstly, in terms of WTC and anxiety levels, the male students scored fairly consistently in all of the three Grades whereas the female students showed an increase in WTC in higher Grades of study, in addition to a reduced level of anxiety over time. Such increases over time may be influential in females continuing to study FSL to a greater extent than males.

B. Gendered Second Language Learning Motivations: International

Second language motivation and the potential influential variable of gender have been examined beyond the context of Canada. In the United States, Kissau, Quach, and Wang (2009) studied the impact of single-sex instruction in a Level 1 Spanish course. Pre- and post- questionnaire findings revealed that overall second language motivation, motivational intensity, desire to learn Spanish, and positive attitudes towards Spanish decreased over the four-month period. Although there were no differences noted between genders, interviews showed that female students perceived themselves as much more integratively and instrumentally oriented than the male students. In addition, female students in the single-sex instruction classroom exhibited a greater interest than the all male class in learning Spanish for communication purposes and career advancement.

In a longitudinal study, Henry (2009) analyzed how gender impacted motivation and second language self-concept development. This Swedish study comprised of a multi-item questionnaire administered to students in Grade 6, and again in Grade 9 pertaining to their English language-learning motivations. The results indicated that over time, females' conception of their ideal L2 selves strengthened, while that of the males diminished. In addition, males reported a lower level of interest in the English whereas female interest increased. Regarding attitudes towards the learning situation, both female and male students experienced a significant drop over the duration of study. Henry hypothesized that while enthusiasm is initially expressed by both genders, as time persists, for many students, language-learning expectations are not met in the traditional classroom setting. Henry (2009) suggests that these unmet expectations apply more so to male students, as after second language studies were no longer mandatory, they were significantly overrepresented in the non-continuation group.

In another European context, Hadermann and Ruyffelaert (2012) examined motivation to learn FSL according to the variables of gender and age by means of a questionnaire administered to secondary students in Flanders, Belgium. The results of the data demonstrated that females and males possessed quite different orientations and attitudes towards the learning of FSL with 98% of female students citing that French was a beautiful language, while only 67% of males shared this view. Additionally, the analysis of male and females' motives to learn FSL showed differentiation. The most frequently cited motive (87%) amongst females was learning to "expand the boundaries of their social settings." Whilst males most often cited "to find a good employment" as their primary motive (78%). The second most cited motive by females was "to find a good employment" (86%), when for males it was "to obtain good grades at school" (71%). Overall, females reported a higher integrative motivation orientation toward FSL learning, whereas males reported a greater instrumental motivation.

In Turkey, Polat (2010) examined motivational variance according to gender, through four self-regulatory forms of motivation: external regulation, introjection, identification and integrated orientation (Deci & Ryan, 1985). The results of the questionnaire indicated that where the Kurdish and Armenian middle and high school male students completed a language task due to obligation or to avoid anxiety or guilt (introjection orientation), it negatively impacted their capacity to produce a native-like accent. Whereas, when males completed a language task in which they had attributed importance (integrated orientation), this had a positive impact on their accent production. The only significant motivational predictor for female students was integrated orientation, and that the more value females ascribed to a language learning task, the better their accent production.

A study (Lai, 2007) conducted in postcolonial Hong Kong investigated attitudes of males and females towards their three official languages. The first stage of the study used a questionnaire to determine the integrative and instrumental orientations towards the learning of each three national languages: Cantonese, English and Putonghua. The findings revealed that females held more positive attitudes in both integrative and instrumental inclinations towards English and Putonghua. In comparison, the males harboured more positive attitudes both integratively and instrumentally towards their vernacular, Cantonese. Although males showed pragmatic attraction towards English, they were more drawn to their mother tongue as it was convenient and easy. The interviews conducted elaborated on the integrative attitudes of the female respondents. They expressed admiration for English speakers, their Western society, and also perceived them as amicable, attractive and competent. According to female and male responses, females were more conscious and

active in preparing for their futures. Respondents remarked that males were disinterested when it wasn't foreseen as necessary or immediately beneficial.

Dörnyei (2006) also revealed differing perceptions according to the language to be learned. This large-scale quantitative study involved 4,756 pupils in 1993 and 3,828 pupils in 1999, all of whom were 13 or 14 years old. Through answering the multi-item questionnaire, participants judged German as a masculine language, Italian and French as feminine, and English as neutral. These results may offer insight into why both males and females recorded similar attitudes towards English language learning in Lai's research. Furthermore, the fact that males responded with greater instrumental inclinations could be rooted in the traditional belief that males are assumed to be the family head and be the chief financial contributor (Kobayashi, 2002). This role is juxtaposed to the conventional ideal that a woman is to be socially and culturally proficient, in terms of one's career but also through child development and cultivation.

To summarize, where there were significant differences between genders in the Canadian research cited above, females were found to be more integratively and intrinsically motivated in the core FSL context where there were no significant differences in the FI context. The French language being a variable in and of itself was confirmed in both Canadian and international research showing society to judge FSL as a more feminine subject. Another theme revealed across studies was the decline in motivation over time for male students. The cited research that linked lower male motivation to educational practice and the differing results in core FSL and FI contexts where different delivery methods are used provides rationale for this study to explore motivation in FI at the Grade 6 level.

C. *Second Language Achievement According to Gender*

In addition to gendered motivation towards second language education, researchers have also examined second language achievement according to gender. However, there is not a sizeable quantity of research pertaining to second language achievement according to gender, especially in the Canadian context.

Looking more broadly and to more dated research then, one study of first-year university students in Hong Kong, sought to evaluate pupil's English language proficiency (Boyle, 1987). In the multi-item test, females demonstrated superiority over men in their general linguistic abilities. The items included: reading vocabulary, listening passage, listening conversation, dictation, stress, meaning through stress/intonation, syntax, and listening vocabulary. The only item of the evaluation in which males performed better was listening vocabulary. One possible explanation for this gender differential is that females develop their output and verbal expression in their L1 at a quicker rate than males. Consequently, males become more and longer dependent on listening discrimination, rendering them more proficient in listening competencies (Brimer, 1969).

A large-scale study by Green and Oxford (1995) looked into language-learning strategy use and its relation to gender and second language proficiency. Situated in Puerto Rico, 374 university students of three proficiency levels (i.e., intermediate, basic, pre-basic) completed an *English as Second Language Achievement Test*. This test measured strategy use through the grammatical, writing, and reading comprehension questions. The results showed that successful language learners used greater language learning strategies. Moreover, females demonstrated more overall strategy use than the male students. Regardless of gender, participants who used higher order cognitive strategies in their language learning, were more proficient and in the more advanced language groupings. Also, despite females using more language learning strategies, females were not overrepresented in the advanced level courses. Finally, it is emphasized the complexity of language learning strategies and that even though they generally correlate with L2 achievement, gaining proficiency can also lead to the abandonment of L2 strategy use.

In 1998, Tae-II Pae conducted a study of 14,000 Korean students in their English language acquisition. The participants ranging from 17-19 years old completed an English Reading Comprehension subtest of the larger Korean National Entrance Examination for post-secondary studies. The results evidenced that females underperformed and experienced difficulty with the items of "logical inference", which required pupils to deduce what was to come after a reading passage. While females were more successful in the test item of "mood/impression/tone". Pae highlighted that this disparity could be reflective of cultural practices in which the education system pushes males to be more independent and females to be more dependent (Pae, 2004).

In addition to gender influencing second language achievement, a variety of factors are recognized as contributing to second language acquisition. These factors include gender differences but also consist of age difference, cognitive differences, personality differences, learning motivations, and learning strategy differences amongst others (Ellis, 1994). Therefore, although gender is examined as one possible predictor of second language achievement, it is important to keep in mind that a variety of individual characteristics influence achievement and acquisition comprehensively.

In the Netherlands, van der Silk, van Hout, and Schepens (2015) explored gender differences in the learning of Dutch as a second language of immigrants aged 18-50 years old using a multi-skills test. Despite the differences in participants (e.g., age, country of origin), the achievement gap according to gender remained. The speaking and writing results revealed female learners to outperform the males by an average of 8 points. Reading proficiency results, however, showed males to score two points higher, on average, over females. Finally, listening proficiency did not differ based on gender. The authors attributed that these differences in speaking and writing achievement could be attributed to the fact that women more often reported using metacognitive and cognitive strategies, as outlined in previous studies (e.g., Green & Oxford, 1995, Oxford & Young, 1997). Such strategy use may be congruent with the higher achievement of

females on the productive test components. However, as the authors reiterated, more research is necessary on the linguistic and cognitive processes in females and males.

The research cited above shows that females and males perform differently on second language proficiency measures. Greater understanding of the influential variables may provide information with which educators can respond to better meet the needs of male students in the context of FSL study in Canada. This study therefore examined both motivation and achievement of Grade 6 FI students, comparing their results and linking the results to FSL achievement.

IV. METHODS

This study used mixed-methods to explore the role of gender on second language motivation and achievement. The research design was a concurrent, non-experimental case study. The study was conducted in an urban publish school setting where FI is an optional program.

A. Instruments

Data were collected for this study using two instruments: a questionnaire and an FSL test. The questionnaire was created for the purpose of this study in order to examine students' motivation to study FSL using Gardner (1959, 1972, 1985, 2010) and MacIntyre et al.'s (1994, 2003) frameworks. The number of items pertaining to each criterion is described in the findings section below. The students completed the questionnaire online under the supervision of their teacher.

The participants also completed a four-skill (listening, speaking, reading and writing) FSL test: *Diplôme d'études en langue française* (DELF)A2 junior test (Centre international d'études pédagogiques, 2012), under the direction of a DELF trained team of researchers and research assistants. The same team marked the tests and established an acceptable inter rater reliability score (ranging from .76 to 1.00) using the Pearson's r correlation (Salkind, 2010).

B. Participants

The participants in this study were 87 Grade 6 early FI students, of whom 58 were female and 29 were male. They came from ten different classes in two different schools within the same region and board of education. The students began their education in English and began FI in Grade 1. Given that only a randomly selected subsample of participants completed the FSL speaking component, the results below were taken from the larger participant pool keeping only those who had completed all four FSL test components.

V. FINDINGS

Prior to exploring gender differences, principal component analyses were conducted on the test components and questionnaire items to determine if the associated variables could be aggregated. These analyses determined that the multiple items pertaining to integrative motivation: climate (3), attitude (3), and motivation to learn FSL (5), instrumental motivation (4), attitude to the learning situation (3), language anxiety (6), willingness to communicate orally (5), receptively (6), and in writing (5), language awareness (4), and strategy use (5), as well as FSL listening (3), speaking (4), reading (3) and writing (2) components could be aggregated into one composite variable per criterion.

A. Gender Differences on Proficiency Measures

Independent-samples *t* tests were conducted to examine gender differences on FSL scores and questionnaire items. These results are presented in Tables 1 and 2 below. Table 1 presents the results for FSL achievement scores by gender where there were statistically significant differences by gender for the following: reading: $t(85) = -2.71, p < .01, d = 0.59$, where females had a significantly higher mean score ($M = 14.49, SD = 4.39$) than males ($M = 11.81, SD = 4.28$); writing: $t(85) = -5.87, p < .001, d = 1.27$, where females had a significantly higher mean score ($M = 17.66, SD = 3.37$) than males ($M = 12.71, SD = 4.33$) and speaking: $t(37.58) = -2.53, p < .05, d = 0.83$, where females had a significantly higher mean score ($M = 20.64, SD = 2.78$) than males ($M = 18.19, SD = 4.82$).

TABLE 1
INDEPENDENT-SAMPLES T TESTS FOR FSL ACHIEVEMENT SCORES BY GENDER

<u>Achievement Test</u>	<u>Gender</u>	<u>N</u>	<u>M</u>	<u>SD</u>	<u>t</u>	<u>df</u>	<u>Cohen's d</u>
Listening	Male	29	14.03	4.80	-1.70	85	0.37
	Female	58	15.56	3.45			
Reading	Male	29	11.81	4.28	-2.71**	85	0.59
	Female	58	14.49	4.39			
Writing	Male	29	12.71	4.33	-5.87***	85	1.27
	Female	58	17.66	3.37			
Speaking	Male	29	18.19	4.82	-2.53*	37.58	0.83
	Female	58	20.64	2.78			
	Female	58	68.35	10.41			

Note: Cohen's *d*: 0.2= small; 0.5=medium; 0.8=large

The results are presented in Table 2 for questionnaire items by gender where there were statistically significant differences by gender on the language awareness variable: $t(45.20) = 2.19$, $p < .05$, $d = 0.65$, where females had a significantly lower mean score ($M = 7.41$, $SD = 3.96$) than males ($M = 9.79$, $SD = 5.14$).

TABLE 2
INDEPENDENT-SAMPLES T TESTS FOR QUESTIONNAIRE ITEMS BY GENDER

<u>Achievement Test</u>	<u>Gender</u>	<u>N</u>	<u>M</u>	<u>SD</u>	<u>t</u>	<u>df</u>	<u>Cohen's d</u>
Integrative (climate)	Male	29	9.21	1.93	-.48	85	0.10
	Female	58	9.38	1.39			
Integrative (attitude)	Male	29	3.62	1.12	1.56	85	0.34
	Female	58	3.31	0.73			
Instrumental	Male	29	10.69	1.42	1.22	85	0.26
	Female	58	10.33	1.25			
Motivation_to_learn FSL	Male	29	16.52	1.86	.12	85	0.03
	Female	58	16.47	2.01			
Attitude to the learning situation	Male	29	8.10	2.08	-.76	85	0.16
	Female	58	8.45	1.98			
Language anxiety	Male	29	18.86	3.47	1.07	85	0.23
	Female	58	18.00	3.56			
WTC oral	Male	29	15.72	3.59	.42	85	0.09
	Female	58	15.45	2.49			
WTC_receptive	Male	29	18.41	4.48	.84	85	0.18
	Female	58	17.79	2.47			
WTC_writing	Male	28	14.54	4.33	-.39	85	0.08
	Female	58	14.83	2.56			
Language awareness	Male	29	9.79	5.14	2.19*	45.20	0.65
	Female	58	7.41	3.96			
Strategy_use	Male	29	14.21	4.89	1.12	85	0.24
	Female	58	13.16	3.68			

Note: Cohen's *d*: 0.2= small; 0.5=medium; 0.8=large

To assess the contribution of gender and survey items to the prediction of FSL proficiency measures, multiple linear regression analyses were conducted with the results presented in Tables 3 and 4. As shown in Table 3, all models were significant and the amount of variance explained varied, ranging from $R^2=.32$ to $R^2=.49$. Specifically, the predictors in this model accounted for 49% of the variance in FSL listening $F(9,76) = 7.43, p < 0.001$, 41% of the variance in FSL reading $F(5, 81) = 9.11, p < 0.001$, 47% of the variance in FSL writing $F(5, 81) = 16.14, p < 0.001$, and 25% of the variance in FSL speaking $F(4, 79) = 9.84, p < 0.001$.

TABLE 3
MODEL SIGNIFICANCE TESTS

<u>Dependent variable</u>	<u>R²</u>	<u>Adjusted R²</u>	<u>F</u>	<u>degrees of freedom</u>
FSL listening***	.47	.41	7.43	9,76
FSL reading***	.36	.32	9.11	5,81
FSL writing***	.50	.47	16.14	5,81
FSL speaking***	.28	.25	7.80	4,79

* $p < .05$; ** $p < .01$; *** $p < .001$

The regression coefficients are shown in Table 4 for each dependent variable and indicate the relative value of each statistically significant predictor. Specifically for every one unit increase in Integrative (attitude) FSL listening decreases by 1.68 points. For every one unit increase in language awareness, FSL reading decreases by 0.23 points. For every one unit increase in attitude to the learning situation, FSL listening increases by 0.69 points. For every one unit increase in WTC: writing, FSL listening increases by 0.69 points. In contrast, for every one unit increase in integrative (climate), FSL listening decreases by 0.59 points. For every one unit increase in WTC: receptive, FSL listening decreases by 0.63 points and FSL speaking increases by 0.34 points.

Being female compared to male results in a 3.39 point increase in FSL writing, and 2.43 point increase in FSL speaking. Being female compared to male did not result in a significant increase in FSL listening or reading.

TABLE 4
REGRESSION COEFFICIENTS FOR QUESTIONNAIRE ITEMS AND GENDER ON EACH MEASURE OF FSL ACHIEVEMENT

	<u>FSL Listening</u>	<u>FSL Reading</u>	<u>FSL Writing</u>	<u>FSL Speaking</u>
Intercept	17.96***	12.78***	3.86	12.98***
Integrative Attitude	-1.68**			
Language awareness		-0.23*		
Attitude to the learning situation	0.69**			
Integrative (climate)	-0.59**			
WTC_writing	0.69**			
WTC_receptive	-0.63**			0.34**
Female	-0.90	1.19	3.39***	2.43**
N	86	87	87	84
Adjusted R ²	.41	.32	.47	.25

* $p < .05$; ** $p < .01$; *** $p < .001$

In summary, although the female participants outperformed the males in FSL reading, writing and speaking, only one significant difference was found on the questionnaire items (i.e., language awareness). Although the multiple regression analyses showed both increases and decreases in FSL achievement according to questionnaire items, where there were significant differences being female was associated with increases in FSL achievement.

VI. DISCUSSION

Although the majority of previously published research as cited above showed females to be more motivated to learn second languages in general and FSL more specifically, this study did not reveal differences in motivational variables according to gender. These motivational findings are congruent with other research conducted in the FI context in Canada. It is therefore perhaps the teaching methods used in FI and the delivery of content through subject areas that

afford males similar motivation to females not demonstrated in other contexts (i.e., core French). Alternatively, considering the younger participants in this study as compared to Kissau's work, perhaps this lack of motivational difference can be attributed to the age of the participants in that they may not yet be conscious of societal perceptions and any domain as being feminine or masculine in nature.

The only questionnaire item that revealed a difference was language awareness with females showing less language awareness. Given that language awareness was greater for males but associated with a decrease in FSL reading has also been revealed elsewhere in FI research in Canada (Mady, 2017) where language awareness is associated with a decrease in achievement. On one hand, making use of language awareness may be task dependent (Bialystok, 1988, 2001, 2008), thereby suggesting that the test in this study did not require the use of such skills. On the other hand, given that the female participants outperformed the male participants in FSL reading underscores the importance of further examination of the language awareness variable in the FI context in particular where use of other language knowledge may be discouraged (Dailey-O'Cain & Turnbull, 2009).

In addition, as the participants in this study are in elementary studies, and many of the cited research studies provided details for older students, this may, in part, account for this study's different results in motivation as compared to some other studies. The potential influential variable of declining motivation over time is congruent with enrolment in FSL programs that declines with overtime and is associated with the augmenting level of complexity, boredom, traditional classroom setting learning, and instructors. In addition, the societal perceptions, female overrepresentation in the staff and student bodies, and peer influence may become more influential with age. As noted in Kissau's doctoral work, continuation plans were functionally correlated to encouragement. Such findings highlight the importance for educational stakeholders to consider means by which to maintain male student interest, in particular as age increases.

Congruent with other research findings, this study found that females attained higher scores than their male counterparts in general and more specifically, in the domains of reading, writing and speaking. The only linguistic criterion in which males and females obtained similar results was listening. Such results are consistent with past research that found females to outperform on productive language skills (e.g. Boyle, 1987, Schepens, van der Slik & van Hout, 2015) in particular. Past research suggests that such enhanced female performance on speaking components may be due to a more advanced rate in terms of verbal, pronunciation, hearing and auditory competencies, which corresponds to the superior oral performance of female students. Whereas, receptive communications of reading and listening seem to vary considerably according to the study. Where this study's findings revealed males to outperform in reading, van der Slik, van Hout, and Schepens also evidenced males scoring slightly higher. Although these inconsistencies could be attributed to differing tests, linguistic pedagogy, educational programming, regional contexts, and/or learning settings, amongst other variables, highlighting such trends may provide encouragement for second language educators to try a variety of means to support their male students in areas of language production in particular.

This study, in congruence with other research, provides additional findings that show females to outperform males in second language learning with multiple regression analysis showing the female gender to be a positive predictor of productive language skills in particular. However, the results did not show females to be more motivated. In fact, where motivational factors influenced achievement they had both advantageous and disadvantageous impacts. Although these findings highlight the complexity of second language motivation and its relationship with achievement, they also provide information for educators to consider and areas on which to focus with the view to improve male achievement in FSL in Canada which then may lead to greater retention. These data indicated areas that can be better addressed on the micro-level setting of the classroom through enhanced pedagogy. For example, a greater focus on productive skills and strategies to support instruction may prove beneficial. With regards to language awareness, these findings reinforce the importance of explicitly teaching strategies that incite higher order thinking capacities such as metacognition, critical thinking and creativity. In fact, Moore (2006) and Castelotti and Moore (2005) underscore the need for second language educators to teach metacognition in order for students to reap the rewards of its use.

This study also provides impetus for additional research to examine the impact of motivation on FSL achievement. The achievement test results indicate that females outperformed their male counterparts in three of the four skills: speaking, writing and reading. While these data align for the most part with existing knowledge on the topic, it bodes the question as to why these discrepancies exist so as to be able to address them. This work therefore serves as a gateway to additional study and the search for a more profound understanding of the topic.

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The Effect of Junior High School Teachers' Motivation and Willingness to Change on the Diversity of Their Teaching Methods

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Abstract—This study attempts to examine the influence of motivation and willingness of teachers to change on the diversity of teaching methods. The research question is: What is the influence of junior school teachers' motivations and willingness to change on the diversity of their teaching instructions? The participants of the study are 50 English teachers of Junior High Schools in Northern Israel. The research instruments were three questionnaires. The research's findings revealed a significant influence of English teachers of Junior High Schools willingness to change on the diversity of teaching methods; the higher the willingness to change, the diversity in teaching modes increases. Another significant effect was also found between the level of teaching motivation and diversity of teaching methods; teachers with high motivation level reported diversification in teaching methods. A final significant effect of level of general motivation and willingness for change was also found; the willingness for change among teachers of high motivation increased. The main research conclusion is that willingness to change, which is connected to motivation, influences the diversity of teaching methods. Therefore, in order to assimilate changes in teachers' working modes, like diversifying their teaching methods or in any other way, there is a need to encourage and nurture their motivation.

Index Terms—the new English program, willingness to change, motivation, diversification of teaching mode

I. INTRODUCTION

In recent years the need to change the educational system to fit and be relevant to the students and society of the 21st century had become a central issue for educators and policy makers alike (Zhang, 2007 & Zhang, 2010 & Salant & Paz, 2011). The Israeli educational system is in a process of adjustment to the 21st century, by introduction of various digital technologies aimed to develop skills, research and critical thinking, strengthen digital literacy and make the school more relevant to the students (Peled & Blau, 2011).

These processes require teachers to undergo a conceptual transformation from frontal “standard classical” teacher, into online teacher, using online teaching–learning technologies (Rotem & Peled, 2008). Teachers are required to adopt a pedagogical perception of self-directed students studying independently and helped by the teacher's guidance (Prinski, 2008).

Unlike Prinski, the ministry of education emphasizes that the methodology used should be flexible to enable teachers and pupils to learn in different modes according to personal tendencies, mental capability and competence. Thus, the ministry outlines a policy of advancement and development of teaching learning processes to pursue meaningful teaching and learning. This policy requires methodological change.

The new English program emphasizes a number of principles in the linguist aspect of the subject, choice of materials and achievement evaluation (Ministry of education, 2014). There is a dire need to change teaching modes in teaching English as foreign language. A study conducted by the institute for nurturing education revealed a need to a greater and more profound training, theoretical and practical of English teachers, and raised the concern that teachers who are not native speakers of English, lack satisfactory linguistic skills in the language. The study also revealed that this difficulty is more present among teachers of English teaching in the periphery and in the Arabic sector. Thus, to realize the aims and objective mentioned above, there is a need to change teachers' perception of their teaching modes and the methods they use and adapt their teaching modes to the new teaching environment (Peled & Magen-Nagar, 2012).

This study will examine the influence of willingness and motivation to change on the diversifying of teaching instructions of English teachers in Junior High Schools of the Israeli Arabic educational system. The findings of this study might shed light on problematic aspects of the subject and help to consolidate alternative teaching methods in teaching English according to the new program.

II. REVIEW OF RELATED LITERATURE

Educational change

In the professional literature, a change is described by terms such as: innovativeness, reform, effectiveness, improvement, development, initiative and others all referring to initiated change aimed to improve, advance and make the system more efficient. According to Hall & Hord, (1987), the term “innovation” describes in characteristics linked to features like the innovative attributes in reality, the relevant advantages of the innovation, the measure of the innovation adaptness to the relevant field and ratio of its complexity. Moreover it is linked to its implementation in practice, the experimental effect of the innovation, the aims of the innovation and its products activities and behaviors performed during the introduction and application of the innovation.

Sarason (1995) defined educational change as substituting established behavioral patterns used by workers in an educational institute by different new behavioral patterns. Others, like Lashley & Smith (1993), defined educational change as reconstruction or reform. They state that reconstruction of a school is a change characterized by local initiative of factors involved in improving a long term program for the school, while reform is characterizing external projects.

These definitions indicate that there are a number of approaches for description of an educational change; there are those who treat it as a process implementation and others, who define it as the product of other processes, while the common feature is an initiative aimed to advance the system.

Change is also described as an introduction of new elements to the system, something new and different, at least from the view point of those implementing it; a new and significant effort to supplement or create a system, an attempt aimed to improve performance to suit the desired objectives like adopting a new idea or new behavior in processes and programs performed by the system (Sharan & Sharan, 1991).

In the professional literature dealing with introduction of changes to educational learning system change is perceived as a long complex process in which those involved have to overcome several obstacles both in various levels. Some of the difficulties accompanying change processes can be constant components, whether the change is desired or forced and whether it is the result of a need identified by external factor or an expression of the school’s internal need (Kozma, 2003).

Teachers’ willingness and readiness for a change

Willingness to change reflects the positions and intentions of the teachers regarding the change proposed: how much it is needed and to what extent they are able to perform it. High willingness supports and contributes to the change and reduces resistance to its implementation while low willingness makes it difficult to adopt and implement the proposed change (Bernshtock & Cohen, 2014).

Rogers (2003) defines adoption of change as a decision of the individual to use innovation as the best and most available way of action. He describes it as a process beginning with a primary discussion and ending with final adoption of innovation. He also says that there are technological factors/characteristics involved in the process that might affect the decision to adopt the proposed innovation such as: users’ characteristics, content, technological and organizational considerations.

Kipala et al (2007), claim that the levels of the teachers, the school and the system also affect the decision regarding the adoption of innovation, along with factors like level of education, age group, gender educational experience and experience with digital media that might also affect adoption of innovation, especially when it comes to technology; the teachers' positions toward technology affect adoption and integration of computers in their teaching. On the other hand, anxiety, lack of confidence and ability, and fear of change can also affect teachers’ decision (Bernshtock & Cohen, 2014).

The following sub-section will discuss teaching modes and teachers’ perceptions regarding changes in teaching modes.

Strategies and teaching models

Nisim, Barak & Ben-Tsvi (2012) claim that teaching strategies definition are the modes used by teachers to reach the lesson’s aims and objectives. They add that since the sixties of the previous century, scholars in education encourage the use of teaching strategies promoting the learner’s active intelligent processing of new information, aided by high level thinking and diverse social capabilities.

The role of the teacher is teaching, thus, he/she should be ready to assimilate new initiatives while integrating various elements with knowledge concerning advantages and shortcomings of the teaching process (Jaspers, Meijer, Prins & Wubbels, 2014). The teacher is responsible to provide teaching of diverse means and modes, to create effective learning environment leading to the development of thinking skills (Gavish, 2002).

Teachers should also challenge their pupils by presenting new theories and different world views; they have to conduct discussions on actual ideas. During the teaching process, the teacher experiences building and developing new teaching modes by various means of imparting knowledge and information to his/her pupils, preferably in the most interesting way possible (Hobson, Ashby, Malderez & Tomlinson, 2009).

The teacher is also responsible for the development and welfare of his/her pupils; he/she can realize this aspect of responsibility by implementing alternative teaching methods and using diverse teaching modes (Robert & Bulloug, 2012).

Teaching strategies are based on 4 basic elements: talking, listening, reading and reflection on the contents learned. To obtain complex high level thinking among the pupils, to reach the right form of understanding of the material learned, they are also required to activate diverse abilities, talents and skills and to use common sense and consideration. Teaching strategies can be implemented by using diverse teaching methods and relying on theories and teaching models (Lazarowits & Hertz –Lazarowits, 2007).

The following sub-section will show the connection between teaching style and academic achievements.

The importance of teaching methods diversity

The department of educational programs development and designing in the Ministry of Education published a manifest (2012) saying that: “Diverse methods and teaching modes combining development of skill will be activated in all learning contents for all age layers. The methods and modes that will be applied in various learning subjects will be chosen according to considerations such as: the essence and nature of the subject learned, the target population, the environmental resources and according to the additional value of the modes or the tools chosen to be used as means to reach the teaching objectives. The modes of teaching and learning will include activating pupils by means of lectures, discussions, discourse, teamwork or other assignments. All these will be performed according to conditions and the required of the learning material in individual activity, working in pairs or small groups or within a class framework of a heterogeneous group.”

Contemporary educational perception encourages diversity in teaching and evaluation methods. The policy of the Ministry of Education manifested in the program of the reform “reorganization of learning” reflects this perception; the leading assumption is that such a diversity will encourage pupils and draw them closer to various teaching subjects, help development and establishment of pupil’s skills, encourage research and help the pupil to express him/herself and realize his true potential.

Frontal teaching method can no longer be the only way to teach, significant learning the learning experience, absorption and internalizing of the learned material requires diversity of teaching methods (the Ministry of Education, 2015). Diversification of teaching methods will enable the teacher to reach several pupils since this diversity fits better the learners’ learning styles (there).

According to Adar (inside Mahlev, 2003), the choice of teaching methods relates directly to pupils’ motivation; therefore, the choice will affect the pupil’s performance only if it suits his/her motivation format. For example, the study of Kampa & Martin-Dias (inside: Mahlev, 2003) found that frontal teaching suits the conscious pupil, while curious pupils are motivated by discovery learning and motivation of socially oriented pupils increases when they learn in groups.

Educational perceptions among teachers

Ertmer (2005) suggests that decision regarding the use of particular teaching method derives from the educational perceptions of the teachers which function as sort of a sifter used to make decisions regarding issues of program planning, teaching modes or performance activities in the learning environment. Therefore, teachers’ perceptions can advance or delay a change. Studies indicate that teachers tend to adopt new teaching modes if they happen to be in line with their personal and epistemological perceptions.

A change of teachers’ paradigm is a complex subject; paradigms include a system of positions, perceptions, beliefs, values and experiences that define the thinking format of the individual and affect his/her perception of the reality and his/her responses to the perceived reality.

Therefore, changes in the paradigm especially changes in educational views and perceptions should be planned and graded in all the transitory stages.

Work and teaching motivation

Vidislavski & Shemesh (2009), described motivation as a significant factor essential to success in the work place. In light of the awareness to the impact of motivation on the quality and job satisfaction of the workers, several organizations including educational institutions perceive high motivation of employees an inseparable part of the organizational strategy; meaning, that elevation of work motivation is in the interest of the school management and the teachers.

Most theories view motivation as unified phenomenon moving on axel where at one end there is very little of it and on the other end a lot of it. However, motivation is also affected by personal natural and professional differences among people. Robins (2000) defines work motivation as the willingness to invest significant effort at work to achieve organizational goals. The willingness to invest effort depends of the individual’s ability to satisfy a particular personal need. This willingness does not relate to a specific condition or the relations between the worker and the organization or the possible profitability of the investment; it relates to the mental variables of the worker, his self-image, self-confidence and his personal values.

Asor (2001) observed that the willingness to invest exists even when there are difficulties or lack of organizational success. He mentions different types of motivations: external, internal, conformity, placation, and conscious integrative and emotional.

Regardless of the difference between the theories described it is possible to distinguish between two major motivation types: external motivation and internal motivation. The self-directing theory of Deci & Ryan (1985) distinguishes between motivation types on the basis of causal factors such as the objectives or reasons for various

actions. In the basis of this theory lies the distinction between internal motivation relating to performing a pleasurable and/or satisfactory action and external motivation relating to performing an action leading to some kind of result.

Teaching motivation

Ololube (2006) suggests that teacher's motivation, which is an individual internal process, is a central factor of class efficiency and improvement of academic achievements in the school. He says that the existence of motivation or the lack of it could be deduced according to results and features of the individual's overt behavior.

A study of teachers' work in Nigeria, conducted by Helsinki University for UNESCO revealed that teachers' motivation affects the teacher's behavior; teachers with high motivation are able to create a better physical, social and psychological climate in the class. They can integrate professional knowledge, content knowledge in given academic discipline, and didactical knowledge, personal and inter-personal knowledge.

The conclusions of the study suggest that motivation is a central factor in teacher's work; it is an important factor in class efficiency, improvement of academic achievements and their willingness to participate and contribute to the advancement of the educational process (Vidislavsky & Shemesh, 2009).

Peled & Magen-Nagar (2012) quote several studies (Freitas & Selwyn, 2010; Halverson & Smith, 2010; Cunningham, 2009; Oliver, 2005; Fullan & Smith, 1999), which revealed that there is a serious difficulty in assimilation of change in teachers teaching modes and in the implementation of these changes. Among the reasons for this difficulty are the teachers' positions, perceptions, abilities and their attitudes towards digital environments and towards their teaching role in such environments. In other words, the scholars mentioned above suggest that when we intend to introduce change into an educational system we should take into consideration all these variables.

Forkush-Baruch, Mudoser & Nahmias (2012) refer to variables supporting or delaying pedagogic innovativeness and mention two central aspects: The first is an organizational aspect, the teleprocessing vision and its objectives – this component contains positions and beliefs concerning innovative pedagogy. The second component is definition and mapping of the innovative activities connections and identification of the innovation's aims.

To sum it all up, in the light of the above mentioned it would be advisable to examine the connection between diversification of teaching modes in the subject of English as second foreign language in Junior high schools, the teachers' motivation and their willingness to diversify their teaching modes. The study whose aims and questions will follow was designed to examine these connections.

III. METHODOLOGY

The Research Goal:

This study aims to examine the influence of English teachers' motivation and willingness to change on their teaching modes.

The Research Hypotheses

What is the effect of English teaching motivation level and willingness to change among teachers of Junior High Schools on the diversification measure of teaching modes used by English teachers?

The Research Hypotheses are:

1. There is a significant effect of willingness to change among junior high schools English teachers on the diversity measure of their teaching modes.
2. There is a significant effect of the general motivation level of Junior High School English teachers on the diversity measure of their teaching modes.
3. There is a significant effect of the general motivation among Junior High School English teachers on their willingness to change.

Participants

The research population is teachers in junior High Schools of the Arabic sector in Northern Israel. The research sample was comprised of 50 teachers who teach English as foreign language in Junior High School located in five Arabic towns in Northern Israel. The participants were randomly chosen.

Research Tools

The tools used in this study were three self-reporting questionnaires filled and submitted by the research participants.

1. A questionnaire examining teachers' willingness to change: a questionnaire for self-reporting designed and developed by Blau & Antonovsky (2009). This study used only the second part of this questionnaire – teachers' willingness to change.
2. A questionnaire examining teaching motivation – this study used a questionnaire modified from the motivation questionnaire developed by Ryan & Connell (1989).
3. A questionnaire examining the teachers' positions regarding diversification of teaching modes- for this purpose this study used the second part of the Teachers position questionnaire regarding diversification of teaching modes developed by Friedman (2009) to measure the frequency they use teaching strategies of high order thinking. In addition all participants filled up a questionnaire of personal details aimed to collect useful demographic data.

IV. RESEARCH FINDINGS

First hypothesis: there is a significant effect of willingness to change among English teachers of junior high schools on diversity measure of teaching modes.

Table 1 below describes the average of number of statements that examined the attitudes of teachers towards a variety of teaching instruction and it points to several important aspects:

Teachers who participated in this study believe that thinking skills are more important than providing information. In addition, most of the teachers noted that there is a need for coordination between a professional and teaching method, meaning that they believe in lateral teaching, and about 75% of all teachers are interested in making their teaching relevant to the world of the students and agree that the teacher must devote a great deal of time from the lesson to creating a connection between the students' world and the knowledge they have learned. In addition, most teachers are interested in cultivating curiosity among students, even on subjects that are not in the curriculum. 75% of the teachers believe that their role is to correct the students' worldview and shape it according to the requirements

However, about half of the teachers stated that imparting learning skills often impairs the submission of the goals of the lesson and the provision of the material studied. About 70% of the teachers noted that if teachers from close fields of study teach the same subject from different perspectives, this could create confusion among the students. The same percentage claimed that the teachers are the source of knowledge and that it's their role to transfer this knowledge to students. About 82% of all teachers noted that students' questions might be detrimental to lessons. An identical percentage requires teachers to focus on providing information.

A significant effect of willingness to change among teachers on the teaching modes diversity; the higher the willingness ratio, the diversity level of teaching modes rises as shown in Table one.

TABLE 1
ATTITUDES TOWARDS THE VARIOUS TEACHING ASPECTS

N'	Statement	1	2	3	4	AV
1	I encourage students to ask questions even if it does not allow me to finish all the material I planned to teach.	2	8	19	21	3.18
2	The teacher must engage the students in expressing doubts about the content being studied, even if it is clear to him that doubts are not established	4	12	19	13	2.74
3	Engaging imparting learning skills to students during the lesson harms the teacher's ability to achieve the goals of the lesson.	10	25	15	0	2.1
4	The teacher must coordinate the teaching of the material with teachers who teach close fields of knowledge.	1	9	19	21	3.2
5	The teacher must devote a large part of the lesson to encouraging students' curiosity about subjects that are not necessarily in the curriculum.	0	7	22	21	3.28
6	Dedicating time to develop students' thinking skills delays the learning process learning material.	16	21	13	0	1.94
7	The teacher must devote a great deal of time from the lesson to creating a connection between the student's world and the knowledge he has learned.	5	9	18	18	2.98
8	If teachers from close fields of study teach the same subject from different aspects, this may create confusion among the students.	4	34	9	3	2.22
9	The teacher is a "jar full of knowledge" whose role is to "pour the knowledge" into the student's "container."	2	34	9	5	2.34
10	The student's questions may impair the normal course of the lesson.	21	20	9	0	1.76
11	The teacher must devote a large part of the lesson to trying to correct erroneous perceptions of the students.	4	10	18	18	3
12	The teacher must focus on teaching the material only in order to be able to teach the whole material.	12	23	13	2	2.1
13	The ultimate goal of instruction is to transfer the teacher's knowledge to the student.	7	24	13	6	2.36
14	The teacher must ensure that students are able to apply the knowledge learned in other contexts as well.	2	2	25	21	3.31
15	The teacher must devote a large part of the lesson to imparting learning skills to students.	2	2	25	21	3.31
16	The student is a "blank sheet" and the role of the teacher is to design the student according to the requirements of the education system.	6	8	18	18	2.95
17	Each teacher must focus on teaching his or her field of knowledge without interfering with the teaching content of other teachers.	2	33	10	3	2.21
	General mean					2.64

Figure 1 below displays the rating of the participants regarding attitudes towards the various teaching aspects presented in the above table.

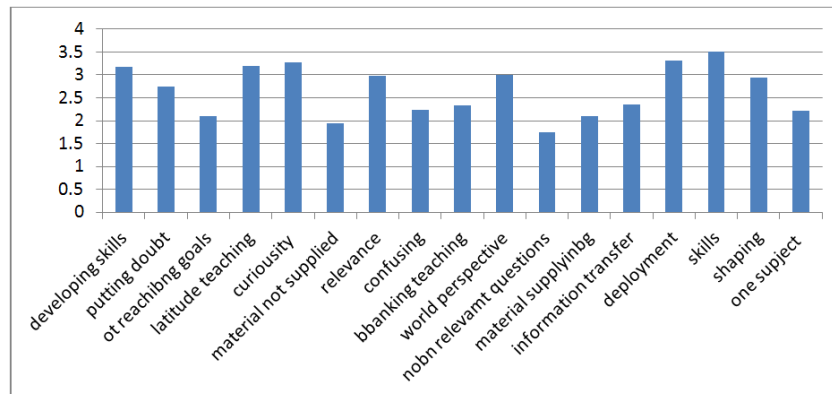


Figure 1: The Attitudes towards Various Teaching Aspects of English Instruction.

Preferred Teaching Strategy

Table 2 below describes the preferred teaching strategy of the teachers who participated in this research. As can be seen in the table, about 78% of all teachers mentioned that they encourage asking questions even if it is detrimental to supplying the material, even if the questions are not directly related to the topic being studied. Teachers combine various activities, use humor and write assignments. Moreover, they compare knowledge to other fields, talk to other teachers about the material being studied. More than 80% of all teachers ask many questions to ensure that students understand the material, use various reference materials, and about 90% of the participants in this study indicated that they teach students how they can improve thinking skills and give them feedback, -60% believe that the frontal teaching is the teaching method used by the classes. In addition, more than 50% of teachers indicated that they focus on teaching without interfering with the teaching contents of other teachers, less than 50% of all teachers draw students' attention to the thinking skills they use, and most teachers prevent students from asking questions that may delay progress in transferring the study material.

TABLE 2:
THE FAVORITE TEACHING STRATEGY

Number	Statement	1	2	3	4	AV
1	I encourage students to ask questions even if it does not allow me to finish all the material I planned to teach.	3	8	19	20	3.12
2	During the lesson, I combine many sessions (such as role-playing games and brainstorming sessions).	3	8	19	20	3.12
3	I use humor a few times during class.	5	9	18	18	2.94
4	In the lesson, I compare my professional knowledge to the subject being studied, and that of close fields of knowledge.	4	8	19	19	3.06
5	I ask the students many questions that examine their understanding of the material being studied.	1	4	20	25	3.38
6	Frontal teaching is the method of instruction used by me during classes.	8	21	15	6	2.38
7	I talk to teachers who teach close subjects to my teaching profession about how they teach certain subjects.	4	8	19	19	3.06
8	I teach students how to use the means of understanding the material that is being studied (eg. using comparison tables and flow charts).	0	7	22	21	3.28
9	During the lesson I teach students how they can improve their thinking skills.	0	0	27	23	3.46
10	I give students feedback, both in writing and orally, regarding their answers to my questions.	0	2	25	23	3.42
11	I allow students to ask questions that are not focused on the material being studied.	5	9	18	18	2.94
12	I focus on teaching my teaching profession without interfering with the teaching content of other teachers.	2	33	11	2	2.18
13	I give the students writing and reading assignments at every lesson.	7	10	18	15	2.82
14	During the lesson, I draw students' attention to the thinking skills they use during class.	20	21	9	0	1.78
15	I tend to prevent students from asking questions that may impede progress in the delivery of the material.	2	2	25	21	3.3
16	I ask the students questions that examine their ability to apply the material learned in other contexts as well.	12	24	13	1	2.06
	General mean					2.89

The rating of the teachers' favorite teaching style presented in table 2 above is also presented in the following figure

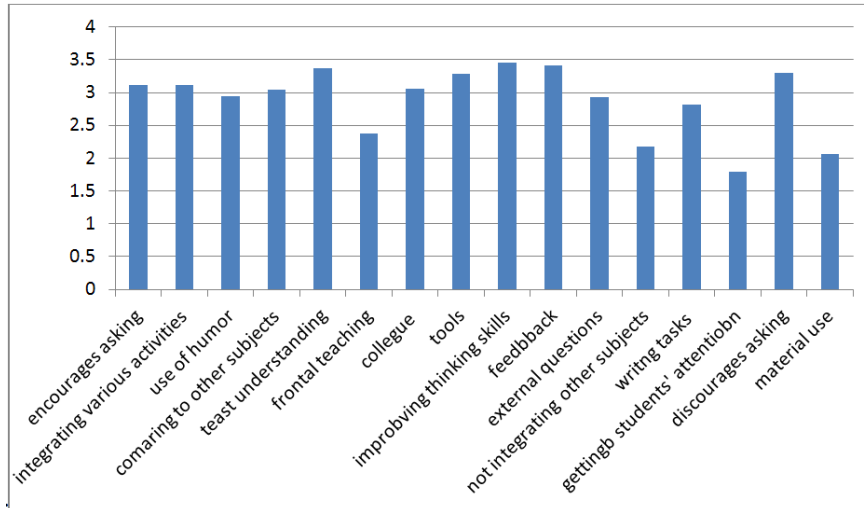


Figure 2: Favorite Teaching Strategy

Teachers' willingness to change

Table 3 below describes the average number of statements that examined Teachers' willingness to change. The average of teachers' willingness to change is relatively high. Teachers are willing to move to teaching according to a new curriculum, or teach a different subject, but it is more difficult for them to move to another locality or to change their personal lives.

TABLE 3:
TEACHERS' WILLINGNESS TO CHANGE

number	Statement	1	2	3	4	AV
1	Moving to teaching according to a new curriculum in the profession you teach	35	15	0	0	1.3
2	moving to teaching a different profession than in previous years	3	7	20	20	3.16
3	teaching students in a different age group than you taught in previous years	1	0	20	29	3.54
4	Change in personal life, for example, separation from a daughter / son	1	2	18	29	3.54
5	Moving to a new town	0	0	21	29	3.58
6	dismissal	0	0	6	44	3.88
	mean					3.16

The figure below demonstrates the average of the answers given in the above table concerning teachers' willingness to change questionnaire

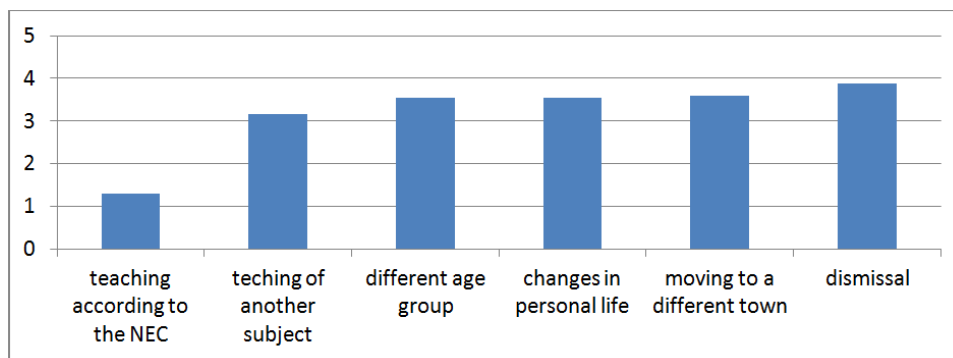


Figure 3: Teachers' Willingness to Change

In light of the above data, the research findings can be summarized in the table 4 below as follows:

TABLE 4:
PIERSON CORRELATION FOR CHECKING CONNECTIONS BETWEEN RESEARCH VARIABLES

The higher the willingness rate, the higher the teaching modes diversity measure	Significance	Correlation
	0.000	*0.885

*P<0.05, ** P<0.01, ***0.001, n= 50

The data analysis shows that there is a significant effect of willingness to change among teachers on the diversity measure of teaching modes: $P < 0.05$, $r_p = 0.885$. Therefore, according to the positive correlation we can deduce that the higher the willingness to change among teachers, the diversity level of teaching modes rises.

The findings indicate that the level of the willingness to change among the teachers can significantly affect the diversity measure of teaching modes.

Second hypothesis: There is a significant effect of the general motivation level of teachers on the diversity measure of teaching modes.

The researcher also assumed that the higher the teacher's motivation, the more he/she will diversify his/her teaching modes.

TABLE NO. 5:
PIERSON CORRELATION FOR CHECKING CONNECTIONS BETWEEN RESEARCH VARIABLES

	Significance	Correlation
Teachers' motivation level *Teaching modes diversity measure	0.000	**0.723

* $P < 0.05$, ** $P < 0.01$, ***0.001, $n = 50$

The findings indicate that the second hypothesis is significant. It had confirmed that there is a significant effect of teachers' motivation level on the measure of teaching modes diversity: $P < 0.05$, $r_p = 0.723$, which strengthens the assumption that the higher the teacher's motivation level, the measure of teaching modes diversity will rise.

Third hypothesis: There is influence of the teachers' general motivation level on their willingness to change. The higher the teachers' motivation level – the higher will be their willingness to change.

TABLE 6:
PIERSON CORRELATION FOR CHECKING CONNECTIONS BETWEEN RESEARCH VARIABLES

	Significance	Correlation
The general teachers motivation level * their willingness to change	0.000	**0.885

* $P < 0.05$, ** $P < 0.01$, ***0.001, $n = 50$

Table 6 shows that there is a significant effect $P < 0.05$, $r_p = 0.885$, of the general motivation level among teachers on their willingness to change, indicating that the higher their motivation level, the higher rises their willingness to change.

V. DISCUSSION

The discussion focuses on the research findings regarding the three main factors examined: willingness to change, teaching motivation and diversity of the teacher's teaching modes.

There are a number of approaches regarding teachers' willingness to change, and the diversity measure of teaching modes. Fullan, (1991) explains educational change as an alternative action performed in specific time frame; adaptation of something different or an idea of doing something differently in one or more components than the way it was previously done or replacement of constructive or content related component with a different better component.

Another approach describes educational change as changing the regular behavioral patterns of the school's faculty in to different new behavioral patterns, and as learning focused upon "how to make a new thing" (Sarason, 1996).

The findings of this study indicate that willingness of teachers to participate in a change process can greatly affect the measurement of their teaching modes. These findings support the findings of Rogers (2003), who defined adaptation of change as the individual's decision to use innovativeness as the best and most available mode

It is therefore possible that when teachers are willing and ready to be part of an educational change, they are also willing and ready to diversify and try new teaching modes.

This finding is also supported by the approach of Sharan & Sharan (1991) who perceive change as introducing new elements to the system or (program) with the intention to improve performance to achieve the desired results.

The second research hypothesis referred to the effect of teachers' motivation diversity of teaching modes. The research findings indicate strong positive connection between these two variables. The findings also indicated that the teachers are aware of the significant effect of motivation on various aspects, including their readiness to diversify their teaching modes. These findings support the observations of Vidislavsky & Shemesh, (2009) that teachers with high motivation can integrate and make practical usage of various types of knowledge and impart learning content in various modes.

The research findings also confirmed that that willingness and readiness to change positively affects motivation. The questionnaire analysis validated, in fact it revealed that all the three variables are inter-connected, and therefore, affecting each other.

The need to initiate pedagogical changes to adapt the school to the needs of the 21st century concerns several educators throughout the world. There is an abundance of ideas, initiatives, reforms, innovations, experimentation and technology related developments these findings support several studies in the field regarding the mutual positive interconnection between teachers' motivation, diversity of teaching modes and teacher's willingness to participate in an educational change.

VI. CONCLUSIONS AND RECOMMENDATIONS

This study investigated the effect of willingness to change on motivation level and diversity of teaching modes and willingness. The study was conducted using a sample of 50 English teachers of junior high Schools in Northern Israel.

The study revealed strong positive mutual connections between the three variables; willingness to change positively affected teachers' motivation and diversification of teaching modes, motivation level strongly affected the other two variables: high motivation raised the level of both willingness to change and measure of diversity. The findings derived from the questionnaire support findings of other studies published in recent years.

The study also validates the original model developed by Blau & Antonovsky (2009) aimed to understand teachers' position regarding technology usage and reveals connection between the teachers' willingness to change, the measure of digital media usage and teaching motivation.

The research findings support the approach recognizing the connection between motivation, willingness to change and the measure of teaching modes diversity. The motivation level of the research participants was found to be high – the teachers also recognize the importance of willingness to change and the need to diversify the teaching modes used in teaching English to speakers of other languages.

Thus, the main conclusion of this research is that willingness to change, which is connected to motivation, is a factor inviting the teachers to diversify their teaching modes. Therefore, in order to assimilate changes in teachers' working modes, like diversifying their teaching methods or in any other way, there is a need to encourage and nurture their motivation

The findings indicate that the three variables are interconnected, affecting each other; willingness to change is essential to cooperation among the teachers. Recognition of the need for a change affects teachers' motivation and their willingness to diversify their teaching modes and can be a key factor encouraging teachers to seek professional success.

In light of the above, it is recommended to conduct continuing studies that will also look into variables such as: teachers' education, age and gender. It is also recommended to conduct future study on a larger scale and in various populations.

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Unifying Constructionist Intercultural Competence through a Complex Systems Perspective

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Abstract—Research on intercultural education very often falls short of its expectations in the ways it strives to correlate different variables affecting the elements of intercultural competence with learning outcomes. In this article, we discuss intercultural competence from a constructionist perspective, where intercultural competence is viewed from a complex systems approach, i.e. its understanding is constructed by learners influenced by context. Thus, our aim is to define shared meanings between intercultural competence and complex systems peculiar to both paradigms. The article first describes the notion of meaning construction in intercultural competence, pointing to the affinities of intercultural competence and complex systems theory. Then, we demonstrate how constructionist intercultural competence and the theory of complex systems can be applied to research in an educational setting.

Index Terms—intercultural competence, constructionism, complex systems theory, complex adaptive system

I. INTRODUCTION

Although the concept of intercultural competence has been explored from many angles (language education, communication, intercultural education, psychology, anthropology), literature in this respect does not offer any clear theoretical and methodological approach (Dervin, 2011, p. 37), which has resulted in the existence of a plethora of definitions and models of the concept. In fact recent studies in the field of intercultural communication and language education (e.g. Garrett-Rucks, 2012; Peckenpaugh, 2012; Foncha, 2014; Moeller and Nugent, 2014; Rygg, 2014; McBride and Gu, 2015) with their inconclusive and scattered findings pointing to the instability and variability in the development of intercultural competence engender that it might be profitable both to re-conceptualise the epistemological positioning of intercultural competence and to establish a sound theoretical and methodological framework for examining the concept. The studies cited above emphasize the importance of meaning construction, which entails unpredictability, aperiodicity, and non-linearity in intercultural research. Yet, despite these developments, very few theoretical and exploratory papers have considered these descriptors to analyze the development of intercultural competence in a classroom environment. In this paper, intercultural competence is understood as a result of meaning negotiation and construction by individuals influenced by the interaction of prior and actual situational context constantly in flow and changing over time. Thus, context and adaptability are central in the construction of intercultural competence.

In this article we aim to explore the potential of a critical and a constructionist approach to intercultural competence stemming from the works of Papert and Harel (1991) in psychology, and Larsen and Freeman (2008) in applied linguistics to generate a new direction in thinking about intercultural competence from the perspective of complex systems theory. Thus, we are going to argue that categorical and linear description of both intercultural competence and the development of this competence, as proposed in Byram's (1997) most adopted framework for acquiring intercultural competence, does not account for its dynamic and complex nature. Nor does it explain the transfer from intercultural competence (cognition) to intercultural performance (action). Instead, we are going to demonstrate that intercultural competence emerges from constructing and reconstructing experience subjected to variations, i.e. mental and social context, interacting and fluctuating in a reciprocal manner rather than in a cause and effect link. In presenting this model we draw on complex systems theory, which stretches beyond the conceptualization of intercultural competence as the interplay of three elements, i.e. knowledge, skills and attitudes, and views the concept as the convergence of variables (understood here as context) adapting dynamically, tending towards aperiodicity and influencing the construction of intercultural competence by a group of individuals.

In line with this reasoning, in the context of intercultural education, we reject a classroom where activity is supplied and input provided by a teacher leading to intake processing and output generation as a space for the development of intercultural competence. Instead, following complex systems theory, which is in line with social, constructivist

(Vygotskian) and cultural approaches to a classroom (Kramsch, 1993; Lantolf, 2000; Senior, 2006), we are going to embrace a view of a classroom as a complex adaptive system, i.e. as a 'third space' comprising context in terms of institutional, pedagogical, personal and physical aspects constantly interacting, permeating each other and adapting to different variables (Burns and Knox, 2005, 2011). This interaction, causing instability and change, allows constant meaning negotiation, construction and reconstruction to take place. Therefore, the features of the complex adaptive system are connection, co-adaptation, change, interaction, aperiodicity, and dynamicity (Larsen-Freeman and Cameron, 2008). Next, we make suggestions concerning the applying of a complex systems perspective within a constructionist framework of intercultural competence to educational research.

We base our consideration on empirical research (see Strugielska and Piątkowska, 2017 for details) which demonstrates that intercultural competence cannot be reduced to either psychological or social aspects. Instead, it has to be analyzed by an approach unifying the cognitive and the social through a complex systems perspective with constructionism as an encompassing framework. The study carried out by Strugielska and Piątkowska (2017) was based on a qualitative analysis of data obtained from students participating in the international summer school 'Developing Intercultural Competence of European Teachers of English' (DICETE). The aim of the research was to examine the validity of a complex systems approach within the constructionist perspective to developing intercultural communicative competence in educational contexts. The researchers demonstrated how the students' meaning construction of intercultural competence changed as a result of the interplay of prior and actual situational contexts (Kecskes, 2014) consisting of institutional, pedagogical, personal and physical factors which constituted a constellation of unpredictable, dynamic, aperiodic and adaptable features. The data showed that intercultural competence cannot be defined merely in terms of the input-output interplay. Instead, the system, i.e. intercultural competence, and its subsystems, i.e. institutional, pedagogical, personal and physical factors, were in constant interaction, the result of which the researchers discussed in terms of configurations of attractors constraining meaning. The findings revealed that while the students' initial construct of intercultural competence was unstable, fluctuating between static and dynamic, autonomous and imposed, modular and blended, the ICC meaning emerging from the interplay of the aforementioned subsystems lacked this clear polarity and constituted a blend of the static and the dynamic, the autonomous and the imposed, the modular and the blended. Thus, the participants' construction of intercultural competence before the course was affected by prior contexts in their minds, which created an actual situational context comprising institutional, pedagogical, personal and physical factors. Permeating each other in a reciprocal rather than cause and effect link, the two types of context intermingled, i.e. prior contexts became an actual situational context and vice versa. Therefore, the research demonstrated that the two aforementioned contexts are in constant interaction in an educational setting, creating a hybrid of mental and social aspects, which leads to the creation of a third space, producing unpredictable results. Consequently, the researchers conclude that intercultural competence is always context-dependent and can be constructed as a meaning which is a configuration bearing the features of stable and dynamic, universal and relative. Therefore, Strugielska and Piątkowska's (2017) findings clearly suggest that intercultural competence requires an approach which defines the concept in a holistic way and reconciles the social and the mental in educational settings. It appears that a complex systems perspective bridges this gap by providing shared meanings for the concepts of intercultural competence on the constructionist framework.

II. CONSTRUCTIONIST INTERCULTURAL COMPETENCE

Although theoretical and exploratory considerations of intercultural competence in education over the last twenty years have resulted in various definitions and models of the phenomenon (e.g. Meyer, 1991; Kordes, 1991; Byram, 1997; Heyward, 2002; Anderson, Lawton, Rexeisen and Hubbard, 2006), the mainstream approach tends towards the understanding of intercultural competence with regards to cognitive and affective domains with three elements, knowledge, skills and attitude as typical constituents. Thus, the most influential view, best reflected in Byram's (1997) model of intercultural competence, perceives intercultural competence as the interplay of these three descriptors. However, it has to be clearly emphasized that these elements are treated as autonomous entities in the human mind, which is the result of the body and mind distinction. Affective states are considered the most essential as they can either enhance (positive states) or impede (negative states) the development of intercultural competence. Arising from so called solid interculturality (Dervin, 2011), which categorizes cultures on the opposite sides of a continuum on the basis of fixed categories, Byram's (1997) model represents a reductionist view of intercultural competence. As a consequence, asserting that the interaction of cognition and affect leads to intercultural competence (i.e. intercultural behaviour or action) and the construction of what Kramsch (1993) calls the 'third space', Byram's (1997) model constitutes a cognitive perspective which is reminiscent of the Chomskyan competence and performance dichotomy (i.e. knowledge vs. intercultural action). Therefore, the underlying assumption is that awareness of cultural constructs leads to intercultural competence. (Castiglioni, 2013) This approach is consistent with a view of culture as a dichotomous polarized phenomenon (explicit vs. implicit culture), encapsulated in a culture as an iceberg metaphor, whose consequence is a psychological praxis of (inter)cultural competence, i.e. the belief that cultural elements influence psychological constructs and action as a consequence.

However, in a recent criticism of current intercultural models researchers (Dervin, 2011; Castiglioni, 2013) notice that the approaches do not account for the process of adaptation, i.e. how the transfer from cognition and affect to

intercultural behaviour takes place. The only element linking the two phenomena is attitude, which appears to be an encompassing framework for all the elements of intercultural competence (Castiglioni, 2013). Still, a major limitation of Byram's (1997) approach is that it does not explain how attitude contributes to the process of transferring thought into action. Therefore, presupposing an automatic transfer of skills, Byram's model has some affinities with acculturation models in this respect. Although he replaces assimilation and adjustment to a new culture (which is typical of acculturation models) with the construction of the 'third space' (Kramsch, 1993), Byram (1997) does not preclude the comparing and contrasting of cultures. In fact, the acquisition of intercultural competence in his model is based on comparing one's own and the target culture. Implying a universal route of developing intercultural competence, without taking into consideration the role of context, Byram's (1997) model is in line with a positivist stance in cultural studies. Consequently, assuming that the development of intercultural competence takes place within one's cognitive system where cognitive invariants (i.e. knowledge, skills and attitudes) are treated as regularities subjected to change, Byram (1997) takes a Piagetian viewpoint, where meaning, even if constructed, is not affected by variables other than one's inner cognitive stabilities. Thus, the goal of any model of intercultural competence from this perspective is to distinguish universal variables which constitute this competence (Bennett, 2005).

Similarly, Kordes' (1991) model of intercultural competence in an educational setting is built on the assumption that the acquisition of this competence proceeds in a linear way from a monocultural through intercultural to a transcultural level, with the last one marking the creation of the 'third space'. Yet, if the goal of intercultural competence is the creation of the 'third space' through the process of interaction with representatives of other cultures, a relativistic approach to intercultural competence which simply presents it as a hybrid of various perspectives (one's own and the interlocutors') in interaction does not explain the complexity of intercultural competence, affected not only by one's cognitive system and cultural constituents, but also by other variables such as one's interlocutors, their action or their perception of intercultural interaction.

Theories of both education and communication, including intercultural communication and intercultural education, strive to explain how people are affected by context (Castiglioni, 2013; Bennett, 2005) to construct their meaning. Furthermore, if assuming the 'third space' as central in intercultural competence, the assumption that individuals do not have a worldview but constantly construct it, interacting with others (Bennett, 2005), becomes a natural consequence. Thus, rejected are both objective and subjective perspectives of culture with the former viewing it as a set of facts individuals are provided with on their way to develop cultural competence and the latter assuming a one-way linear construction of a new worldview from one's cultural viewpoint (i.e. cultural constructs subsumed under their cognitive system). Instead, we argue that individuals construct the meaning of intercultural competence based on etic cultural constructs (i.e. from meta level), which allow for cultural contrasts, moving to emic ones (Bennett, 2005). This shift, which lies at the core of intercultural competence, is possible through self-reflexive consciousness and interaction with other individuals, which generates the 'third space'. Thus, culture and intercultural competence are both the result of the experience of social interaction. (Bennett, 2005) Experience in turn entails language, which plays an essential part in meaning construction, negotiation and, what Bennett (2005) calls, languaging about culture. Language is a representation of an individual's constructs (Gee, 2005) including (inter)cultural constructs. Consequently, culture and intercultural competence are constructs created in the process of meaning construction through social interaction and experience with linguistic negotiation lying at the heart of this process. Therefore, if intercultural competence results from interaction based on individuals' experience, it cannot be reduced to either psychological or social aspects as such a perspective does not account for the nature of intercultural competence and intercultural interaction. Instead, intercultural competence has to be viewed in a holistic way where the psychological and the social are reconciled and unified under a common denominator. Thus, we postulate a sociocognitive approach to intercultural competence.

This perspective thus contrasts with Byram's (1997) model, where although interaction and language are included, the former is rather conceived of as the final outcome while the latter is treated as an autonomous element of intercultural competence with the result that intercultural competence is constructed in an individual's mind. Hence, rather than an interplay of knowledge, skills and attitude, intercultural competence is to be understood as the constructing and reconstructing of experience in interaction (the role of the collective mind) and in context. This view is consistent with the Papertian constructionist paradigm and Vygotskian constructivism, according to which building competence is contextual, i.e. it takes place not only within an individual's mind but also through active construction within a specific context (i.e. environment), which means meaning is socially (re)constructed (Stager 2001, 2002, 2005). Consequently, adaptation, which presupposes the role of context, is a central process. Similarly, if the goal of intercultural competence is the ability to interact effectively across cultures with the creation of alternative culture (Bennett, 2005) or the 'third space' (Byram, 1997; Dearsorff, 2009; Bennett, 2014), shared meaning in interaction emerges as a natural consequence. However, contemporary perspectives on intercultural competence have fallen short of their expectations in explaining this aspect of intercultural competence and the process (i.e. transformation of knowledge into intercultural behaviour mentioned above) individuals go through on their way to become interculturally competent.

In a recent criticism voiced against interculturalists, Bennett (2014) emphasizes that some researchers bring aspects of global culture(s) to the surface at the expense of local diversities, suggesting that any attempt to seek patterns in individual cultures leads to stereotyping and ignoring variations among and between cultures. At the same time, reifying

cultural attributes in such a way that the dynamicity and contextuality of cultural interactions are both excluded from intercultural research distorts the nature of these interactions and brings the effect of essentializing cultures which are presented as a set of fixed categories (Chirkov, 2009a; Jack, 2009; Dervin, 2011; Bennett, 2014). However, while contemporary approaches to intercultural competence are based on the view of culture as immutable bounded entities composed of various dimensions allowing individuals to fully engaged in the target culture and create the 'third space', Bennett (2014) in his recent commentary on the most fundamental issues in intercultural competence emphasizes that social constructivist research confirms that patterns are to be sought in context rather than in stable and normative reality. Nevertheless, intercultural competence research does not reflect this tendency. At the same time, a social constructivist perspective considers the role of variables influencing existing patterns, i.e. the situation and the individuals in the process of shared meaning construction in interaction through negotiation. In other words, research on intercultural competence through the constructionist prism focuses on the dynamics of change in the intersubjective meaning individuals construct (Chirkov, 2009b).

Therefore, we argue that individuals construct their intercultural competence through interaction with others. Following Vygotskian and Papertian paradigms, we consider intercultural competence as a concept emerging from the interplay of a set of mental and social factors, constituting context, which is either prior or actual situational (Kecskes, 2014). Prior context refers to the individuals' mental representation of intercultural competence they bring to an educational setting while an actual situational context is a sociocognitive disposition at a given time and a place. In other words, prior context represents an individual's certain cognitive stability or a fixed pattern resulting from past experience, knowledge, beliefs, values etc. Following Kecskes (2014), we postulate that when trying to construct their understanding of intercultural competence, individuals are affected by both prior and actual situational context. Depending on a situation, i.e. the role of the participants, the place of interaction etc., these two types of context undergo constant changes leading to unpredictable outcomes. Although these two types of context are equally important, the result of this interplay is strictly dependent upon the dynamic process of interaction, which can make one type of context become stronger in a given situation. Consequently, intercultural competence will be constructed as a stable and fixed concept, if prior context is dominant, as a negotiable notion if actual situational context is dominant or as a constellation bearing the features of a stable notion and a negotiated concept if prior context engages in interaction with and actual situational context. The two types of context not only are viewed through each other, leading to the creation of a third space (Kecskes, 2014, p. 134), but permeate each other forming complex systems, each of which constitutes a complex system and undergoes changes. We argue that these complex systems function as constraints on meaning viewed as a conceptualization constructed by individuals in interaction. Consequently, we postulate the existence of two types of interaction, off-line and on-line. If individuals interact with prior context, then we deal with on-line interaction. If individuals interact with actual situational context we deal with off-line interaction. Following Rizolatti and Craighero (2004), we postulate that human beings act as individuals and as social beings.

Consequently, we agree with the theory of grounded cognition, which assumes the existence of universal human capacities and universal patterns in cognitive processes. Universality, however, refers to conceptual operations (based on embodiment) being performed by all human beings. Notwithstanding a certain degree of universality, the conceptual system varies across and within cultures just as individuals vary. There are thus two influences exerting pressure on a conceptualiser trying to conceptualize the world: their embodied experience and aforementioned context. Concurring or conflicting, these influences interact leading to an unpredictable outcome which depends on the force of a given influence in a particular situation. Thus, universal embodiment and non-universal context influence meaning making. If the construction of meaning is based on a basic human experience, the outcome may be close to a universal concept. (Kövecses, 2015) Therefore, the position we adopt is that meaning construction fluctuates between universal and relativistic, which is in line with a socio-cognitive approach represented by complex systems theory. Thus, in the following section we are going to show congruences between the constructionist nature of intercultural competence and complex systems theory.

To summarize, intercultural competence from a constructionist perspective is viewed as a concept which is emergent rather than imposed, context-dependent rather than autonomous, unpredictable rather than expected, and blended rather than modular.

III. CONSTRUCTIONIST INTERCULTURAL COMPETENCE AND COMPLEX SYSTEMS THEORY

Unlike a universalist paradigm, which tries to impose universal rules to explain or predict human action, complex systems theory assumes a relativistic (Einsteinian) and contextual (Papertian) position and strives to explain how variables interact as complex systems to evoke a certain action (Bennett, 2005). Interaction in turn implies dynamicity and change (i.e. explains systems in change), which are some of the most essential features of complex systems. Intercultural competence research, as discussed above, describes how individuals influenced by prior and actual situational context, construct meaning through the process of negotiation to create a third space. Complex systems theory runs counter to a universalist perspective in that it does not seek to explain the correlation between a given variable and an outcome. (Bennett, 2005) On the contrary, complex systems theory presupposes discontinuities of meaning stemming from the divergence of cultural elements. Thus, a complex systems perspective with its attempt to explain how meaning is constructed in the process of interaction in a given context is likely to maintain relevance to

intercultural competence. As opposed to a universalist model such as Byram's (1997) model, which assumes a linear development of intercultural competence, a constructionist intercultural competence perspective will try to account for intercultural meaning created in the mutual interaction of the elements in the system (i.e. context). Thus, rejected is the correlation between variables and outcomes. Instead, intercultural competence research through the complex systems perspective explains how cross-cultural context affects the construction of meaning. Another consequence of the constructionist stance is the rejection of shifting cultural perspectives. Instead, it is believed that one's cultural perspective organizes and influences the construction of a new cultural perspective (Bennett, 2005). In other words, the cultural perspectives individuals bring to the process of interaction are some of the elements of context. Thus, bringing constructionist intercultural competence and complex systems theory together, we postulate that meaning is constructed by an individual in interaction within some boundary conditions, i.e. prior and actual situational context, which may function as a constraint, i.e. an attractor¹, on the process. Consequently, we assume that the process of intercultural meaning construction oscillates between variation and stability, with the former stemming from the lack of inherent meaning, which is constructed in interaction, and the latter from attractors at play, i.e. context.

IV. CONSTRUCTIONIST INTERCULTURAL COMPETENCE IN EDUCATION: A CLASSROOM AS A COADAPTIVE COMPLEX SYSTEM

Based on research which points to instability and variability in the process of learning (Burns and Knox, 2011), the constructionist perspective views learning as a dynamic process influenced by context defined as both an environment and experience which encourage students to construct knowledge through interaction and engagement in meaningful project work (Stager, 2005). Thus, the process is determined by the interplay of various factors which make meaning construction possible. The variables comprising context in complex adaptive systems can be categorized with reference to institutional factors (e.g. time tabling, course aims or syllabus requirements), pedagogical elements (e.g. previous lesson(s), student skills, student age, or teacher-student relationships), personal aspects (e.g. theories of learning, recent or current study commitments, personal lives and relationships), and physical factors (e.g. heat, physical size and layout of class, changes of rooms, or student movement in and out of class) (Burns and Knox, 2005, p. 254). The theory of complex adaptive systems views the relationship between these variables as relational, dynamic, aperiodic, and non-linear, which implies a lack of a cause-effect relationship between input and learning outcomes. It is acknowledged that factors comprising context are in constant flow, affecting one another and distorting the input, intake and output order. As a result, a classroom is seen as a convergence of the elements of context which tend to adapt to one another (Burns and Knox, 2011).

If intercultural competence is developed through (re)constructing experience (which is contextual as presented above) in interaction, following Liu and Zang (2014), we recognize three elements of constructivist theory, namely, situation, collaboration and communication, as both capturing the fluid and unpredictable nature of the learning/teaching process and leading to meaning construction. With reference to fostering intercultural competence it implies creating authentic intercultural situations through situated, experiential and anchored learning (Liu and Zang, 2014).

V. CONSTRUCTIONIST INTERCULTURAL COMPETENCE – RESEARCH POTENTIAL

Adopting a complex systems perspective within a constructionist framework of intercultural competence in educational settings entails that the concept of intercultural competence be construed as a category fluctuating between the modular and the blended, the localized and the distributed, the static and the dynamic, the imposed and the negotiable, the autonomous and the dependent. Consequently, the state space of the system, i.e. possible interpretations of intercultural competence, oscillate, in an unpredictable, though constrained manner, between one set of attractors, involving standardized, universal competences firmly situated in individual minds, and the other, constituted by a mixture of capabilities, prone to change and influenced by the context, which emerge within the collective, ecological mind. Importantly, the above constraints, i.e. sets of attractors, are just potential influences acting upon construals of intercultural competence, and hence particular educational contexts may either conceal or highlight some of them as well as expand the state space of intercultural competence through the emergence of new attractors.

As argued above, meaning cannot be inferred from input and hence, defining intercultural competence in terms of clearly delineated learning outcomes seems an impossible task. Instead, the concept should be viewed as a meaning potential prone to contextually-induced, alternate construals. The interplay between the system and its context, inherent in the constructionist framework, means that the two can be separated only arbitrarily since elements of the former constitute and are constituted by aspects of the latter. Nevertheless, a particular research focus will always require that the system and its context are distinguished. Consequently, the concept of intercultural competence is taken as a complex system and the classroom, involving institutional, pedagogical, individual and physical elements, is seen as its context. Thus, we postulate that further research on intercultural competence focus on the identification of potential

¹ There is a difference in the way context, a constraint and an attractor are understood in this paper. Context is used in a broad sense and refers to variables (institutional, pedagogical, personal and physical) that affect learners; constraint refers any factor which may hinder meaning construction; an attractor refers to a shift in meaning construction as a result of a non-linear nature of the process.

attractors within institutional, pedagogical, individual and physical elements and the quality as well as the extent to which they affect the process of intercultural meaning construction.

VI. CONCLUSIONS

The aim of this paper was to generate a new way of thinking about constructionist intercultural competence by demonstrating a potential contribution the theory of complex systems can bring to the way the concept is approached in research and education. First, we demonstrated affinities between intercultural competence and a constructionist perspective by both emphasizing the inadequacy of a three-component and modular model of intercultural competence and pointing to the need to analyze the phenomenon as constructed by individuals in interaction bounded and constrained by context. Thus, we argued that intercultural competence should be viewed as a negotiable, blended, dynamic and context-sensitive notion, which explains the discrepancy between input and learning outcomes in a classroom environment where the focus is on developing intercultural competence. Therefore, to tackle the issue we suggested looking at constructionist intercultural competence from the perspective of the theory of complex systems, which with its focus on aperiodicity, non-linearity and unpredictability, explains the lack of input – output dependency in formal instruction. Consequently, following the perspective of complex systems we suggested viewing the experience of intercultural competence as a goal in itself rather than as a set of clearly defined in advance aims referring to knowledge, skills and attitude. Furthermore, we argued that the major contribution that the complex systems perspective can bring to research on constructionist intercultural competence is the concept of constraint, i.e. context, on meaning, which may introduce some order to a sometimes chaotic, aperiodic and unpredictable process of intercultural meaning construction. Consequently, by defining shared meanings between intercultural competence and a complex systems perspective, we proposed a more unified and holistic interpretation of intercultural competence.

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Brain and Language Specialty: Insights from Aphasiology and Neuroimaging

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Abstract—Scientific interest in the investigation of language and its neural correlates has always centered on the possibility of pinpointing the location of language in the brain with the assumption that specific areas of the brain could be dedicated to specific language components and processes. A central question in current neurolinguistic and psycholinguistic research that has been thoroughly discussed over the last few decades is whether certain linguistic abilities result from dedicated brain areas each specialized for specific kinds of linguistic representations and processes or whether these abilities are more accurately described in terms of interactions among different linguistic levels distributed across multiple brain regions. An outlook on language derived from current research suggests that language specialty as a distinctly human cognitive faculty lies in being supported by distributed neural structures that interact efficiently with so many domain-general abilities, functions, and information sources rather than in being located in a dedicated set of cognitive neural structures. This paper is a reflection of the insights into language in the brain based on findings obtained from neuropsychological and neuroimaging studies that support this perspective. The paper goes on to plead that with current developments in linguistic theory, as a model of human knowledge of language, and some powerful methodological advances in cognitive neuroscience may lead to a new and more precise image of the functional organization of language in the brain.

Index Terms—localization, modularity, neuroimaging, Broca's area, language networks

I. INTRODUCTION

One of the most challenging issues related to human language is understanding how it is organized and processed in the brain (Blumstein, 1995). Prior to the onset of functional imaging techniques (Petersen *et al.*, 1989), most findings concerning the representation of language in the human cerebral cortex were derived from neuropsychological investigation of language pathology subsequent to brain damage or by electrical stimulation and recording from individuals undergoing neurosurgery (Horwitz & Wise, 2008). Data from the application of deficit-lesion correlations provided important findings regarding the neural organization of language functions. Neuroimaging studies of cognitive function have looked to lesion studies for confirmation of the functional organization of the brain. The advances in neuroimaging methods have provided researchers with a powerful, noninvasive means to examine brain activity during processing of linguistic stimuli. This activity can be measured while people read or listen to sets of words or sentences with ERPs (Event-Related Potentials), PET (Positron Emission Tomography) scans, and fMRI (functional Magnetic Resonance Imaging) scans. The new findings supported by modern neuroimaging techniques have challenged the classical view regarding language and its underlying neural organization, and has lent support to a new perspective on cognitive functions as being mediated by distributed interacting neural elements (Horwitz & Wise, 2008).

There are currently two main prominent views about the study of the neural representation of language functions: the modular account suggests that brain regions are specialized for particular language functions, while the distributive account claims that language requires cooperation of widely distributed brain regions. Researchers following the modularity perspective have assumed a set of distinct processing components within a modular system, each subserving a language-specific function and operating on language-specific information and representations (e.g., Fodor, 1983; Fromkin, 1997; Pinker, 1994; Pinker & Ullman, 2002). Such proposals assume a static base of linguistic knowledge, which is associated with distinct neural structures. The origins of these claims lie in Franz Gall (1809) who conceived of the brain as composed of several independent organs, each subserving a specific faculty (cf. Trimble, 2007).

Conversely, the distributive or connectionist perspectives of brain function emphasize circuits, parallel processing, and the cortical-subcortical representations of functions (e.g., McClelland & Rumelhart, 1986; Seidenberg & McClelland, 1989). According to the current connectionist model, individual concepts are represented by a pattern of activation existing across a large network of interconnected nodes; the nodes and connections are argued to be analogous to neurons and their synaptic connections (see, for example, Pulvermüller, 2003). As a result, language processes should engage multiple distributed brain areas, which may be involved in a variety of cognitive functions that are not specific to language.

Current research in neurolinguistics uses the available methods, approaches and powerful new technologies to investigate brain structure and function with respect to language representation through addressing three basic questions: (1) What are the neural underpinnings of language? (2) Are these neural correlates exclusively dedicated to language? (3) How is language represented in the human cerebral cortex? The major objective of the present paper thus is to

survey this new literature, focusing on findings from neuropsychological and neuroimaging studies that examined the neurological and functional organization of language in the human cerebral cortex. The paper is organized as follows. First, we present a brief overview of the brain regions commonly known to be involved in language processing. We then review and discuss the neural and functional organization of language, with reference to neuropsychological and contemporary neuroimaging studies. In this section, we focus on the implications of the findings of these studies on the evidence for the modular versus the distributed nature of the neural substrate for language functions. We then briefly discuss the role of Broca's area in language processing, based on data from recent neuropsychological and brain imaging studies. We close by presenting some concluding remarks on the implications of current research for the nature of language representation and processing in the human brain and current limitations and future directions of research on the relationship between language and the brain. We begin by introducing the brain regions commonly known to be involved in language processing.

II. BRAIN REGIONS INVOLVED IN LANGUAGE

The part of the brain most relevant for language is the cerebral cortex (Pulvermüller, 2002). This fact has been proved by neurological observations where lesions in certain regions of the cortex lead to neurological language impairment known as aphasia (Broca, 1861/1977). Current neuropsychological research on the neural structures of language has resulted in confirming that human language involves parts of the association cortex in the lateral portion of one cerebral hemisphere, usually the left in right-handed individuals. The cortex includes the Sylvian fissure and runs from the pars triangularis and opercularis of the inferior frontal gyrus (Brodmann's area (BA) 45 and 44; Broca's area) through the angular and supramarginal gyri (BA 39 and 40) and into the superior temporal gyrus (BA 22; Wernicke's area) (Caplan, 2009). Broca and Wernicke regions are crucial for language. As we shall see, however, the involvement of each area in particular components of language processing is still unknown. Figure (1) shows a lateral view of the left hemisphere with its most common area subdivision.

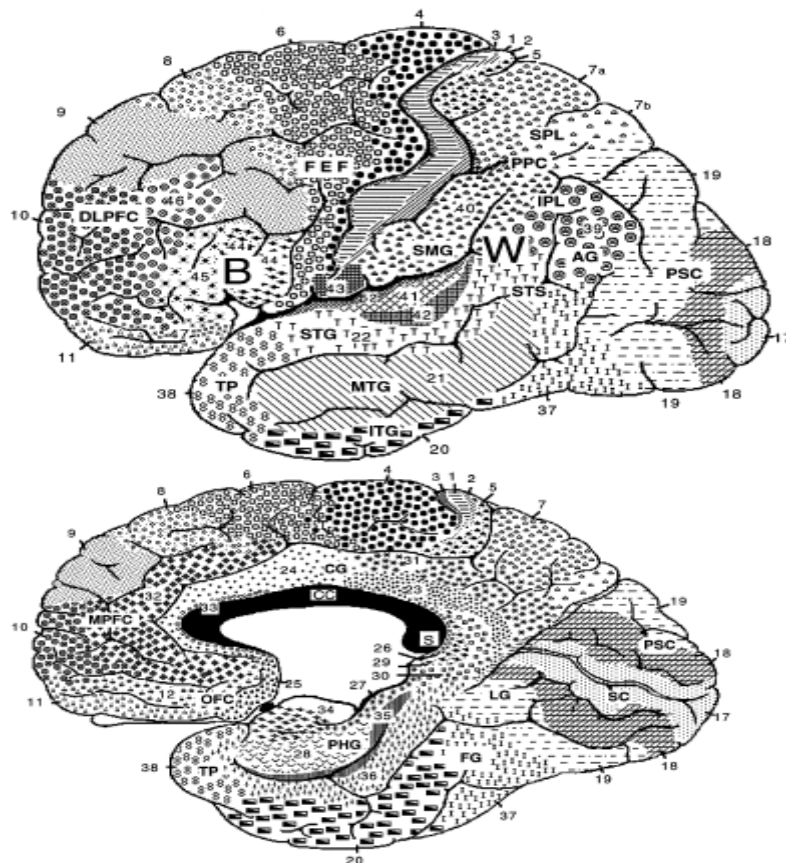


Figure 1: A representation of the cortical map of Brodmann, which distinguishes regions of the cortex on the basis of their microscopic features. AG, angular gyrus; B, Broca's area; CC, corpus callosum; CG, cingulate cortex; DLPFC, dorsolateral prefrontal cortex; FEF, frontal eye fields (premotor cortex); FG, fusiform gyrus; IPL, inferior parietal lobule; ITG, inferior temporal gyrus; LG, lingual gyrus; MPFC, medial prefrontal cortex; MTG, middle temporal gyrus; OFC, orbitofrontal cortex; PHG, parahippocampal gyrus; PPC, posterior parietal cortex; PSC, peristriate cortex; SC, striate cortex; SMG, supramarginal gyrus; SPL, superior parietal lobule; STG, superior temporal gyrus; STS, superior temporal sulcus; TP, temporopolar cortex; W, Wernicke's area. Adapted from Mesulam (2002).

Findings from imaging studies of the brain areas involved in language processing have confirmed the involvement of the main regions of perisylvian cortex known as Broca's area and Wernicke's area identified as the primary language

areas on the basis of neuropsychological findings from aphasia studies. Both areas appear to be necessary for language processing, even though neither of them is sufficient for word comprehension or production (Indefrey, 2007). A crucially important finding from such research has been that many other cortical and subcortical areas outside the perisylvian language cortex are actively engaged in language processing as well. These structures are not restricted to the language-dominant left hemisphere, but include areas in the nondominant right hemisphere as well. The role of subcortical structures in language processing is much less understood than cortical structures, but recent evidence links them closely to cortical mechanisms of language. Some of these structures comprise "the middle and interior regions of the temporal lobe for its role in word-level processes, the anterior superior temporal gyrus (STG) for its role in the construction of phrases as well as intelligibility, and subcortical structures (basal ganglia and cerebellum) for their role in linguistic computation" Poeppel & Hickok, 2004:9). Recent functional imaging techniques have also revealed the involvement of the premotor cortex in language processing (e.g., Wilson *et al.*, 2004). In addition, the insula, a large limbic lobe structure, has been found involved in many functions including integration of limbic and cortical information; it also links anteriorly with the frontal cortex (Trimble, 2007).

The basal ganglia and the thalamus (figure 2) are subcortical structures that have received the most attention in studies of language processing and subcortical aphasia (Cappa & Abutalebi, 1999; Friederici, 2006). As reviewed by Kertesz and Wallesch (1993), the basal ganglia are essential relay systems between subcortical and cortical structures. The basal ganglia are a collection of structures consisting of the striatum, the globus pallidus, and the thalamus. The thalamus is the most medial of the nuclei of the basal ganglia, and occupies the two sides of the third ventricle. Recent evidence has established the involvement of these subcortical structures in aspects of language processing. For example, the basal ganglia has been suggested to be involved in 'rule-based' processing in language, such as regular aspects of word formation, while the thalamus appears to play a role in processing the meanings of words (Caplan, 2009).

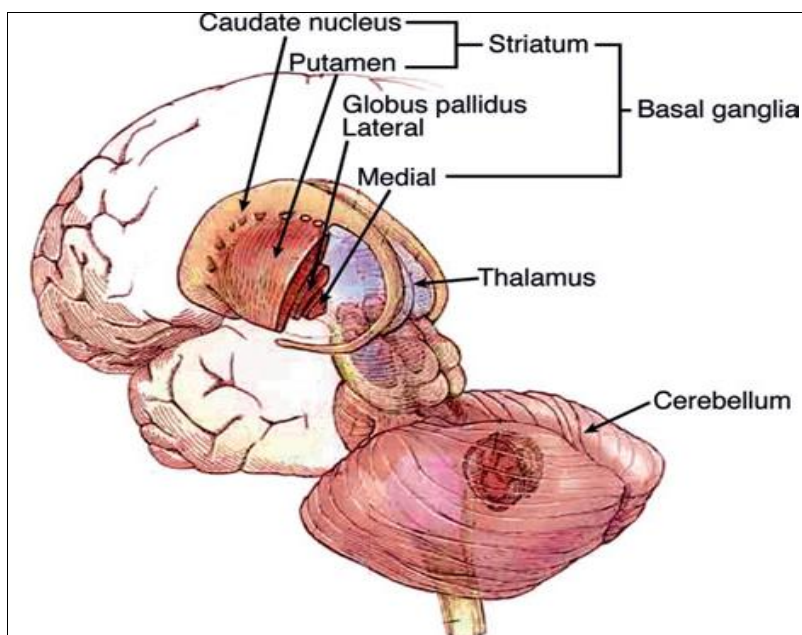


Figure 2: The location of subcortical regions involved in language processing. The insula, a cortical region located deep to the brain's lateral surface at the junction between the frontal, temporal, and parietal lobes, is not visible in this figure. Adapted from Bornkessel-Schlesewsky & Schlesewsky (2009).

III. THE NEURAL ORGANIZATION OF LANGUAGE

Despite the fact that scientific inquiry into brain-language relationship has grown considerably to support the neural basis of language, the issue of how human brain supports language is still not clearly understood. Moreover, as part of this incomplete knowledge, the relationship between cortical brain areas involved in language processing is less well known compared to many other brain functions. Amunts (2008) attributes this difference to the fact that human language is very complex in comparison to other cognitive functions, and the disagreement among researchers as to how this function should be analyzed and be related to the underlying anatomy. The debates today mostly concern "whether there are domain-specific modules associated with different components of the grammar, whether such modules recruit distinct neural structures that are solely dedicated to the processing of that module and whether the neural systems associated with language are different from those recruited across other cognitive domains" (Blumstein & Amso, 2013:45; as quoted in Cahana-Amityay & Albert, 2014 :3). We address these issues in the following sections.

A. Evidence from Lesion Studies

The classical lesion-deficit model developed in the late 1800s by Wernicke, Broca, and Lichtheim and revived by Norman Geschwind (1970) constitutes the standard model that has guided research for almost a century and a half, and its goal is to formulate typologies of language disturbance, using structure-function correlations (Siddis, 2006). Current research has revealed a number of inconsistencies that, on the one hand, refute such a rigid locationist theory and, on the other hand, provide significant insights into the nature of language representation in the brain. We focus here particularly on the following controversies discussed under the following subsections

1. The localization issue: structure-function correlation principle

Research on the neural organization of language based on the classical lesion-deficit model developed in the late 1800s by Wernicke, Broca, and Lichtheim and revived by Norman Geschwind (1970) has accentuated belief in the existence of cerebral language centers primarily localized in the left hemisphere. Research of aphasic patients resulted in a general model for mapping language functions to relatively specific regions of the left hemisphere (Carter, 1998). Thus, for example, two large brain regions, Broca's area in the left posterior inferior frontal gyrus (IFG) and Wernicke's area in the left posterior superior temporal gyrus (STG), were linked to language functions. This claim led researchers to speculate that language is actually embodied in the wiring of these areas of the brain, i.e., Broca's area as closely related to speech production while Wernicke's area as associated with speech comprehension. As we shall see, however, this view of brain-language mappings has been challenged on empirical reasons.

First, the basic assumption of lesion studies is that the symptoms of aphasia are related in a straightforward way to anatomical lesions. As Kertesz and Wallesch (1993: 132) states "One can only localize lesions (and accompanying physio-logical and metabolic changes) associated with certain behavioural alterations but not function". Moreover, the relationship between a particular language function and specific brain region is significantly more complex and more variable. For instance, lesions in the frontal and temporal lobes, some of which spared the perisylvian language areas, lead to impairment in producing or understanding words (e.g., Damasio & Tranel, 1993; Humphreys & Forde, 2001). In addition, lesions around the inferior frontal gyrus correlate with different aphasic symptoms within Broca's aphasia (Alexander, Naeser & Palumbo, 1990). This suggests that other areas outside the classical language areas are crucial for language processing. Conversely, a lesion to a certain area does not necessarily lead to a predictable language breakdown. For instance, neither lesions to Broca's area lead to a persisting Broca's aphasia, nor do lesions affecting only Wernicke's area lead to a persisting Wernicke's aphasia (Mohr *et al.*, 1978; Dronkers, Redfern, & Knight, 2000). Such findings reveal the limit of aphasiology studies by suggesting that a wide range of cortical and subcortical regions are associated with language processing.

Second, findings from imaging studies in normal and language-impaired individuals make strong claim against the view that language is represented in specific cortical regions of the brain, i.e., Broca's area as closely related to speech production while Wernicke's area as associated with speech comprehension. For example, patients with Wernicke aphasia have difficulty speaking, even if their lesion is restricted to the superior temporal lobe (Pulvermüller *et al.*, 1996). Similarly, patients with Broca aphasia have specific comprehension deficits with certain types of sentences such as passive sentences (Caramazza & Zurif, 1976). Thus, the specific function of the inferior frontal area of Broca and the superior temporal area of Wernicke as centers contributing to either speech production or comprehension has been questioned. Recent imaging studies confirm that both classical language areas central for language processing in the cortex appear to be functionally interdependent (e.g., Hickok and Poeppel, 2000; Bornkessel-Schlesewsky and Friederici, 2007; Indefrey, 2007).

Finally, there is increasing evidence that for some cognitive functions, alternative brain systems might be available, and one area within association cortex might be a node in different functional networks. Consequently, the absence of a cognitive deficit after a lesion to a specific brain area does not necessarily entail that the lesion area is not involved in the spared function (Hagoort, 2006). Moreover, imaging studies, as we shall discuss in the coming sections, clearly show that mapping deficits to lesions does not imply the existence of a specialized area that is dedicated exclusively to a particular function or cognitive process.

These considerations have provided compelling evidence against the classical view regarding the brain centers, and led researchers to consider the importance of brain regions other than the classical language cortex in normal language and aphasia (cf. Bookheimer 2002; Brown & Hagoort, 1999; Metter 1995; Patterson & Bly 1999; Poeppel & Hickok 2004). As a result, a new perspective on the involvement of the whole brain in language processes has begun to emerge.

2. The modularity hypothesis: language domain-specificity

The proposal that the human mind is composed of faculties or modules realized in specific neural structures is central to the work of the nineteenth-century neurologists. Current modular views represent a further development of the localizationist perspective with the assumption that language is relatively independent from other cognitive processes and is mediated by distinct neural structures (see, for example, Fodor, 1983; Pinker, 1999). According to this view, the brain consists of modules each specified for different functions such as informational encapsulation, domain specificity, and a dedicated neural location.

Dissociations have been found between language and other cognitive processes; it has been observed that language can be seriously disrupted in the presence of spared cognitive processes and vice versa (cf. Bellugi, *et al.*, 1993). The main evidence in favor of the modularity hypothesis or the domain-specificity of the language faculty comes from neuropsychology. Selective language deficits have also been found in aphasics where other language abilities are

relatively spared. This has been cited as evidence in favor of linguistic modularity (Fromkin, 1997; Pinker, 1994). In general, language impairments in aphasia seem to support the view of language modularity, which is functionally and neurologically distinct from other higher cortical functions (see Blumstein, 1995; Dąbrowska, 2004, for discussion).

A prominent assumption that has dominated theoretical discussions of the modularity is the separation between lexical and grammatical processing observed in certain aphasic patients (e.g., Pinker & Ullman, 1994). The classical distinction between Broca and Wernicke's aphasia would appear to provide compelling evidence for these claims. According to the traditional characterization of these disorders, patients with Broca's aphasia due to damage to left inferior frontal brain regions experience a loss or disruption of grammatical rules resulting in a deficit in syntactic comprehension. Conversely, patients with Wernicke's aphasia due to damage to left posterior temporal brain regions experience a loss or disruption in lexical-semantic representations resulting in a deficit in semantic comprehension (Ullman, 2001). This apparent double dissociation has been used to argue for supposing the existence of functionally specialized neural modules for lexical and grammatical representations.

Investigation of the nature of language impairments in aphasia reveals that the dissociation between production and comprehension or grammar and the lexicon is not as specific as has been previously suggested, and in fact may be more easily accounted for in terms of a general processing model. For example, Bates and Goodman (1997) argue that language impairment in aphasia do not provide convincing evidence of the dissociation between grammar and the lexicon, leading them to reject the view that these functions are mediated by domain-specific neural systems. More recently, Aydelott, kutas and Federmeier (2005) present evidence from some neurophysiological studies demonstrating that language comprehension is subserved by a distributed processing network involving multiple brain areas in both the left and right hemispheres, with no clear distinction between perceptual and conceptual processing. The results presented also demonstrate that the neural mechanisms involved in language comprehension are also responsible for the processing of other kinds of information, including the recognition of visual objects, with no evidence for a distinct language neural system.

Another issue that has tended to dominate theoretical discussions of modularity concerns the separation of distinct components of the grammar. Under this strong version of the modularity hypothesis, it has been assumed that language consists of submodules, which are functionally autonomous, with a restricted domain of analysis and processing (e.g., Fodor, 1983; Garrett, 1979). Selective syntactic deficits have been found in aphasic patients where other language abilities are relatively spared (e.g., Berndt & Caramazza, 1980; Caramazza & Zurif, 1976). This has been cited as evidence that the human brain contains an autonomous faculty or module dedicated exclusively to the representation and/or processing of syntax (Grodzinsky, 1995, 2000; Pinker, 1994).

The results of several studies of aphasia suggest that there is little evidence to support the view that the organization of the language system itself is modular (Blumstein, 1995). In particular, it has been found that there is no systematic correlation between a specific brain lesion and the presence of syntactic comprehension deficits (e.g., Caplan, Hildebrandt, & Makris, 1996; Dick *et al.*, 2001). Grammatical functions are also impaired in Wernicke's aphasia (Caplan *et al.*, 2004), and phonology is seen as distorted in the non-fluent as well as the fluent aphasias (Levy & Kavé, 1999). Language impairments in aphasia thus are not selective with respect to a particular component of the grammar nor do they reflect impairments to particular linguistic representations (Blumstein, 1995). Moreover, aphasic patients' deficits are argued not to reflect damage to specific language modules but rather processing impairments. This interpretation appears to be supported by several studies which show that neurologically intact individuals can be shown to exhibit patterns of linguistic impairment that mirror the various dissociations observed in aphasic patients when required to process spoken utterances under conditions of perceptual and cognitive stress (Dick *et al.*, 2001). This fact has been taken to support a distributive model of language in the brain, where language functions are distributed over several cooperating areas, rather than having any specific locus (Dick *et al.*, 2005).

In addition to the neuropsychological evidence against the modularity view, the issue of language resilience provides another evidence against the modularity perspective of language. There is considerable evidence that cortical tissue is quite plastic in that it can support different representations (Elman *et al.*, 1996). In particular, studies on children with early focal lesions and hemispherectomy tend not to show consistent differences between early left and right hemisphere injury in terms of language abilities (Dick *et al.*, 2005). Although these children show language processing delays in comparison with their age-matched peers, they show remarkably spared comprehension and production relative to adults with comparable focal lesions. This suggests, as proposed by Leech & Dick (2009), that the brain has some flexibility to reorganize such cognitive functions in children with early focal lesions and thus enables them to acquire normal language. These findings lend further evidence against the notion that language functions are localized within specific left hemisphere regions (cf. Leech & Dick, 2009).

Finally, under the modularity hypothesis, the assumption that language consists of submodules or components, such as phonological, syntactic, and semantic, which are functionally autonomous, is controversial. For example, most of linguistic theory posits a delimitation between syntax and semantics for language analysis purposes, but which in actual practice does not exist (Sidtis, 2006). These two "levels" commune and interact and signal each other incessantly (Bates & Goodman, 1997; noted in Sidtis, 2006). Further, their status as autonomous components in mental and cerebral processing is not recognized. Geschwind (1974) notes, we cannot expect every nameable feature; e.g., each theoretical

linguistic component, to correspond in some obvious way to a particular cortical location. As suggested by Finlay (2005:2006):

...cortical areas are not particularly important features of cortical organization, and most certainly do not correspond to "modules"—localized regions that do a distinct input-output computation and are functionally isolated. Rather, they are epiphenomena of a particular way of maximally specifying and fanning out information from thalamus to cortex, while allowing intracortical projections to recombine this distributed input quite widely and use prior activity (memory) and other current activity to recognize emerging patterns across this matrix.

Therefore, as will be discussed in the next section, it is unlikely that the components of language have a direct instantiation in localized areas of the brain.

B. Evidence from Brain Imaging Studies of Language Processing

From a linguistic viewpoint, it has been argued that the language components such as phonology, syntax, and semantics might yield a clearer picture of the neurology of language. However, the complexity of neural activation when the brain is engaged in simple language processing tasks as well as the complex nature of the interactions between phonology, semantics, and syntax poses a challenge to the study of these individual processes in language processing. These difficulties have played a significant role in modern functional neuroimaging techniques. Thus, much of the current research has focused on the possibility of identifying specific neurocognitive correlates of the processing of distinct language components. Both PET and fMRI have been extremely useful for identifying brain regions activated during processing of linguistic stimuli. In this section, we consider the extent to which neuroimaging data is reconcilable with this viewpoint.

1. Phonetic/phonological processing

Traditionally, anterior aphasias with frontal lobe lesions in Brodmann's areas (BA) 44 and 45 have been associated with phonological disturbances. Both anterior and posterior aphasias show disturbances in phonological aspects of language input and output (Caplan, 1992). As reviewed by Shafer and Garrido-Nag (2007), studies of speech perception show that primary auditory cortex (BA 41) and secondary auditory cortex (BA 42) are involved in speech perception. Different portions of these regions are activated in different types of processing. Activation in the bilateral superior temporal gyrus (STG) is observed for pre-lexical processing of phonetic features. The left posterior superior temporal sulcus (STS) shows particular activation for phonetic features and the right STG to melodic variation of speech. Mapping of speech onto lexical-semantic representations activates the left anterior portion of the STS (BA 22). An additional cortical area of activation has been described in the planum temporale (PT), part of Wernicke's area in posterior superior temporal cortex, which serves as a motor/sensory interface for any acoustic stimulus. Taken together, neuroimaging studies have shown that phonological processing involves posterior brain regions of the superior temporal gyrus (BA 41, 42, 22) for speech perception, and PT for interfacing with the motor system. It also has been suggested that left prefrontal cortex (BA 44/6) is activated in processing rapid transitions, such as those found in consonant-vowel syllables, and in accessing, sequencing, and monitoring phonemes (see figure 3).

2. Semantic/discourse processing

Wernicke's area is traditionally associated with semantic and discourse processing. Recent neuroimaging studies, as reviewed by Shafer and Garrido-Nag (2007), have shown that widespread anterior and posterior cortical regions are involved in semantic processing. Activation of the pars orbitalis of the left inferior frontal gyrus has also been observed while processing semantic relationships and/or retrieving semantic information, whereas the left superior temporal sulcus (posterior cortex) is activated in mapping between speech and lexical-semantic representations. In addition, activation of right cortical regions has been observed in pragmatic/discourse and prosodic functions, such as interpreting metaphors and morals, creating coherence, topic maintenance, and using prosody to interpret emotion. For example, BA 44/45, dorsolateral prefrontal cortex (BA 46), superior temporal cortex (BA 22), and angular gyrus (BA 39) are highly activated in topic maintenance. Findings from neuroimaging studies thus show that semantic/discourse processing is broadly distributed in both anterior and posterior regions of the left hemisphere, with right hemisphere activation commonly observed in pragmatic/discourse processing.

3. Syntactic/morphosyntactic processing

Neuropsychological studies associate damage to the left inferior frontal regions (BA 44 and 45) with syntactic and morphological deficits (Miceli & Caramazza, 1988). Brain imaging studies show that the pars opercularis in the left third frontal convolution, i.e. in and around Broca's area, is associated with syntactic processing (Caplan, Alpert, & Waters, 1998; Ni *et al.*, 2000; Stromswold, *et al.*, 1996). Recently, however, the role of Broca's area in syntactic processing has been challenged. According to Kaan and Swaab (2002: 355), neuroimaging findings suggest that "syntactic processing recruits not one brain region but multiple areas that are not each uniquely involved in syntactic tasks." It has been proposed that different parts of the brain may be involved in different aspects of syntactic processing, such as encoding, storage, and lexical processing (Kaan & Stowe, 2002; Keller, Carpenter, & Just, 2001; Stromswold *et al.*, 1996). In a recent study, Moro (2008) proposes that Broca's area is selectively involved for syntax within a complex net that also involves the activation of subcortical portions of the brain. It is its interaction with the caudate nucleus that constitutes a network that is specifically involved in syntax.

As far as morphosyntactic processing is concerned, imaging studies show that regions in left prefrontal cortex are involved in processing of morphosyntactic information (see figure 3). In particular, the premotor cortex (BA 6), pars

opercularis, and putamen (basal ganglia structure) are activated in learning and recognizing simple grammars with phonological encoding, and pars opercularis and triangularis (BA 44/45) are activated in recognizing higher-level grammatical patterns. In posterior cortical regions, the anterior portion of the left superior temporal gyrus is also activated in processing morphosyntactic information (Friederici, *et. al*, 2003). Generally speaking, imaging and neurophysiological studies indicate that left anterior regions, including Broca's area and basal ganglia subcortical structures, are highly activated in early and late aspects of morphosyntactic processing (for a review, see Shafer and Garrido-Nag, 2007).

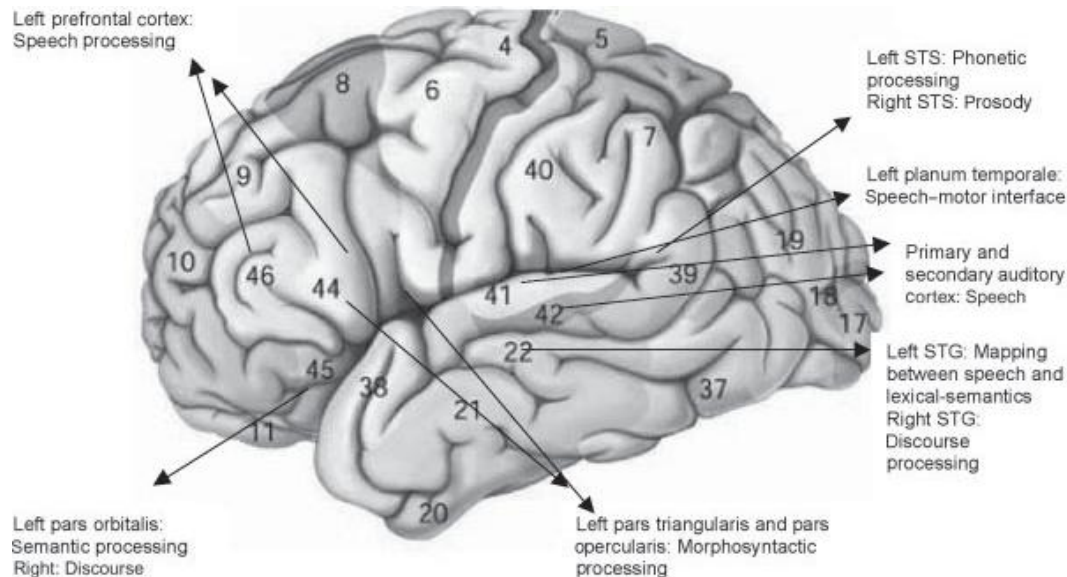


Figure 3: Brain structure–language function relationships. Brain regions typically activated during (1) phonetic/phonological processing related specifically to speech perception, (2) morphosyntactic processing, and (3) semantic/discourse processing. Adapted from Shafer and Garrido-Nag (2007).

In spite of indisputable correlations between particular language components and certain neurocognitive processing domains, many recent studies argue against the one-to-one mapping principle between cognitive functions and the activations of a single area. For instance, Bub (2000: 468; as quoted in Beaton, 2004: 235) convincingly argues that one should not be attracted by “the hidden tendency to assume that the pattern of activation seen in the final image is a literal description of neurons firing to a particular task demand.” Beaton (2004) further elaborates that lack of PET activation does not mean lack of brain activity. Thus, the patterns of activation reported in published papers do not necessarily identify those neural areas involved in a given task. Moreover, to claim a critical role of cortical structures in language processing does not mean that they are uniquely dedicated to language functions (Saygin, *et al.*, 2003). This implies that the appearance of a particular processing effect is not necessarily to claim domain specificity for that area. On the other hand, many of the elements of the neural net underlying different aspects of language are also involved in the performance of other cognitive tasks (Kaan & Swaab, 2002), in interaction with other brain regions (Heim, Opitz, & Friederici, 2003). On this view, a particular cognitive function is most likely served by a wide range of cortical areas, rather than by one local area alone. In addition, a local area participates in more than one function and thus challenges the notion that language-related areas subservise language-related functions only. Consequently, “although it is theoretically possible that there is a well-defined cortical (or other) region of the brain corresponding to the theoretical linguist’s “syntactic component,” it is just as possible in theory that such a component corresponds to the intersection of several such regions, or even to no anatomically well-defined region, but rather results from the complex interaction of diverse neural circuits” (Jenkins, 2000: 65). However, this does not mean that different areas of cortex are not specialized for different components of the language processing system. It only means that the one-to-one mapping principle between a single anatomical region and a particular cognitive process and vice versa is in many cases not an adequate account of how cognitive functions are neurally instantiated (cf. Hagoort, 2006; Moro, 2008).

In sum, findings from brain imaging studies suggest that language processing activates a complex neural network of primarily left fronto-temporal brain regions in concert with a number of other areas such as the basal ganglia (Bornkessel-Schlesewsky & Schlewsky, 2009). The two most directly involved areas of this Perisylvian network are an inferior frontal region and a superior temporal region, (Broca and Wernicke’s areas respectively). These two areas are connected with each other as well as with multiple regions of the temporal, parietal, and frontal lobes (Mesulam, 2010). The precise role of Broca’s area in language functioning has been questioned as will be highlighted in the next section.

IV. BROCA’S AREA AND LANGUAGE SPECIFICITY: A MULTIFUNCTIONALITY PERSPECTIVE

Since the influential work of the French neurologist Paul Broca (1861), Broca's area has represented one of the most challenging areas of the human brain. A preoccupation of aphasia research has been the role of Broca's area in language. Broca's claim recognized that the posterior part of the left Inferior Frontal Gyrus (IFG) was of critical importance for speech production. Many functional imaging studies support this claim. For example, studies have shown the involvement of inferior frontal cortex in language production (Kim *et al.*, 1997; Petersen *et al.*, 1988), and in syntactic as well as phonological processing (Friederici *et al.*, 2003). Recent neuroimaging and neuropsychological studies challenge the specificity of the role of Broca's area for language processing and suggest that Broca's area or parts of (Brodmann's area 44) subserve other cognitive functions in addition to speech and hence may be part of human inferior premotor cortex (Binkofski and Buccino, 2004). For instance, several recent experiments have shown that Broca's area seems to be involved in the processing of musical sequences (Koelsch *et al.*, 2000; Patel, 2003), the imagination of movement (Binkofski *et al.*, 2000) and the perception of the rhythm of movement (Schubotz & von Cramon, 2003). It has also been observed that listening to complex music and mentally rehearsing music activates much the same areas as language, i.e. both Broca's and Wernicke's (Hickok *et al.*, 2003; as noted in Stowe, Haverkort & Zwarts (2005)

In addition, Broca's area may play some role in language comprehension. This assumption seems to be supported by several studies showing that Broca's aphasics, in addition to their deficits in production, are also impaired in speech comprehension. Deficits are more evident when patients were tested with verbal material requiring syntactical understanding (Caramazza and Zurif, 1974; Caplan, Hildebrandt & Makris, 1996). Consequently, an alternative view on the role of Broca's area in language processing has been proposed, according to which Broca's area supports syntactic processing in both production and comprehension, while Wernicke's area supports lexical semantic processing (cf. Stowe, Haverkort & Zwarts, 2005).

Recently, the key role of the left inferior frontal gyrus (Broca's area) in syntactic processing has been questioned on the grounds that studies typically involve task and stimulus demands may activate brain regions that overlap with those involved in linguistic computations, making it difficult to differentiate between linguistic and non-linguistic processes (Tyler *et al.* 2011). As reviewed by Stowe, Haverkort & Zwarts (2005), recent neuroimaging evidence show that the left inferior frontal gyrus plays some role in comprehending sentences when processing is more difficult, but combined with the simple sentence results, they suggest that the left inferior frontal gyrus is not exclusively dedicated for syntactic processing. More recently, in a functional neuroimaging study of the linguistic performance in patients with left hemisphere damage and healthy participants, Tyler *et al.* (2011) have found that the left inferior frontal gyrus may not itself be specialized for syntactic processing, but plays an essential role in the neural network that carries out syntactic computations. This net involves a variety of brain areas co-activated with the left inferior frontal gyrus, including the right inferior frontal gyrus, bilateral superior temporal gyrus, left middle temporal gyrus and a more posterior temporo-parietal cluster including left inferior parietal lobule, left angular gyrus and left supramarginal gyrus. This suggests that the left inferior frontal gyrus plays an essential role within the neural language network, and that differential modulation within this network underpins different types of linguistic computations (Tyler, *et.al.* 2011).

It is evident that the view that Broca's area is a language-specific area can no longer be held in the light of evidence from recent imaging studies and lesion studies. From this view, Hagoort (2006: 246) argued strongly that "it would be a serious mistake to assume that Broca's area is a language-specific area." Instead, besides the classical Broca and Wernicke's areas, several additional distributed cortical and subcortical neuronal structures of both hemispheres clearly make a significant contribution to language function. Imaging and electrophysiological studies have identified an enlarged frontal region engaged in speech and language and Hagoort (2006:251) has called this enlarged area "Broca's complex," which refers to a series of related but distinct areas in the left prefrontal cortex, at least encompassing BAs 47, 45, and 44 and ventral BA 6. This set of areas subserves more than one function in the language domain and almost certainly other nonlinguistic functions as well. In the context of language processing, activation of this region is seen while experimental subjects engage in semantic (BA 47 and 45), syntactic (BA 45, 44, 46) and phonological processing (BA 44, 6). Broca's complex is thus involved in at least three different domains of language processing (semantic, syntactic, phonological), with substantial overlap (see figure 4). Thus, localizing Broca's region in the context of a functional imaging study analyzing linguistic material, or a lesion study of Broca's aphasia may refer to completely different areas with different cytoarchitecture, connectivity and, ultimately, function (Amunts 2008).

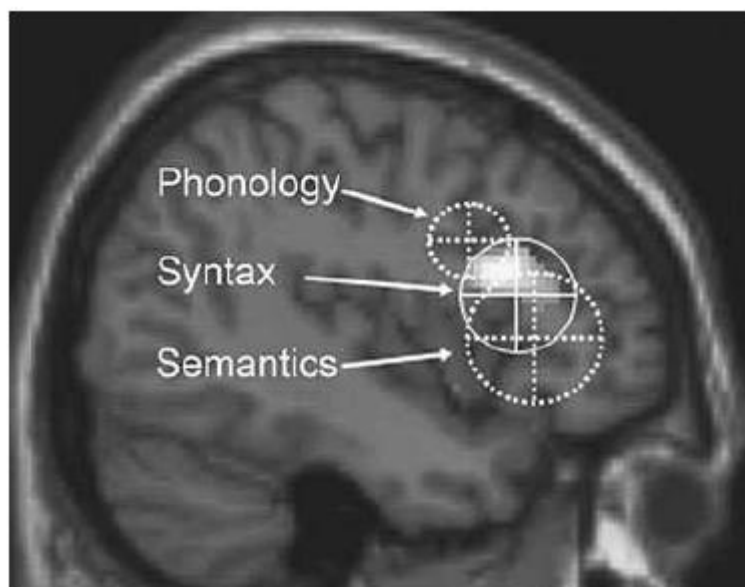


Figure 4: The gradient in left inferior frontal cortex for activations and their distribution, related to semantic, syntactic, and phonological processing. Adapted from Hagoort (2006).

Given the multiplicity of functions associated with Broca's area, a crucial question that arises is: Due to what extent one can claim a functional specificity to Broca's area? According to the connectionist model (e.g., Pulvermüller 2003), neurons develop billions of connections in a massively parallel network, in which no action or perception could be considered to have a single or simple "impulse." The brain activates many interconnected cortical nodes that are likely to participate in the function of more than one network. In this conception, Broca's area receives its specificity as part of a specialized network. It has been noted that particular neuroanatomical regions, including Broca's area, change their functions consequent upon the simultaneous activation of other regions that are effectively connected to a given region (cf. Fink *et.al.* 2006). Hence, context-dependent interactions within networks of areas determine the functions of the constituent areas. This notion of a distributed architecture of brain function suggests that a particular area may be part of different networks and hence its involvement in different functions depends on the input it receives in a given task context.

V. CONCLUDING REMARKS

One of the major hopes in investigating the neural correlates of language has always centered on the possibility of identifying the location of language in the brain. In fact, the results of deficit-lesion studies and neuroimaging studies have revealed much about the brain-language relationship though the issue of the neural organization of language remains a largely unexplained issue in view of the brain's complexity. Functional imaging findings reveal an array of brain areas involved in language processing, many of which are in conflict with long held assumptions about brain-language relationships. Not only the tradition of linking language-related functions with particular brain regions has been questioned, but a completely new perspective is also being offered. There is no single 'language area,' and it is likely that there is no language-specific area in the brain devoted to a specific function. A crucially important finding from such research is that the brain activates complex neural networks dispersed across both the left and the right hemispheres, even for simpler acts of cognition (Hellige, 2010). Therefore, any proposal of hemispheric specialization, such as saying that language depends on a relatively small area of the cortex or that a certain brain region can be exclusively dedicated to a certain function is unconvincing.

The same kind of consideration holds with regard to the postulation of a "language organ or module" (cf. Anderson and Lightfoot, 2002). Within current linguistics, the view of the brain as a "tabula rasa" for language has led some researchers to speculate that the brain consists of highly specialized language areas and/or circuits. The idea is also central to generative linguistics, i.e., the view that the language faculty is a module of the mind separate from other cognitive functions (Chomsky 1987). Such claims, however, are problematic as they opened the way to unnecessary entailments and to considerable misuse of the ideas that gave linguistics a bad name. Marshall termed this view of linguistics "the new organology" (Marshall, 1980:23). One reason for this is that so far, despite intensive research, no one has been able to find this organ or module. It is perhaps plausible to argue, as Jenkins (2000) did, that the proposition that there is a mental organ for language does not entail the proposition that the neural basis for such a mental organ is exclusively identified with any particular localized area. Rather, it "must be understood to include neural language circuitry with a possibly quite complex topological distribution" (Jenkins 2000:65).

Generally speaking, the findings uncovered by recent functional imaging research, reviewed in the present paper, suggest that language, as a special cognitive faculty, requires the interaction of numbers of highly integrated systems of the brain. This interaction involves both hemispheres as well as cortical and subcortical structures (Metter, 1995). Moreover, findings in the cognitive electrophysiology of language processing has made it clear that none of the ERP effects discovered to date seems to be unique to language processing. Neuroimaging data clearly suggest that key neural networks dedicated to language functions partially subserve nonlinguistic functions, such as executive system function, working memory, or attention control, which contribute reciprocally to aspects of language performance (Cahana-Amitay & Albert, 2014). These data, therefore, do not provide any evidence for the hard-wiring of anything as specific as language. Rather, it suggests a conception of language not a single process but a massively interconnected one; a neural network of cortical and subcortical regions, which participate in the performance of other cognitive processes in addition to language. Consequently, it is reasonable to argue, as Aydelott, Kutas, Federmeier (2005) did, that language specialty lies in being a cognitive faculty that requires such efficient and intricate integration of so many domain-general abilities, functions, and information sources.

The conclusion, thus, is that language does not have a dedicated set of cognitive/neural structures to draw upon. Rather it is a cognitive faculty that is intimately embedded in the general cognitive network. From this point of view, the proposal that there is an autonomous mental organ for language does not entail the proposition that the neural correlates for such a mental organ refer to discrete neural structures, but rather as a collection of interconnected neuronal pathways whose activation is related to language. This renewed view of the biological bases of language has challenged the classical assumptions about modularity, domain specificity, and the characterization of language disorders in terms of damage to language-specific processing modules. Researchers nowadays know that such a rigid locationist theory is implausible for two reasons: one function involves more than one cortical area and more than one portion of the brain. Conversely, the cortical areas and the portions of the brain that are involved can play a role in other functions as well. However, evidence from physiological studies and deficit analysis indicates that the conception of modularity of language functions is useful provided that these functions participate in more diffusely distributed processes (cf. Kertesz & Wallesch, 1993). Thus, Carston (1997: 20; as quoted in Hudson, 2007:6) notes that "we have to rethink the concept of module and allow for a kind of continuum, from peripheral perceptual systems, which are rigidly encapsulated (not diverted from registering what is out there), through a hierarchy of conceptual modules, with the property of encapsulation diminishing progressively at each level as the interconnections among domain-specific processors increase." This suggests that a model of brain functioning needs to include both a localization and a distributed processing perspective.

Despite a great deal of progress has been made in understanding the neural mechanisms that underlie language, the problems of relating neural structures and dynamics to specific cognitive functions, including language processes, are many. Indeed, functional imaging techniques have been useful in identifying the areas that become active during linguistic stimuli as well as in identifying several neural interfaces among language, cognitive, motor, and sensory processes (cf. Cahana-Amitay & Albert, 2014). However, to the best of my knowledge, even the use of such modern research techniques has not definitively answered how and exactly and precisely which cortical-subcortical structures are involved in language functions. A significant challenge has been the manner in which the different elements of the neural networks work and coordinate their activity to execute the complex functions they support (Hellige, 2010). To identify the network of connections throughout the brain that deal with this uniquely human ability and its brain substrates, including the functional contributions of nonlinguistic skills, is a major challenge for the neurosciences in the twenty-first century (Friston, Harrison & Penny, 2003).

Finally, this overview of the current state of knowledge on topics related to brain-language relations clearly indicates that the field of brain-language search is still at its infancy with numerous exciting avenues for future research. There has been extraordinary progress made in recent years in genetics, embryology, and developmental neuroscience. New and important discoveries may come from the use of electrophysiological techniques such as transcranial magnetic stimulation (TMS) or evoked potentials (for a review of these techniques, see Calvin and Ojemann, 1994.) Finally, in vivo brain investigation makes use of a combination of neuroradiology and computer science in order to produce investigative techniques such fMRI or PET. Research using these techniques may open new perspectives on how human brain supports language functions. One important aspect of this enterprise is that it is truly multi-disciplinary, involving cooperation between linguistics, psychology, genetics, neuroanatomy and other related disciplines.

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Developing a Religious E-program for Student Self-learning of Culture and Translation

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Abstract—Scanty research has been conducted on the development and assessment of religious e-programs for students' self-learning of culture and translation, so this research investigates the effectiveness of an education-oriented e-program of poetic divination lots. Drawing on e-learning concepts as theoretical guidance, an e-program was developed by converting religious materials into a digital, multimedia program for cultural and translation learning, featuring a blend of verbal, visual and audio elements, not reduced to verbal presentations. To evaluate its effectiveness, a questionnaire-based survey was conducted. As high as 93.3% of respondents express that they are satisfied with the content design as they can learn Chinese cultural references and allusive stories. The same high appreciates the program's conceptual impact as they realize the reformative role of religious materials. Meanwhile, as high as 90% of respondents agree to learn translation by contrasting Chinese texts and their English translations and identify their linguistic differences. However, only 76.7% of respondents support e-learning features, suggesting some room for future improvements in the multimedia technology. Overall, since the findings show a generally positive reception, we cannot overemphasize the value of innovating traditional religious materials with new technologies for student self-learning of culture and translation.

Index Terms—a religious e-program, poetic divination lots, multimedia e-learning, culture and translation learning, a questionnaire-based survey

I. INTRODUCTION

With the rapid growth of e-programs and web-based information for the individual's knowledge acquisition in recent years, the informal learning or outside-class education has become easier than before. In spite of this, never has any religious program been developed for students' self-study of culture and translation education. Also, no much research (Buddenbaum, 1981; Johnson, et.al., 1997) has been conducted on the assessment of religious e-programs from the perspective of computer-aided culture and language learning. Thus, the present article examines how a religious e-program can be developed following multimedia-mediated e-learning principles. All the discussions address two themes: 1) how the religious materials such as divination lots can be converted into digital, educational programs by consulting the principles of e-learning and 2) student respondents' reception of the reformative religious e-program for culture and translation learning.

Research motivation

Over the past decades, iPods, iPads, smartphones, MP3 players, and computers with broadband Internet connections have been widely used and have contributed to the formation of a networked information society in which people access all kinds of digital and web-based information for knowledge acquisition. This way of accessing information has also affected the way students acquire knowledge. In response to the trend, many scholars (Figura & Jarvis, 2007; Ma, 2007; Moreno & Mayer, 2000; Wagener, 2006) confirmed that e-learning and computer-aided learning can be treated as an effective user-centered approach to language learning. Mayer (1989, 2001), Kiraly (2011) and Nyirenda (2013) proposed some principles for developing and implementing multimedia-enabled e-learning. Inspired by them, the author of this article decides to use information technologies to transform poetic divination lots into educational resources for students' self-study of culture and language/translation although some e-programs of its kind are available on the market for the commercial purpose of fortune telling.

Drawing on multimedia concepts as the theoretical guidance, the author developed a religious e-program. Its content differs from the others of its kind because it supplements allusive stories of the tiles of the divination lots and end-notes of cultural references. Technically, it combines background music and pictorial materials to increase its vitality. Linguistically, it includes English and Japanese translations in parallel with its Chinese version. The integration of multimedia elements and the supplementary translations not only enrich the content but also diversify its educational function.

However, as Hassan (2001) has put it, the development of e-learning material needs to make clear "how to effectively use multimedia capabilities to create a richer and more appealing learning experience" (p. 55). Thus, the author conducted a questionnaire-based survey to investigate the audience's reception after she developed the e-program. The procedures of this research are therefore structured by three phases—theoretical review, material development, and effectiveness assessment. The reviewing of multimedia e-learning literature gives full support to the know-how of developing the e-program in the preparation phase. A description of the e-program relates to the notions of multimedia

e-learning in the execution phase, and the assessment of the effectiveness of the e-program is done in the post-implementation phase.

Purpose of the study

The religious e-program is unlike other computer-aided language-learning programs as it provides cultural and linguistic information for passive learning, or more exactly, for self-learning in the free style. Neither exercises of gap-filling, multiple-choice, sequencing, matching nor quizzes or tests are given to check the users' learning performance. A zero-stress learning setting is expected to create for the users, so they can learn without pressure. They learn to acquire cultural and linguistic knowledge, not for high scores. Native Chinese students may use the e-program to understand better their own ancestors' cultural heritage and the international audience may use the e-program to increase their knowledge about Chinese culture by reading English and Japanese translations. An important concept behind the development of the e-program is to put old wine of religious materials in the new bottle of multimedia technology and make it take on new meaning of educational function in the computing era.

Thus, this research has two objectives: 1) to develop an e-program by converting religious materials into educational resources for student learning of Chinese culture, cultural references, and English translation, and 2) to check if users favor the program and change their previous concept of religious materials. For this reason, the research focuses will be: 1) how the education-oriented e-program is developed by following the principles of multimedia e-learning and 2) what is users' reception of the education-oriented e-program and how it affects their concept of religious materials. With the help of multimedia and information technologies, daily-accessed religious materials have witnessed a great opportunity of being retextualized and being innovated into digital e-programs. Thus, we can take this chance to explore how far the reformative materials with the function of cultural and language education can benefit students.

II. THE COGNITIVE THEORY OF MULTIMEDIA LEARNING

Since the author proposes developing an e-program in accordance with some concepts of multimedia learning, the relevant literature of Mayer (2001), Kiraly (2011) and Nyirenda (2013) will be reviewed. Many scholars (Mayer, 1989; Mayer & Gallini, 1990; Mayer & Anderson, 1991, 1992; Mayer et. al., 1996) claim that multimedia learning has a lot of benefits. For Basham et. al.(2010), Duff & Lester (2008) Rogerson-Revell (2007) and Nyirenda (2013), multimedia learning can improve learners' performance and make language learning more accessible. For Kiraly (2011), multimedia learning can motivate students' learning. In light of so many benefits, we believe that the development of an e-program by blending words, pictures, sound and story-telling can maximize its educational effectiveness.

Mayer (2001) declares that it is important to enhance the effectiveness of multimedia learning by retaining information in the audience's memory, so both words and pictures can be used together, not words or pictures alone. The use of the dual types of presentation is because human information processing system has dual channels "for visual/pictorial and auditory/verbal processing" and "each channel has limited capability for processing" (Mayer, 2001, p. 41). Thus, the incomplete processing of words in the verbal channel can be complemented by using the pictorial images that are processed in the visual channel. Some teaching experiments have shown that the students who receive words and pictures together can retain and transfer the information better than those who receive only words (Mayer, 2001; Rosenberg, 2001). From Kiraly's (2011) point of view, some visual learners are stimulated by images while others prefer the sound, so we should add images and sound to texts in the multimedia-aided education. Nyirenda (2013) holds a similar concept that to meet the needs of many different types of learners, online video may be provided to visual learners and streaming audio is prepared for auditory learners. Following these concepts, the author has developed an e-program by combining some multimedia elements to empower its functions and boost student interest. In addition to the use of pictures to account for the theme of each allusive story, the voice of narrating all stories and end-notes targets the students who favor learning by listening, not by reading. The voice of narration is expected to create contextualized information in the e-learning environment (Diehl & Hagenberg, 2004; qtd. in Gruber, 2015) and engage the learners in the auditory context. Meanwhile, music is played in the background to create a classical and old-time atmosphere.

In compliance with Mayer's (2001) principle of spatial contiguity that argues for putting words and pictures close to each other, the author put all the pictures next to the allusion stories in the e-program. When the verbal text is inadequate for the audience to understand the meanings, the visual pictorial element can immediately give them a cognitive support. The purpose of using the allusion stories that are adapted from the web-based information is to boost the users' interest, meeting with Kiraly's (2011) proposal of activating the learner's imagination through story-telling. Telling a story helps visualize the context and promote the learner's understanding through imagination. However, the allusion story only presents the core messages, not specific details, so the audience can focus on the important, relevant information to understand core messages quickly. This point accords with Mayer's (2001) principle of coherence in multimedia program design, which emphasizes the exclusion of extraneous words, pictures and sounds. Above all, a conclusion is made that a blend of word, sound, music, pictures and stories in the religious e-program have met the requirements for a successful e-learning program.

III. DEVELOPING A RELIGIOUS E-PROGRAM

In a distinctively different manner, the remodeled education-oriented multimedia e-program consists of not only divination lots in honor of Goddess Guanyin of Mercy but also relevant allusion stories, cultural notes and English, Japanese translations. Cultural notes are added to explain the implicit meanings of special words, Chengyus and fixed phrases in the poetic divination lots. For example, in No. 1 poetic divination lot, a note of “Tian-Kai-di-pi,” a Chinese Chengyu, which suggests a naturally-formed thing (extracted from *Jinci*), is added to explain the meaning of the Chinese Chengyu, “Tian-Kai-di-pi”. Furthermore, to optimize the understanding of the international audience, English and Japanese translations are provided because English is the *lingua franca* and Japanese is increasingly being learnt by the young generation in Taiwan under the impact of Japanese culture. Furthermore, an increasing number of Japanese tourists have visited Taiwan in recent years, so students may learn the religious culture in English or Japanese. If an opportunity admits, students may introduce what they have learnt to foreign tourists. Figure 1 shows the homepage of the education-oriented e-program and its operational features.



Fig. 1 The homepage of the education-oriented religion e-program Note. Produced by the author of this article

In the following, Figure 2 shows the English (left) and Japanese (right) translations that contain poetic divination lots, endnotes and allusion stories. Cross-references between Chinese texts and English or Japanese translations enable users to learn the translations of some words or some sentences.

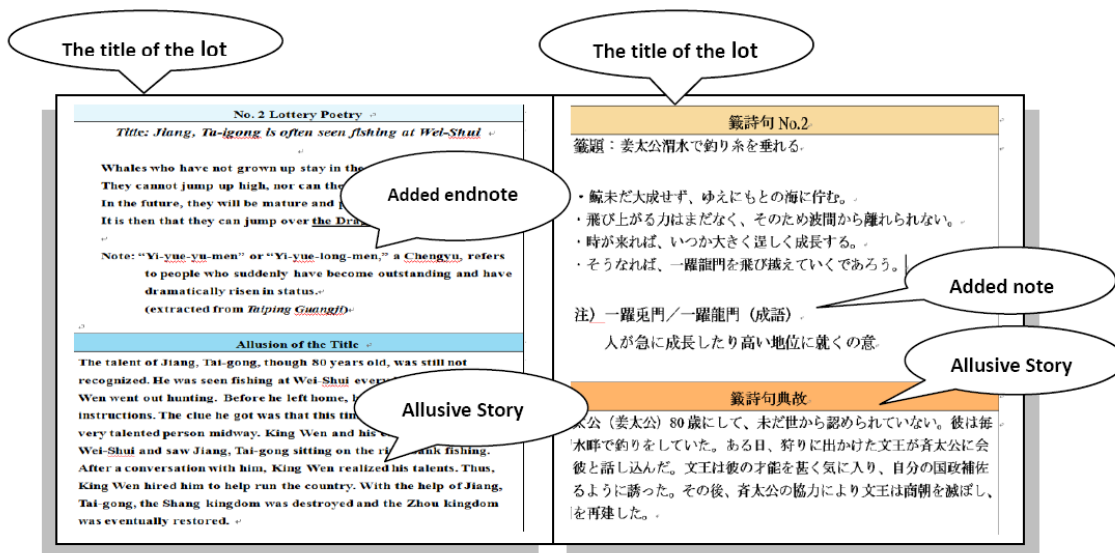


Fig. 2 The English and Japanese translations Note. Produced by the author of this article

To allow users to understand the themes of allusive stories easily and quickly, each story is given a picture with key words on it. Figures 3 and 4 show the pictures of the allusive stories of No. 38 and No. 39 divination lots. Looking at the pictures with the four words “Bèi chǔ guī hàn” (lit: Betray Chu and follow Han) and the five words “Mí-Héng tǎ huáng zǔ” (lit: Mi-Heng serves Huan-Zu), the audience could roughly figure out the main messages the two allusive stories want to deliver. No. 38 suggests that a general left the king of Chu to follow the king of Han; and No. 39, a person named Mi Heng was sent to serve Huang Zu..



Fig. 3 The picture of No. 38

Fig. 4 The picture of No. 39

Note. Produced by the author of this article

The above pictures add vitality to the stories and expect to trigger the audience’s interest. Compared to other religious e-programs, the added pictures are the significant selling point and render the e-program more attractive to student learners or program users. All the pictures are painted by three university students, with one who majors in art and the other two who are good at painting. They were paid to paint and agreed to authorize the author to use their paintings in her e-program and her academic research.

IV. THE QUESTIONNAIRE DESIGN

Administering a questionnaire is necessary because the above education-oriented religious e-program is a reformative material and needs to know the users’ reception before it is formally introduced to more students and other teachers. The participants for the questionnaire-based survey are twenty-four students, including twenty undergraduate students who major in English and business, and four graduate students who were studying in the MA-level program of translation and interpretation.

The content of the questionnaire consists of four sections, including content, translation/language choice, e-learning and conceptual impact. Each section has five selection questions. In addition, there are two open-ended questions for participants to answer freely. They all know the purpose of doing the questionnaire and agree to allow the author to use their responses for her academic research. Table 1 shows the five selection questions in the section of content.

TABLE 1
THE CONTENT-SPECIFIC SELECTION QUESTIONS AND CHECKING POINTS

Variable	Items	Checking points
Content	1-5	<ul style="list-style-type: none"> ■ Checking if end-notes allow users to understand the meanings of Chengyus and fixed phrases better. ■ Checking if allusive stories allow users to learn some famous historical figures in ancient China. ■ Checking if users can learn moral lessons from the allusive stories. ■ Checking if users can understand the true meanings of special words by reading endnotes. ■ Checking if the cultural content allows users to understand better some cultural information they have learnt previously and elsewhere.

Note. Produced by the author of this article

The content-specific questions above aim to elicit the respondents’ view about the function of culture learning by reading endnotes of cultural references and the allusive stories. Table 2 shows the translation-specific selection questions.

TABLE 2
THE TRANSLATION-SPECIFIC SELECTION QUESTIONS AND CHECKING POINTS

Variable	Items	Checking points
Language	6-10	<ul style="list-style-type: none"> ■ Knowing if users may learn Chinese-to-English translation by making a cross-reference between Chinese and English versions. ■ Knowing if users benefit from the English translations to learn how to use cultural references in correct English. ■ Knowing if users may learn some Japanese words from Japanese translations. ■ Knowing if users may learn to tell stories in English after learning from the English translations. ■ Knowing if users may learn English or Japanese pronunciation of some words by listening to the voice of narration.

Note. Produced by the author of this article

The translation-specific section intends to know if the e-program allows for a successful learning of Chinese-to-English or Chinese-to-Japanese translations. Specifically, it helps examine if users may learn how to

translate cultural references in English. More importantly, it aims to probe if the users can learn how to tell a story using correct English after reading all the allusive stories in English. It is also hoped to investigate if users who are interested in Japanese can learn some Japanese words by listening to the voice of narrating Japanese translations. Table 3 indicates the selection questions in the section of e-learning.

TABLE 3
THE E-LEARNING SELECTION QUESTIONS AND CHECKING POINTS

Variable	Items	Checking points
E-learning	11-15	<ul style="list-style-type: none"> ▪ Examining if pictures motivate students' learning. ▪ Examining if the cute logotypes boost users' interest. ▪ Examining if users enjoy the classical music played in the background. ▪ Examining if the voice of narration helps users concentrate on reading. ▪ Examining if a blend of pictures, voice and music optimizes the effectiveness of e-learning.
E-learning	16-20	<ul style="list-style-type: none"> ▪ Probing if a blend of words, pictures and voice enables users to acquire information impressively. ▪ Probing if short allusive stories help users to easily remember the messages. ▪ Probing if users associate pictures with stories easily since they are near each other. ▪ Probing if integrating texts and the voice helps users to remember the messages impressively. ▪ Probing if the pictures with key words help users to remember the pictorial content impressively.

Note. Produced by the author of this article

The e-learning section aims to investigate if multimedia features of the e-program may motivate users' learning and help them remember the messages impressively. Table 4 shows a focus on the conceptual impact of the e-program.

TABLE 4
THE SECTION OF CONCEPTUAL IMPACT AND INVESTIGATING POINTS

Variable	Items	Investigating points
Concept impacts	20-25	<ul style="list-style-type: none"> ▪ Investigating if users have recognized the educational function of poetic divination lots ▪ Investigating if the e-program enables users to have a different view about poetic divination lots. ▪ Investigating if users agree to convert religious materials into an educational e-program. ▪ Investigating if users agree to shift the function of poetic divination lots from its conventional religious purpose to an innovative educational goal. ▪ Investigating if users agree to restructure poetic divination lots with the multimedia technology to achieve the purpose of public education in the computing era.

Note. Produced by the author of this article

The above section checks if users agree to the educational function of the remodeled e-program and if they recognize the importance of restructuring traditional religious materials into educational resources in the computing era.

V. FINDINGS

The statistical results of the questionnaire show that the overwhelming majority of respondents evaluate the e-program positively. With respect to the content design, all the respondents (24/24) agree that they can learn the meanings of Chengyus, fixed phrases and allusive stories of famous historical figures in ancient China. They also claim that the e-program allows them to review the cultural information they have acquired elsewhere. Also as high as 83.3% (20/24) agree that they can use endnotes to understand the genuine meanings of Chinese cultural references. However, 16.7% of them (4/24) do not agree that they can get moral lessons from the stories. One possible reason is that the young audience does not read stories with a reflective manner. They just want to enjoy reading the stories without pressure. In the second section, we find that all the respondents (100%; 24/24) agree to the learning of English translation and the identification of linguistic difference between English and Chinese. But 16.7% of them (4/24) do not think they can tell stories in correct English and use English to translate Chinese cultural references after they use the e-program, suggesting that the effectiveness of e-learning cannot be proven within a short time.

With regard to the effectiveness of multimedia-mediated e-learning, we notice that as high as 66.7% (16/24) argue that pictures and cute logotypes alone cannot motivate their learning, and 33.3% (8/24) of them do not enjoy the classical music played in the background. The two findings warn us that the single multimedia element such as the pictorial materials is not enough and needs to be supported by other elements. On the other hand, the background music might distract some respondents' attention, so we need to reset it. However, 66.7% of respondents (16/24) agree to put pictures near the allusive stories so they can associate them easily. The overall findings show that 76.7% of respondents agree to the effectiveness of multimedia-supported e-learning, but 22% of them have no comments, and 1.3% of them disagree. In reply to the conceptual impact of the program, there is a generally positive reception, similar to their responses to cultural information input. All of them agree that divination lots may be used for culture learning, not singly for fortune-telling. Figure 5 shows the respondents' reception in the four areas.

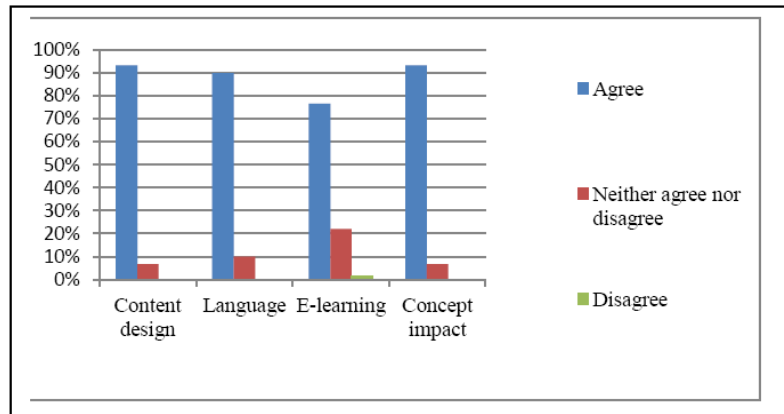


Fig. 5 Users' receptions of the religious e-program
Note. Produced by the author of this article

In addition, the respondents' feedbacks to two open-ended questions in the questionnaire are quite individual and this finding suggests that users of the program have different concerns and focuses. Table 7 shows some quotes transcribed from the respondents' comments.

TABLE 7
FEEDBACKS TO THE FIRST OPEN-ENDED QUESTION

Question 1	Quotes
What are your impressive points about the e-program?	It has three languages for choice, so I can learn Chinese-to-English translation.
	Three languages for choice is a good design and meet different users' linguistic needs.
	I can compare the linguistic differences between Chinese and English.
	I am impressed by the voice of narration; it sounds fascinating to me.
	The design of the spin of wheel and the cute logotypes attract my attention and enhances my interest.
	A combination of texts and pictures motivates my learning.
	Allusive stories are presented in three languages; they allow me to learn the English translation from Chinese.
	The pictures for divination lots motivated my learning.
	The Chengyus and allusive stories in three languages are impressive to me.

Note. Produced by the author of this article

In spite of their different responses, most of them favor a choice from three languages. Clearly, the verbal presentations in different languages benefit the users to learn translation and attract the users with different nationalities. Table 8 shows some respondents' feedbacks about their learning experiences.

TABLE 8
FEEDBACKS ABOUT THE SECOND OPEN-ENDED QUESTION

Question 2	Quotes
What is your overall experience of using the e-program?	It is useful to understand our ancestors' cultural heritage by reading the allusive stories and cultural references.
	The endnotes increase our knowledge of cultural references.
	This innovative e-program can be used to transmit Chinese culture to every corner of the world.
	Not only native Chinese speakers but also international audience can use this e-program to learn Chinese culture.
	The e-program allows us to use English to learn Chinese culture.
	It is a joyful experience to learn Chinese culture in English.
	The e-program has words, pictures and sound, so it is attractive to us.
	We enjoy reading allusive stories and learn some historical figures in ancient China.
	Reading the endnotes enhances my knowledge of Chinese cultural references.

Note. Produced by the author of this article

Above all, we reach a conclusion that the education-oriented e-program is conducive to the public's self-study thanks to its verbal presentation in three languages and its multimedia features. At this point, we confirm that re-textualizing the conventional religious materials in multiple languages with the multimedia technology enables the traditional stuff to generate new meanings and benefit more people for the educational purpose.

VI. DISCUSSION & IMPLICATION

The results of the questionnaire-based survey have suggested some merits and demerits of developing the religious e-program for culture and translation learning. We may discuss them in the areas of content design, translation/language choice, multimedia features and conceptual impact as follows.

Content design

As shown in the results of the questionnaire, as high as 100% (24/24) of respondents agree that reading allusive stories allows them to review and re-learn Chinese cultural and historical information they have gained from other resources. Also, an overwhelming majority of respondents claim that reading endnotes enables them to learn the genuine meanings of Chinese Chengyus and fixed phrases. Since the impact of cultural globalization has made many Chinese natives overlook their own culture, the e-program can be used to help the young generation to learn their ancestors' valuable cultural legacy. For example, they may learn that Xiao-He helped Liu-Bang to establish the Han Dynasty, but he was killed by the queen, and that Li-Bai, a great poet in Tang Dynasty, was framed and drank wine for emotional relief. He died of drowning when he got drunk one day. All the respondents expressed that reading the allusive stories enabled them to learn Chinese history and culture. Thus, the effectiveness of the e-program is justified in terms of its content design.

However, this e-learning program has no quizzes because it tries to create a zero-pressure learning setting. It is not used to test how much cultural knowledge and translation skills students have learnt. Probably for this reason, some respondents (4/24; 16.7%) reserved their attitude towards the effectiveness of using the program to learn English translation and story-telling in correct English. For me, any language learning takes time and efforts, so this e-program cannot justify its efficiency simply based on the results of a questionnaire-based survey.

Translation/ language choice

All the respondents are positive about the translation/language-specific benefits of the e-program. As high as 100% of respondents (24/24) expressed that they could use the e-program to compare Chinese and English versions, and identify their linguistic differences. This suggests that students can make cross-reference between Chinese texts and English translations, so they can learn the skill of code-switching between two languages by themselves. In fact, not many digital materials on the market provide students a chance of learning the English translations of Chinese idiomatic expressions and Chengyus, so all respondents highly confirm the translation/language-specific function of the e-program. Noticeably, many respondents agree that the e-program is friendly for the global audience as they can read the texts in English. As a result, the multi-lingual verbal presentations of the e-program help students learn Chinese-English or Chinese-Japanese translation easily, and also helps international readers access the cultural information easily.

Multimedia features

Instead of using words alone, the education-oriented e-program has transformed its presentation from a conventional single medium to a blend of audio-visual components. The use of hybrid multimedia elements, not a single one, is a crucial factor to attract the users of the e-program. According to the questionnaire, many respondents pointed out that pictures or cute logotypes alone could not motivate users' learning, but when texts, pictures, voice of narration and music were integrated, the vitality of the program would mount and users' interest would be enhanced. This finding meets with Mayer's (2001) and Rosenberg's (2001) argument that the pedagogical effectiveness is often derived from the use of more than two types of multimedia elements rather than a single type. A combination of verbal, visual and audio elements reduces the reader's cognitive efforts to interpret the messages, so they can acquire cultural and lingual knowledge more easily.

However, contrary to the author's initial assumption that music and words together could enhance the user's interest, the findings showed that as high as 33.3% (8/24) did not enjoy listening to the background music. My inference is that some users do not want to be disturbed by music when reading a text, and for this reason we may separate music from texts, allowing users to choose freely—to play or not to play music when they read texts. Furthermore, most of respondents favor cultural endnotes. A possible reason is that each endnote is short, so it is easy to read and remember. Since the audience's span of attention is low when reading information on the computing devices, short information is more appealing to them. This point accords with Mayer's (2001) coherence principle in multimedia learning, arguing for the use of key messages without irrelevant and redundant information. However, not all the respondents agree to an association of nearby pictures with texts, not supporting Mayer's principle of spatial contiguity.

Conceptual impact

Many of us think that religion texts should not be modified because they represent Gods' words and ultimate truth. However, in the digital era, the need of cloud mining for adequate information has affected the way people define the function of divination lots. Due to the public's flexible view, religious information may be re-textualized and customized to a new function by integrating them into the computing technology. The results of the questionnaire-based survey have indicated that young audience can accept the reformative role of poetic divination lots. They can think outside the box and accept the new role of religious materials. For them, divination lots do not need to be advisory or instructional; rather they can be converted into digital materials for student self-learning of culture and translation.

VII. CONCLUSION

With technological innovation, much research into culture and language e-learning has been undertaken and its topics cover the course design, teaching method, tutor intervention and relevant others (Sharpe & Benfield, 2005). Unlike them, the present paper conducted a probe into a religious e-program for culture and language/translation learning purpose. Many respondents' positive reception has supported the effectiveness of converting religious materials into a

digital program with multimedia elements. At a time when people look for cultural and linguistic/translation information acquisition by using diverse resources, the e-program of divination lots can be added to students' list of references for self-learning in the future.

APPENDIX. THE STATISTICAL RESULTS OF THE QUESTIONNAIRE

Areas	Variables	No.	Agree	Neutral	Disagree
Content	Chengyu and fixed phrases	1	100%(24/24)		
	Stories of famous historical figures	2	100%(24/24)		
	Moral lessons of allusion stories	3	83.3%(20/24)	16.7%(4/24)	
	True meanings of special words	4	83.3%(20/24)	16.7%(4/24)	
	Review of cultural information	5	100%(24/24)		
	Total		93.3%(112/120)	6.7%(8/120)	
Language Translation	Chinese-to-English translation	6	100%(24/24)		
	Cultural references in English	7	83.3%(20/24)	16.7%(4/24)	
	Classical and vernacular Chinese	8	100%(24/24)		
	Story-telling in English	9	83.3%(20/24)	16.7%(4/24)	
	English pronunciation learning	10	83.3%(20/24)	16.7%(4/24)	
	Total		90%(108/120)	10%(12/120)	
E-learning	Motivated learning with Pictures	11	33.3%(8/24)	66.7%(16/24)	
	Motivated learning with logotypes	12	33.3%(8/24)	66.7%(16/24)	
	Enjoyable background music	13	66.7%(16/24)	33.3%(8/24)	
	Concentrated reading with the voice	14	100%(24/24)		
	Increasing interest with a blend of pictures, voice and music	15	100%(24/24)		
	Impressive learning with multimedia	16	100%(24/24)		
	Easy remembering of short stories	17	100%(24/24)		
	Easy cognitive association	18	66.7%(16/24)	33.3%(8/24)	
	Easy remembering of messages through texts with voice together	19	100%(24/24)		
	Easy remembering of pictures with key words on the pictures	20	66.7%(16/24)	20.8%(5/24)	12.5%(3/24)
	Total		76.7%(184/240)	22%(53/240)	1.3%(3/240)
Conceptual Impacts	Culture learning, not fortune-telling	21	100%(24/24)		
	Language learning	22	83.3%(20/24)	16.7%(4/24)	
	Technological restructuring for public's education	23	83.3%(20/24)	16.7%(4/24)	
	Acceptance of the religious e-program for a new function	24	100%(24/24)		
	Acceptance of modifying divination lots for the public's education	25	100%(24/24)		
	Total		93.3%(112/240)	6.7%(8/120)	
	Total		88.3%	11.4%	0.3%

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The Analysis of Students' Listening Proficiency Viewed from Their Different Learning Styles after Getting the Strategy Instructions

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Abstract—The students' listening cognitive and metacognitive problems should be overcome with an effective listening strategy instruction. Besides, their learning style as the individual learners' differences should be taken into account in getting a satisfactory listening outcome. To seek the solution, the present study aimed to find out quantitatively the effectiveness of implementation of Explicit (Meta)-cognitive collaboration strategy instruction (M-CCSI) and top-down strategy instructions (TDSI) toward the students' listening proficiency viewed from their learning styles. The participants of the study were 50 Javanese EFL students at Muria University of Kudus, Indonesia. The data were gathered by using a listening proficiency test adopted from Longman TOEFL listening section and a questionnaire of visual, auditory, and kinesthetic (VAK) learning styles. Descriptive statistics, Independent Sample t-test, and Friedman two-way analysis of variance revealed that the experimental group has a significant effect of their listening proficiency after treated by using M-CCSI. Meanwhile, the control group has no significant effect on their listening proficiency after dealt with by using top down strategy (TDSI) as a general listening teaching. On the other hand, the result of two-way analysis of variance reveals that students' listening proficiency was not influenced by learning styles including visual learners, auditory learners, and kinesthetic learners for both experimental group and control group. Thus, the findings imply that it is not essential for the lecturers of listening course to divide students into different learning styles in applying Explicit M-CCSI.

Index Terms—explicit (meta)-cognitive collaboration strategy instruction (M-CCSI), top-down strategy instruction, listening proficiency, and VAK learning styles

I. INTRODUCTION

Most EFL student teachers in Indonesia possess an old perception that listening is a passive skill among the other three English language skills. That attitude makes them ignore the crucial goal of listening practices that are leading to a communication failure (Vandergrift & Goh, 2012). It is in line with the results of preliminary research of interview to ten EFL student teachers at Muria University of Kudus and University of Muhammadiyah Semarang that six of them avoid listening class and consider listening as a difficult skill to master.

Besides the old perception, EFL student teachers have also had the difficulties of cognitive strategies. The general problems in listening are related to cognitive listening strategies such as limited vocabulary mastery (Field, 2008; Vandergrift & Goh, 2012; Chang, 2007; Goh, 2000; Kelm & Horwitz, 2006), unfamiliar pronunciation (Goh, 1997; Goh, 2000) of common words. Other listening problems involved the difficulty in recognizing key words (Goh, 1997; Palmer, 2014). These issues are relevant to the results of the interview in preliminary research, for instance, three learners out of ten interviewees highlighted this point of view. Their problems of listening mastery are unfamiliar sounds of words and the differences they read in written text and what they listen. Meanwhile, three students had the problems dealt with metacognitive strategies as well as the lack of the background knowledge (Goh, 2002). They perceived that the unfamiliarity of contents related to oral texts makes them hard to get in charge in mastering listening class.

Based on aforementioned cognitive and metacognitive problems, a cognitive strategy instruction collaborated with metacognitive one was applied to help the listening instructors trace the source of these listening difficulties in EFL learners. However, many researchers investigated metacognitive strategy instruction separately for implementing cognitive one. In fact, the cognitive strategy instruction should be included in listening class because it helped students to find out the solution of their listening problems.

However, not only listening strategy instruction should be taken into account in getting a satisfactory listening outcome, but educator in teaching listening should also consider other factors like individual learners' differences. Ellis (2005) states that there are seven factors in explaining individual learner differences, which is beliefs, affective state, age, aptitude, learning style, motivation, and personality. As one factor in learning, the study of learning style also needs to be paid attention. When educators know their students' learning styles, they can facilitate their learners to learn better with appropriate teaching strategies. Hamdani (2015) asserts that knowing and recognizing student's learning style can promote the education quality and make it more appropriate for the individual learner.

According to Oxford in Xu (2011), learning styles and learning strategies can work together with a given instructional methodology. Ellis (2005) asserts the optimal type of instruction will be related closely to the individual learner's preferred approach to learning. In addition, Gilakjani (2011) states if the educators recognize their students' learning styles, the educator can find out the most appropriate teaching technique for making students understand faster. They will comprehend about the education setting, teaching methods and learning strategies to make students feel comfortable in the learning process and vice versa. However, most researchers just focused on the effectiveness of listening strategy instruction on listening comprehension, but few consider students' learning styles in the learning process of listening class. Therefore, it is necessary for the lecturers to know what their students' learning styles are in order to facilitate the students in understanding the process of teaching and learning efficiently. Knowing students' learning styles can assist students to determine their strengths and weaknesses to find the correct way of learning (Gilakjani, 2011; Xu, 2011). Thus, they can have a clearer picture of the learning process, and more awareness of learning process.

Considering identification the aforementioned research background, the experimental research on listening strategy instruction should be conducted to overcome students' listening difficulties (Field, 2008). Relevant to that Field's statement, the implementation of effective listening teaching instruction based on the students' problems was conducted to enhance the students' listening proficiency that was analyzed from a moderator variable. Thus, this study was carried out to investigate the effectiveness of Explicit M-CCSI as the proposed technique in teaching listening compared with TDSI on students' listening proficiency as an existing method viewed from students' learning styles.

II. LITERATURE REVIEW

A. *Explicit (Meta)-Cognitive Collaboration Strategy Instruction*

Explicit (meta)-cognitive collaboration strategy instruction (M-CCSI) is the clearly stated instruction of metacognitive strategies and cognitive strategies. These strategies were conveyed to make students aware about what kind of strategies that were used in teaching and learning process. Metacognition is defined as a construct having to do with thinking about one's thinking or the ability to recognize one's mental processes (Nelson in Rahimi & Katal, 2012). Therefore, metacognitive strategies point out the methods applied to enable students understands the way to learn. Making them aware of the strategies used in the learning process, they can get in charge in every stage of the learning activities. Holden in Serri et al. (2012) states metacognitive strategy instruction involves conscious management and regulation over learning process, like planning, concentrating and monitoring.

Meanwhile, cognitive listening strategy instruction can enable learners to overcome their listening difficulties. According to O'Malley and Chamot in Guan (2014), cognitive strategies are defined as mental works that utilize directly on succeeding information, employ the language to improve learning achievement. Based on Vandergrift's taxonomy (1997), common cognitive strategies in second language listening involves making an inference, elaborating, summarizing, translating, transferring, resourcing, grouping, note-taking, deduction/induction, and substitution.

Practically, the implementation of listening strategies between cognitive and metacognitive cannot be separated in the process of teaching. Field (2009) states that to distinguish between cognitive and metacognitive strategies in teaching is arduous for a listening lecturer. Metacognitive strategies in one context are possible to be cognitive in another. Therefore, cognitive strategies and metacognitive strategies were run simultaneously. In the present study, this M-CCSI was implemented based on steps displayed in Fig. 1. The first stage of Explicit M-CCSI as planning for listening class was taught by explaining the goal of listening class and the activation of their background knowledge. The students were taught about the strategy of activating their previous experience related to the learning topics.

The second stage was related to monitoring comprehension. It was carried out by asking learners to understand how to listen to the keywords based on the information of the oral text, and then they listen to the audio oral text from computer and then complete some activities to sharpen their listening comprehension. To make students understand more about their task, they were explained to do note-taking strategy before they listened for the second time for practicing that strategy.

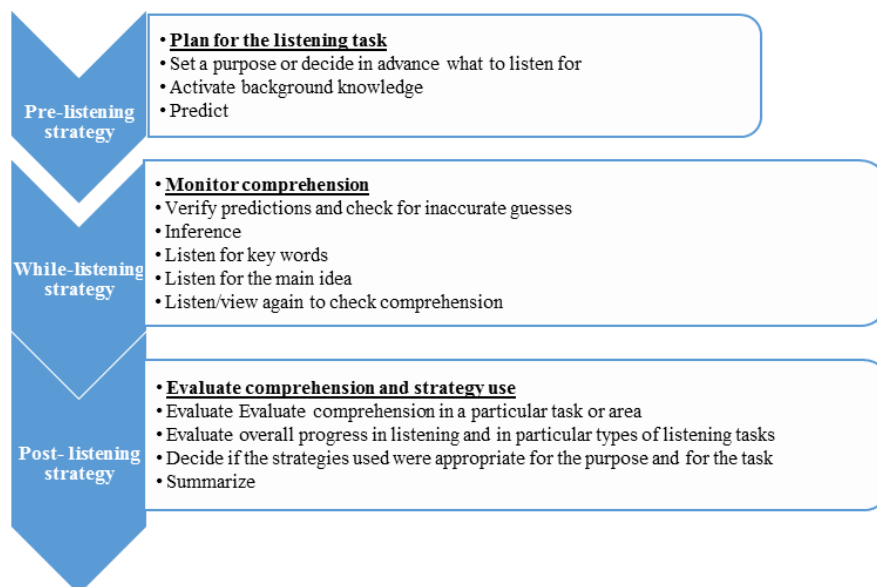


Figure 1. The Steps of (Meta)-Cognitive Collaboration Strategy Instruction

Finally, the learners were invited to have the third listen for doing the next task. The third stage was post-listening activities. The lecturer evaluated students' listening comprehension in a particular task. The students were also requested to determine the appropriate strategies they had learned for better understanding of the oral text.

B. Top down Strategy Instruction

Top-down strategies are the model of the listening process that the listener actively constructs the original meaning based on listening to oral text and its clues. In this reconstruction process, the listeners employ their prior knowledge of the context and situation in which listeners can comprehend what they hear (Nunan, 1994). In this view, the listeners should consider the context of situations well as to each other and prior events such as knowledge of the topic at hand, the speaker or speakers, and their relationship to the situation. These strategies are closely related to larger units and general meaning of a listening text in order to identify smaller ones such as word-level knowledge to find out the phonemes (Field, 2008). In the process of listening instruction, students discuss the topics then they have to find out the most important pieces of information and must do extensive activities to listen for the overall meaning.

Various activities have been conducted to utilize the instruction process of top down strategies as top down strategy instruction (TDSI) as a general strategy instruction that is used for teaching listening in Muria University of Kudus. In this study, the lecturer directly asked students to do the tasks of pre-listening without explaining what kind of strategy they would follow. During listening activities, the students were requested to do the test related to the materials they were listening. They then did the next exercise of word building related to the terms that they had listened to the recording. Finally, in post-listening activities, the lecturer instructed students to summarize the information they had listened.

C. Learning Styles

There are various definitions of learning styles. MacKeracher in Gilakjani (2011) defines that learning styles are the manner in which individuals perceive and process information in learning situations and environment. They are the approaches dealing with learners' preference of learning behavior (Flowerdew & Miller, 2005). Kolb & Kolb (2005) also state that learning style draws the differences in the way learners prefer employing in their learning process. Therefore, the teachers or lecturers are necessary to know what their students' learning styles to facilitate them in comprehending the process of classroom instruction.

There are several kinds of learning styles, but visual, auditory and kinesthetic (VAK) styles are commonly used to classify learners in the learning process. They are widely observed in the education history to reflect on the importance of identifying learner's characteristics to enable effective education as recent studies (Gilakjani, 2011; Ocepek et al., 2013; Hamdani, 2015; Dascalu et al., 2015; Vasileva-Stojanovska, et al., 2015). First, visual learners do not prefer to learn by verbal explanation. Reading and charts, pictures, and diagram are very close to their learning. They prefer to study by reading the text, comprehending diagrams and pictures, power point presentation (Brown, 2007; Xu, 2011). They quickly understand materials by taking descriptive notes when the materials are being explained.

Second, auditory learners prefer to learn through comprehending verbal information and oral explanation. Gilakjani (2011) states these students find out information through pitch, emphasis, and speed. They are enthusiastic to master the lesson by listening and talking to others (Xu, 2011). According to Brown (2007, p.129), "auditory learners like better to acquire knowledge from lecturers and audio information in the classroom." They may not have a full understanding of

information that is written. Third, Kinesthetic learners are very interested in physical activities and practical process. They study best by following the learning process actively by movement (Xu, 2011; Gilakjani, 2011). Thus, they study well to understand the materials from practical activities, demonstrations, and bodily movement.

III. METHOD

The present study was analyzed quantitatively in order to examine the effectiveness of implementation of collaboration between cognitive and metacognitive strategy instruction and top-down strategy instruction as independent variables toward the students' listening comprehension. The scores from the listening test are the dependent variables, and students' learning styles including visual, auditory and kinesthetic are moderator variables. Specifically, we address the following questions: which one is more effective between teaching listening comprehension by M-CCSI in the experimental group and TDSI in control group on students' listening proficiency? To what extent is the effectiveness of teaching listening for visual learners, auditory learners and kinesthetic learners between experimental group and control group? How is the relationship among M-CCSI, TDSI and students' learning styles on students' listening proficiency?

The participants of study were the third semester students at Muria University of Kudus (UMK) of the academic year 2016-2017. There were fifty EFL student teachers as a sample that was taken from seventy-seven as population. Twenty-eight learners were in experimental class, and twenty-two learners were in control class.

The data were gathered by using a listening proficiency test and a questionnaire. They were used to identify the potential predictive power of selected variables on the effectiveness of M-CCSI and TDSI on learners' listening proficiency viewed from students' learning styles. The first instrument is listening proficiency test that was adopted from listening section of TOEFL Test in order to find out the students' listening comprehension that has been influenced by the ten weeks intervention program. TOEFL has been the most widely used in recent researches of listening skill (Ahour & Bargool, 2015; Attarzade & Farahani, 2014; Ching-Shyang Chang, 2007; Guan, 2014; Hariri, 2014; Hayati, 2000; K. Jafari & Hashim, 2012; Moradi, 2013; Rahimi & M. Katal, 2013; Sarandi, 2010; Selamat & Sidhu, 2013; Serri et al., 2012). The students did the pre-test before conducting treatment of applying the strategy instruction to find out homogeneity and reliability. After the 10-week listening strategy instruction, they did a similar test as a post-test. The test was given in both experimental and control groups.

The second instrument was VAK questionnaire. The 36 items of statements were arranged adapted from various sources with visual, auditory, and kinesthetic (VAK) learning styles model adapted from various sources (TCM, 2017; Honey & Mumford, 2006; Honey, 2006; Mansur HR, 2013; Gilakjani, 2011). The VAK learning style questionnaire consists of 36 items with Likert scale i.e., Number 1 (never), 2 (rarely), 3 (sometimes), and 4 (often). Before applying in the process of the research, the items of statements were validated from 45 items that were arranged. They were validated statistically after they have been tried out to 16 EFL student teachers at University of Muhammadiyah Semarang. Every piece of the questionnaire statements was completed by Indonesian translation so that they responded the questionnaire attentively and did not have a misunderstanding. After getting the analyses results, the students then were classified into three groups including visual learners, auditory learners, and kinesthetic learners.

The findings were analyzed quantitatively. They were analyzed using descriptive statistics, independent sample test, paired sample test, and Friedman two-way analysis of variance by analyzing 3 x 2 factorial model of the experimental design.

IV. RESULTS

A. *The Comparison of Effectuality of Explicit M-CCSI Compared with TDSI on Students' Listening Proficiency*

The pre-test was given to the experimental and control learners in order to know their listening proficiency before getting treatments. Before analyzing the data, the normal distribution test and homogeneity test was conducted. The sample of this research was tested using pre-test questions item to see whether the distribution of the data is normal or not. In consequence, the sample score should be tested, so that the researcher can be continued using parametric analysis and non-parametric analysis. The normal distribution was "a spread of cases resembling the normal curve, with most cases concentrated near the mean" (Ary et al., 2009, p. 646). In this research, the normal distribution of the sample was proven that the statistical analysis resulted that P-value of students' pre-test of experimental and control class was the same value ($0.20 > 0.05$) based on Kolmogorov-Smirnov^a. Moreover, the Asymp. Sig. (2-tailed) of the level of significance of students' post-test score between experimental class and control class were more than 0.05. Because P-value was bigger than the standard error, the prerequisite of normality test was fulfilled and could be continued to next statistical analyses.

After analyzing the normality test, homogeneity of variance was taken from the participants' score of the pre-test. This test of Homogeneity was conducted "to assess the inter-item consistency of the items on a test" (Ary et al., 2009, p. 245). Miles and Huberman cited in Cohen et al. (2007, p. 176) assert that "the homogeneous sampling focuses on groups with similar characteristics". The homogeneity test of variance based on the Levene statistical results has the total of significant value is > 0.05 ($0.159 > 0.05$). It can be concluded that students' listening proficiency for both classes between experimental and control class was homogenous. Thus, they were selected as the sample of the research to find

out the effectuality of teaching listening by using Explicit M-CCSI for Experimental Group and TDSI for control group on students' listening comprehension. Then, the homogeneity of variance was taken from the learners' score of post-test indicated that the significant value of students' listening proficiency was higher than 0.05. It means that the variants data of experimental class and control class were homogenous then were continued to be analyzed using independent sample t-test.

The comparison of statistical effects of the treatments on students' listening proficiency was analyzed using independent sample t-test. Table 1 demonstrates that there is a significant influence on students' listening proficiency after conducting the treatments with the 10-weeks listening strategy instruction using the Explicit M-CCSI. The students in the experimental group have a better achievement of listening proficiency than those in the control group. It proves that the collaboration of Explicit two instructions between metacognitive strategy instruction and cognitive strategy instruction is very beneficial in enhancing students' listening proficiency.

TABLE 1.
THE RESULTS OF INDEPENDENT SAMPLES TEST FOR POST-TEST BETWEEN EXPERIMENTAL AND CONTROL CLASS

		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Posttest score	Equal variances assumed	2.752	.104	-4.434	48	.000	-6.53896	1.47478
	Equal variances not assumed			-4.574	47.991	.000	-6.53896	1.42959

B. The Effectiveness of Explicit M-CCSI on Visual, Auditory and Kinesthetic Learners' Listening Proficiency between Experimental Group and Control Group

The Descriptive Results of Students listening proficiency viewed from learning styles in Experimental presented in Fig. 2 was analyzed based on the students' pre-test and post-test scores. The post-test was held to determine whether or not students' listening proficiency have improved after the learners got the treatment of Explicit M-CCSI.

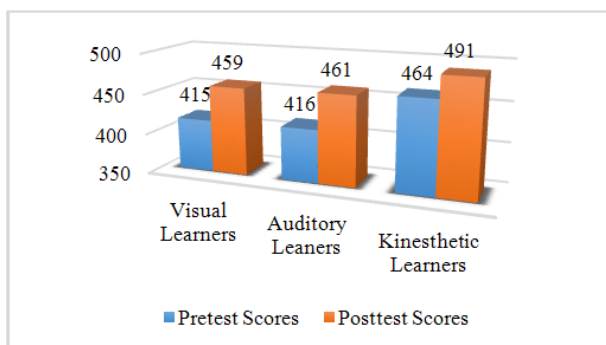


Figure 2. The Improvement of Students' Listening Proficiency Viewed from their Learning styles in the Experimental Group

As shown in Fig. 2, the students' listening proficiency got an improvement after getting treatment of Explicit M-CCSI. It can be definitely seen that the average scores of visual, auditory as well as kinesthetic learners were comparatively higher than their pre-test score. The visual learners and the auditory learners got almost similar improvement, i.e., 10.6% and 10.8%. Meanwhile, the kinesthetic learners had the highest score in both pre-test and post-test, but they just got a slight increase of the score with only 5.6% improvement. The results show that the Explicit M-CCSI could be implemented for teaching students who have various learning styles.

After describing the average scores of students' listening proficiency, the data were analyzed statistically to find out the effectiveness of the experimental treatment on student teachers' listening proficiency viewed from VAK learning styles. As a result, Paired Sample Test shows significant differences of visual, auditory, and kinesthetic learners' listening proficiency after Explicit M-CCSI was carried out as demonstrated in Table 2.

TABLE 2.
THE RESULTS OF PAIRED SAMPLES TEST FOR PRE-TEST AND POST-TEST SCORE VIEWED FROM THEIR LEARNING STYLES IN CONTROL CLASS

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Visual learners	Pre-test- Post-test	-44.000	35.963	11.372	-69.726	-18.274	-3.869	9	.004
Auditory Learners	Pre-test- Post-test	-44.54545	21.61649	6.51762	-59.06761	-30.02330	-6.835	10	.000
Kinesthetic Learners	Pre-test- Post-test	-27.14286	22.88689	8.65043	-48.30970	-5.97602	-3.138	6	.020

Table 2. shows that the probability score or sig. (2-tailed) for visual learners is 0.004, for auditory learners is 0.000, and for kinesthetic learners is 0.020. The scores are lower than $\alpha = 0.05$ that means that can be considered statistically

significant. These findings imply the listening proficiency of visual, auditory, and kinesthetic students got significant improvements of their listening proficiency after having the instruction of Explicit M-CCSI.

C. The Effectiveness of Implementing TDSI to Visual, Auditory, Kinesthetic EFL Student Teachers' Listening Proficiency

The students' post-test scores and pre-test scores were analyzed to find the improvement of listening proficiency. Fig. 3 shows the descriptive results of students' listening proficiency viewed from learning styles in control group that was taught by TDSI.

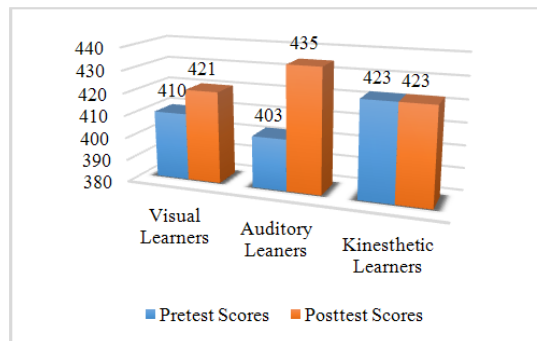


Figure 3. The Improvement of Students' Listening Proficiency viewed from their Learning styles in the Control Group

The graph presented in Fig. 3 shows that there has been a larger increase in auditory learners' listening proficiency with 12.9% improvement than the visual learners' with only 2.7% growth. On the contrary, the listening proficiency of kinesthetic learners did not get the increase in the same score (423) either pre-test or post-test. Furthermore, to find out the effectiveness of implementing TDSI to visual, auditory, kinesthetic EFL student teachers' listening proficiency, the paired sample test was scrutinized as presented in Table 3.

TABLE 3.
THE RESULTS OF PAIRED SAMPLES TEST FOR PRE-TEST AND POST-TEST SCORE VIEWED FROM THEIR LEARNING STYLES IN CONTROL CLASS

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Visual Learners	Pre-test-Post-test	-11.42857	30.78342	11.63504	-39.89849	17.04135	-.982	6	.364
Auditory Learners	Pre-test-Post-test	-32.50000	45.73474	22.86737	-105.27418	40.27418	-1.421	3	.250
Kinesthetic Learners	Pre-test-Post-test	.90909	21.65851	6.53029	-13.64129	15.45947	.139	10	.892

The significant values for visual, auditory, kinesthetic learners are higher than significance level with the score 0.364, 0.250, and 0.892. Hence, it can be claimed that the mean scores of the students' post-tests of listening proficiency are not significantly different. Due to the fact, all students' listening proficiency from different learning styles did not get a significant improvement of their listening proficiency after implementing TDSI in control group.

D. The Effectiveness of Explicit M-CCSI in Enhancing Students' Listening Proficiency Compared to TDSI

In analyzing the improvement of students' listening proficiency viewed from their learning styles, the N-gain analyses were used (Meltzer, 2002; Hake, 1998; McKagan et al., 2017). The researcher calculated the findings of pre-test and post-test mean scores of visual, auditory, kinesthetic, and overall learners both in the experimental group and control group. In addition, the visual representation of the students' improvement in their listening proficiency before and after the application of Explicit M-CCSI and TDSI can be seen in Fig. 4. The results of N-Gain displays the increase of students' listening score in experimental group was higher than students' listening score in control group. It also discloses clearly that all various students including visual, auditory, and kinesthetic learners got a better improvement of their listening proficiency than visual, auditory, and kinesthetic learners in control group.

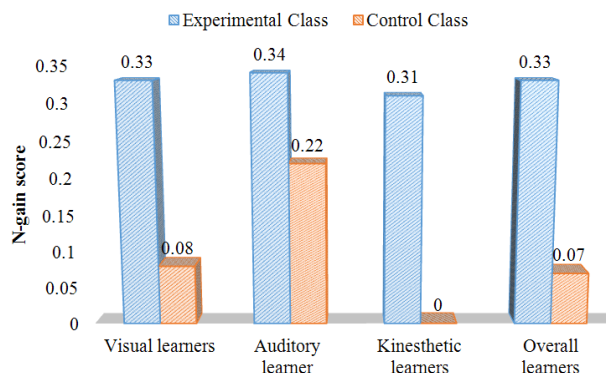


Figure 4. The Comparison of N-Gain Score between Students' Listening Proficiency in Experimental and Control Group viewed from their learning styles

Moreover, the improvement of students' listening proficiency has also been analyzed based on the classification of the enhancement of each group of students with different learning styles. The classification used in this study refers to Hake's category including "High-g, Medium-g, Low-g" (Hake, 1998). Thus, the improvement of students' listening proficiency who have a visual learning style preference in experimental group got a moderate increase with N-gain 0.33 as Medium-g, but the visual learners in control class only got low gain with $0.07 < 0.3$.

After implementing the Explicit M-CCSI, the N-gain of auditory learners got the medium improvement with the score 0.034. On the other hand, the auditory learners who got TDSI had the score $0.22 < 0.3$ as low improvement. For the kinesthetic learners, the instruction of Explicit M-CCSI make their N-gain as others learning style students as the medium growth with the score at the rate of $0.7 > (0.31) \geq 0.3$. In contrast, they who got TDSI did not get improvement at all with the score 0.0.

To sum up, the medium gain happened for all students with different learning styles after getting the application of Explicit M-CCSI. Overall students got 0.33 as gained the medium improvement. Meanwhile, Overall students who got TDSI only got low gain with the score 0.07. It means they just got low enhancement of their listening proficiency.

E. The Interaction among M-CCSI, TDSI and Students' Learning Styles on Students' Listening Proficiency

The interaction among students' listening comprehension and their learning styles was analyzed by using Friedman two-way analysis of variance disclosed in Table 4. The results show that learning styles has no significant effects on listening comprehension with $F=0.996$, $P=0.377$ ($p>0.05$). However, the M-CCSI has a significant impact on students' listening comprehension than TDSI with $F=18.339$, $P=0.000$ ($p<0.05$).

TABLE 4.
THE INTERACTION AMONG M-CCSI, TDSI, AND THE STUDENTS' LEARNING STYLES ON THEIR LISTENING PROFICIENCY

Dependent Variable: TOEFL Score Post Test					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	642.845 ^a	5	128.569	4.812	.001
Intercept	191874.743	1	191874.743	7181.092	.000
Learning style	53.234	2	26.617	.996	.377
Group (experiment & Control)	490.008	1	490.008	18.339	.000
Learning style * group	73.234	2	36.617	1.370	.265
Error	1175.655	44	26.719		
Total	220279.000	50			
Corrected Total	1818.500	49			

a. R Squared = .354 (Adjusted R Squared = .280)

V. DISCUSSION

The analysis result in Fig.1 elucidates that visual, auditory, and kinesthetic learners have a better listening proficiency after getting the treatment of M-CSI, but the visual, auditory and kinesthetic learners in control class without implementing M-CSI have no significant improvement of their listening proficiency. Those results can be concluded that M-CSI can be implemented in teaching listening course to students who have various learning styles among visual learners, auditory learners, and kinesthetic learners in order to enhance their listening proficiency.

The findings (Table 4) also reveal there is no statistically significant different score among visual, auditory, and kinesthetic learners after getting treatment of M-CSI. In other words, this M-CSI can be implemented for students with various learning styles. This concurs with the findings of Hamdani's (2015) study that after analyzing students based on visual, auditory, and kinesthetic learning styles at Sohar University in Sultanate of Oman, there is no dominant learning style among them. Moreover, the findings are in line with M. Jafar's & Sadeghi's (2015) studies revealing students' foreign language achievement viewed from students' learning style categories are not significantly different.

Surprisingly, these findings are not in line with the study conducted by Hsueh-Jui (2008) that listening strategy use was significantly associated with learning styles for Taiwanese university EFL students. The findings are also not supported by Bidabadi & Yamat' (2012) findings that all educators should be aware of students' learning styles and their English listening comprehension level in order to choose the methods of teaching EFL learners. The reason why this study is not in line with those studies (Hsueh's, 2008; Bidabadi & Yamat's, 2012) is the average score of students' preferences based on VAK learning style questionnaire among visual learners, auditory learners, and kinesthetic learners are not highly different. Therefore, the findings imply that it is not essential for the lecturers of listening course to divide students into different learning styles dealing with VAK styles in applying Explicit M-CCSI.

However, the influence of Explicit M-CCSI treatment in control group analyzed by using Independent Sample Test and two-way ANOVA indicates there is a significant difference of students' listening proficiency between experimental group and control group that was taught by TDSI. Thus, the collaboration of metacognitive and cognitive strategy instruction was effective to be applied for teaching listening in order to make students better in mastering spoken language. This effective way of Explicit M-CCSI is relevant with Field's statement that between metacognitive and cognitive strategy instruction cannot be separated (Field, 2008). Furthermore, generally, the significant effect of the listening strategy instruction on students' listening proficiency is corroborated by some studies (Amin, 2011; Selamat & Sidhu, 2013, Birjandi & Rahimi, 2012; Hariri, 2014; Guan, 2014).

VI. CONCLUSION

This study shows that Explicit M-CCSI is the effective listening strategy instruction to enhance the students' listening proficiency. Overall, it is believed that the findings provide the empirical evidence that EFL student teachers should be able to actively and selectively choose the strategies to master their listening skill successfully. Pedagogically, the present study is expected to give a valuable contribution in teaching and learning listening class. This study is also a great value for English teachers or lecturers to accomplish better teaching practices by applying Explicit M-CSI as a teaching technique that will advance their professionalism.

As future research line, it would be an interesting study for investigating the effectuality of Explicit M-CCSI on big population for more effective generalization. Furthermore, the further researcher should also consider other individual learners' differences not only learning styles for scrutinizing the moderator variables in completing the experimental listening strategy instruction treatment.

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Field Composition and Development Trend of Research Hotspots of Translation Technology in China—Based on Co-word Visualization Analysis of Relevant Academic Journals from CNKI Published from 1999 to 2017*

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Abstract—With the rapid development of computer technology and deep integration of disciplines, translation technology has gradually become an important research direction and a new focus of translation studies. In order to reveal the present situation of research on translation technology, we take the academic journals on translation technology from CNKI published between 1999 and 2017 as our data sample for analysis. The results show that the main research hotspots of translation technology cover four areas, i.e. computer-aided translation, human-computer interaction, translation technology teaching and talent training, as well as terminologies of the field. Through analysis of the current situation and existing problems in the above mentioned areas, some thoughts and prospects are put forward to provide guidance and illumination to scholars in this research field and promote further and deeper studies into the subject.

Index Terms—translation technology, research hotspots, co-word visualization, problems and prospects

I. INTRODUCTION

Globalization, informationization, technology, localization, professionalism, projectization and other characteristics of the time have gradually become the labels and features of modern translation, which lead to tremendous changes in many aspects of translation. Machine translation and translation technology are the important factors that bring about these changes (Fu, 2015). It has become necessary to learn and master translation technology in the new era of the 21st Century, and technology is the tool that translators should rely on in their work. Consequently, relevant researches increase and at present, the number of research papers in this field has reached several hundred. We try to do word frequency statistics and analysis of articles on translation technology published from 1999 to 2017 in CNKI database, so as to observe the current situation and development trend of this research field, and provide reference for further and deeper studies on translation technology.

II. DATA SOURCES AND METHODS

A. Sources of Data

The research data was selected from the CNKI Journal Network, including academic papers published between 1999 to April 2017. We resort to advanced search methods to do the retrieval. We set the theme of the search as “keyword ‘translation technology’ including ‘translation tools’, or article entitled ‘translation technology’ including ‘computer-aided translation’”, and we got a total of 938 relevant articles. In order to ensure the effectiveness and representativeness of the sample for our study, further screening was done on the basis of the literature obtained from the preliminary search: we retained articles on English translation technology in social science, computer technology for translation technology systems, education and engineering, deleted 638 articles of irrelevant content, with no keywords, repeatedly published, or on career guidance and industrial policy in natural science that do not meet the standards of our research purpose, and finally selected 300 valid articles as the sample for this study.

B. Tools and Methods

The main tools used in this study are the Bicomb co-word analysis software system and the SPSS19.0 statistical software. The specific research procedures are as follows: Firstly, the key words of the 300 valid documents selected for this study are extracted by using the Bicomb text-mining system software, and the year, journal name, authors, units and keywords of the literature are obtained. Secondly, we extract relevant statistic data for further study, including the

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authors' work units, number of articles published in the journals and high-frequency keywords. Then, we apply the co-word analysis function of the Bicom software to derive the co-occurrence matrix and similarity matrix of the high-frequency keywords. Finally, the word matrix is introduced into the SPSS19.0 software, and the clustering tree is obtained by system clustering.

III. DATA PROCESSING AND RESULT ANALYSIS

To find relevant literature on the topics concerned, we use the Bicom software to do the survey, and get 300 valid journal articles as our research sample. In the following, we will do detailed analysis of the 300 published papers in terms of authors' work units, distribution of journals, etc.

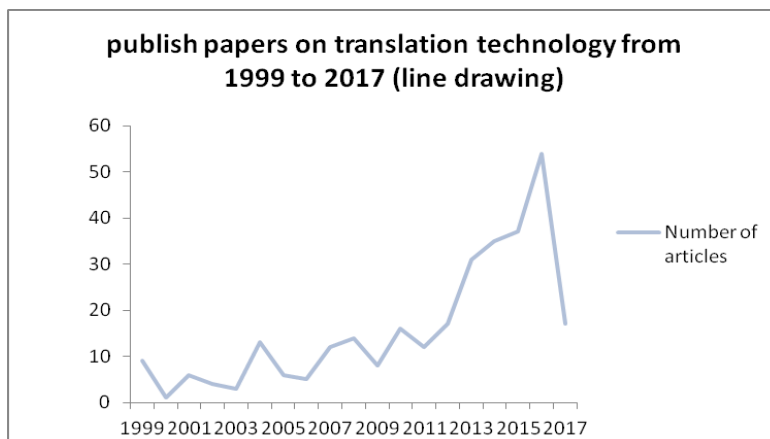
A. Research Overview and Keyword Confirmation

1. Year distribution of the literature

The year distribution of the literature is shown in table 1.

TABLE 1
LITERATURE ON TRANSLATION TECHNOLOGY FROM 1999 TO 2017

Number	Year	Article Number	Percentage(%)
1	2017	17	5.5738
2	2016	54	17.7049
3	2015	37	12.1311
4	2014	35	11.4754
5	2013	31	10.1639
6	2012	17	5.5738
7	2011	12	3.9344
8	2010	16	5.2459
9	2009	8	2.6230
10	2008	14	4.5902
11	2007	12	3.9344
12	2006	5	1.6393
13	2005	6	1.9672
14	2004	13	4.2623
15	2003	3	0.9836
16	2002	4	1.3115
17	2001	6	1.9672
18	2000	1	0.3279
19	1999	9	2.9508



The publication volume of journals can indicate the theoretical level and development situation of academic research in the field. In order to evaluate the research situation of translation technology more directly, and predict the trend of its future development, the curve graph showing the publication volume of the corresponding literature is drawn. It can be seen from the curve that the volume of published literature on translation technology is generally on the rise. Referring to the line chart, we see the amount of the published literature fluctuates slightly from 1999 to 2012, but a sharp rise has manifested since 2012. In 2016 it maintains a high momentum of growth, but in 2017 there signals a drop, which is actually due to insufficiency of data collection. But we can predict that the amount of literature on translation technology in 2017 as a whole will still be increasing. We also see that among all these articles, those published in core journals account for a big proportion, which is reflective of the more and more important role translation technology plays in cross-cultural communication in recent years against the broad context of globalization.

2. Unit distribution of authors

TABLE 2
UNITS OF THE AUTHORS WITH ARTICLES ON TRANSLATION TECHNOLOGY FROM 1999 TO 2017

Number	Author's unit	Article number	Percentage (%)
1	Peking University	17	5.3292
2	Beijing Normal University	12	3.7618
3	University of Shanghai for Science and Technology	10	3.1348
4	Shandong Normal University	9	2.8213
5	Chinese Academy of Sciences	9	2.8213
6	Beihang University	7	2.1944
7	Xi'an FanYi University	6	1.8809
8	Guangdong University of Foreign Studies	5	1.5674
9	Jilin Huaqiao Foreign Languages Institute	4	1.2539
10	Qufu Normal University	4	1.2539
11	University of International Business and Economics	3	0.9404
12	Shandong University of Science and Technology	3	0.9404
13	Anhui Finance and Economics University	3	0.9404
14	Yunnan Normal University	3	0.9404
15	Liaoning Normal University	3	0.9404

According to the unit distribution of authors in the selected sample (as shown in table 2), it can be observed that Peking University enjoys the highest frequency of article publication, which is 17, with a ratio of 5.3292%. The frequency of publication of Beijing Normal University is 12, accounting for 3.7618%. The frequency of Shanghai University of Science and Technology is 10, accounting for 3.1348%. Both Shandong Normal University and the Chinese Academy of Sciences have a frequency of 9, accounting for 2.8213%. Among participants in researches on translation technology and related issues, there are some that come from distinguished institutions such as Peking

University and Chinese Academy of Sciences, but on the whole, the number of prestigious research institutions involved in this research field is still small in our country.

3. Number of published articles on translation technology in the journals

TABLE 3
JOURNALS WITH ARTICLES ON TRANSLATION TECHNOLOGY FROM 1999 TO 2017

Number	Journal	Article Number	Percentage(%)
1	Chinese Translators Journal*	18	5.8824
2	Chinese Science & Technology Translators Journal	13	4.2484
3	Overseas English	10	3.2680
4	Journal of Language and Literature Studies	10	3.2680
5	Shanghai Journal of Translators*	7	2.2876
6	China Science and Technology Information	7	2.2876
7	Computer-Assisted Foreign Language Education*	6	1.9608
8	China Computer Users	6	1.9608
9	Journal of Hunan City University	4	1.3072
10	Foreign Languages Research*	4	1.3072
11	English Square	4	1.3072
12	Journal of Hubei University of Economics*	4	1.3072
13	Terminology Standardization and Information Technology	4	1.3072
14	Wit	4	1.3072
15	Computer Engineering*	3	0.9804
16	Shandong Foreign language Teaching Journal*	3	0.9804
17	Science and Technology Information*	3	0.9804
18	Foreign Language Research	3	0.9804
19	Journal of Mudanjiang College of Education	3	0.9804
20	Contemporary Education Research and Teaching Practice	3	0.9804
21	Journal of Hubei Correspondence University	3	0.9804
22	College English*	3	0.9804
23	China's After-School Education	3	0.9804
24	Journal of Chinese Information*	3	0.9804
25	Family of the Drama	3	0.9804

Note: "*" marks the core academic journals in China.

According to the research findings (as shown in table 3), the 300 papers on translation technology are published in about 172 journals, and by dividing the number of articles by the number of journals, we get the ratio 1.744. The table shows that related research findings have come out in source journals of translation studies, including "Chinese Translators Journal" (18; 5.8824%), "Chinese Science & Technology Translators Journal" (13; 4.2484%), and "Shanghai Journal of Translators" (7; 2.2876%;). Some are published in source journals of English language studies, such as "Overseas English" (10; 3.2680%), "English Square" (4; 1.3072%), and "Foreign Languages Research" (2; 1.3072%). Relevant articles are also published in comprehensive university journals: "Journal of Hunan City University" (4; 1.3072%), and "Journal of Hubei University of Economics" (4; 1.3072%). The number of articles published in journals of computer science and technology is 6, accounting for 1.9608%, and another 4 in "Terminology Standardization and Information Technology", making up 1.3072%. Among all the 25 related journals, core ones (marked with "*") account for 10, including "Chinese Translators Journal", "Computer-Assisted Foreign Language Education", "Shanghai Journal of Translators", "Foreign Languages Research", etc.. From the ratio of article numbers divided by journal numbers, we see that the publication of articles on translation technology relatively concentrates on journals of several fields, esp. core journals in the field of translation studies. In addition, some source journals of

English language studies have also published a large number of articles on translation technology, but far less are published in comprehensive university journals. It to some extent suggests that the research subject is relatively specialized, and the level of domestic studies in this field is advanced.

4. Analysis of high frequency keywords

TABLE 4
KEY WORDS OF THE ARTICLES ON TRANSLATION TECHNOLOGY FROM 1999 TO 2017

Number	Key Words	Article Number	Percentage (%)	Number	Key Words	Article Number	Percentage(%)
1	translation technology	242	17.8598	14	application	6	0.4428
2	translation tools	137	10.1107	15	translation results	6	0.4428
3	translation technology teaching	73	5.3875	16	translation market	6	0.4428
4	translation memory	32	2.3616	17	post translation editor	5	0.3690
5	language service	19	1.4022	18	translation studies	5	0.3690
6	computer	18	1.3284	19	text analysis	5	0.3690
7	terms	18	1.3284	20	translation major	5	0.3690
8	translation talents	18	1.3284	21	localization	5	0.3690
9	parallel corpus	17	1.2546	22	semantic information	5	0.3690
10	translation system	10	0.7380	23	text processing	4	0.2952
11	translation quality	9	0.6642	24	translation collaboration	4	0.2952
12	human-computer interaction	7	0.5166	25	translation field	4	0.2952
13	translation ability	7	0.5166				

After doing statistics of the literature, we get 624 keywords of the 300 valid articles. In order to make the statistical results more representative, the author deletes some obviously erroneous key words or those of too broad meaning, and co-mbines keywords of the same or similar meaning. Then according to the boundary integral formula of high and low frequency words derived from Zipf's law that is proposed by Donohue, $[-1+(8)^{(0.5)*I^1}] (I^1$ is the number of key words whose word frequency is 1, and T is the lowest frequency number of the high frequency words) (Sun, 1992). Considering the representativeness of the statistic data, we set the number of high frequency and low frequency threshold to be 7, and eventually get 13 high frequency key words (see table 3). Key words function as the summary of literature, so the higher quantized value the key word gets, the more attention it receives from researchers. From the 13 high frequency key words as shown in table 3, we can roughly learn the hotspot issues in the current studies of translation technology.

B. Similarity Matrix and Dendrogram Analysis

In order to further explore the correlation of the keywords, we need to transform the co-word matrix into the similarity matrix. In this study, we will deal with the 25 intercepted high-frequency keywords by using the "word matrix" function in "matrix" of the Bicomb software, so as to generate the key word matrix, and lead it into SPSS19.0. Through the gradual function of "analysis-classification-system clustering" in the software, we select "similarity matrix", "dendrogram" and "Ochiai coefficient". By the method of co-word visualization and cluster analysis, we can more directly obtain the keyword results.

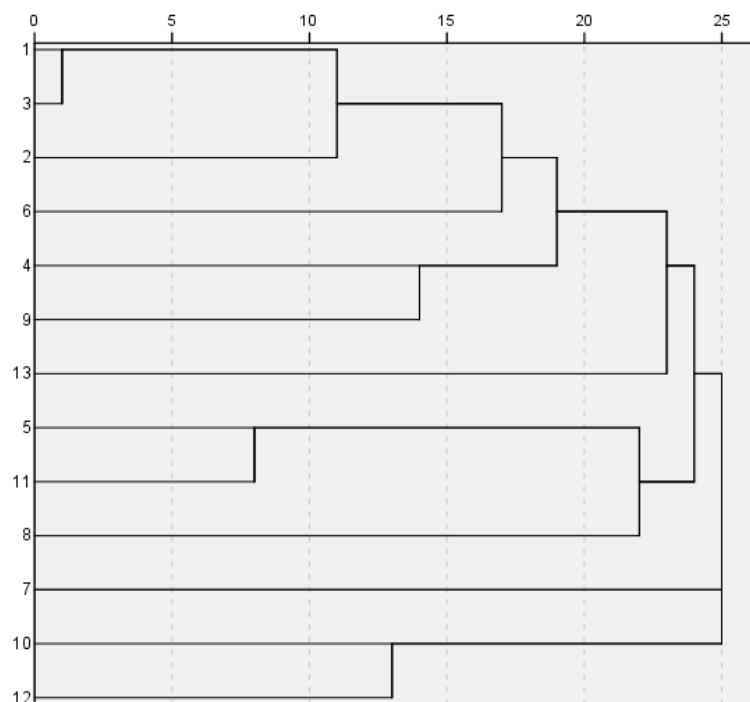
1. Similarity matrix analysis

TABLE 5
SIMILARITY MATRIX OF HIGH-FREQUENCY KEYWORDS IN RESEARCHES ON TRANSLATION TECHNOLOGY

Cases	translation technology	translation tools	translation technology teaching	translation memory	language service	computer	term	translation talents	parallel corpus	translation system	translation quality	human-computer interaction	translation competence
translation technology	1.000												
translation tool	.368	1.000											
translation technology teaching	.422	.145	1.000										
translation memory	.279	.200	.091	1.000									
language service	.194	.067	.121	.042	1.000								
computer	.217	.160	.155	0.000	0.000	1.000							
term	.152	.059	.040	.112	0.000	0.000	1.000						
translation talents	.217	.023	.186	.043	.114	0.000	0.000	1.000					
parallel corpus	.167	.160	.124	.214	.057	.059	0.000	.059	1.000				
translation system	.195	.119	0.000	.056	.149	0.000	0.000	0.000	0.000	1.000			
translation quality	.160	.063	.043	.059	.314	0.000	.105	.081	.081	0.000	1.000		
human-computer interaction	.156	.071	0.000	0.000	.178	0.000	0.000	0.000	0.000	.239	0.000	1.000	
translation competence	.104	.071	.145	.067	.089	0.000	0.000	0.000	.092	0.000	0.000	0.000	1.000

The ratio shows the close to distant relationship of the pair of keywords. If the value is close to 1, then the two key words are similar and related to each other. If the value tends to zero, then the two key words are less similar, or not connected to each other. From the table, we can see the similarity of “translation technology” and other high-frequency key words. Ranked in order of closeness to distance, the key words are translation technology teaching (0.422), translation tools (0.368), translation memory (0.279), computer (0.217), and translation talents (0.217), etc. The data reveal the correlation between these words and researches on translation technology, from which we detect the focus of this research in China.

2. Clustering tree analysis



Dendrogram using average linkage (between groups)

Cluster merging by distance readjustment

- 1: Translation technology 2: Translation tools 3: Translation technology teaching
 4: Translation memory 5: Language service 6: Computer 7: Terminologies
 8: Translation talents 9: Parallel corpus 10: Translation system
 11: Translation quality 12: Human-computer interaction
 13: Translation competence

According to the clustering tree analysis of high frequency key words in researches on translation technology, we consider the correlation degree and the clustering process of the key words to summarize the condition of current studies on translation technology and reach an understanding of the high-frequency keywords in the mainstream academic researches on this subject including their correlation structure, level of correlation and field constitution. Thus, we classify the high-frequency keywords obtained into five broad categories: first, study of computer-aided translation technology; second, research on human-computer interaction in the translation technology system; third, translation technology teaching and talent training; four, study of terminologies in translation technology.

IV. RESEARCH STATUS AND PROBLEMS

A. Research on Computer-aided Translation Technology

In this new era, translation has become an important aspect of globalization, while the advancement of globalization has put higher requirements on translation. More speedy and effective translation is the urgent demand of international communication in the 21st century. The increasing need for translation cannot be satisfied simply by human translation (Fang, 1998). Therefore, using computer to do translation will become the mainstream practice in future, which means the popularity of CAT (computer-aided translation) technology.

Computer-aided translation is a technology developed rapidly after the electronization of translation materials. In a broad sense, computer-aided translation technology is the technology that uses computer software, hardware, network and other equipment to assist the whole translation process. In a narrow sense, computer-aided translation refers to the process of using software to assist translators in language transformation (Jin, 2010).

Translation memory and corpus forms the core of the CAT technology. The CAT technology supported by translation memory can solve the problem of translation reuse and shorten the time of translation. By setting up corpuses, the translated terms can be unified. In fact, in recent years both of them have become hot issues in domestic researches on CAT technology.

The Corpus is a popular research topic of CAT, while the parallel corpus and comparative corpus are the major focus of current corpus research. Because parallel and comparative corpora provide important resources for translation studies, contrastive studies of languages, bilingual dictionary compilation, and bilingual terminology extraction, etc. (Huang, 2004). The core of parallel or comparative corpus application is to translate corpuses into language-knowledge bases through statistical methods, case-based methods and corpus-processing methods. Corpuses exist mainly as a knowledge source of the translation system, and through integration of the resources of the bilingual corpuses, we can on the one hand preserve sentences of the source language, and on the other save the corresponding translation. So when we use

computer to translate, the system will compare the chosen sentence with those preserved in the corpus, to find two of the greatest similarity and then give the translation.

On the other hand, Su (2007) considers the translation memory system as an important part of the computer-aided translation technology, summarizes the existing translation memory systems, and points out the limitations of the current translation memory technology and systems. He also predicts its development trend, and puts forward some suggestions on research and application of translation memory in China. Bowker (2002) defines translation memory as a language database for storing the original text and its translations. In the process of translation, the system will automatically search for translations of the same or similar sentences and paragraphs in the memory resources and give a reference version, so as to help users avoid wasteful duplication of effort, and focus on translating new content. The translation memory is also constantly learning and automatically storing new translations backstage to enlarge the memory volume through the translation memory system which helps translators in their work and greatly reduces their workload.

At present, domestic research on CAT technology and theory has achieved remarkable results, but this field as a combination of information technology and translation studies touches upon a wide range of subjects and is very difficult to handle. Researchers from any single discipline cannot go deep into all aspects of the CAT technology. Therefore, how to integrate knowledge of relevant fields and carry out interdisciplinary research is crucial to the future development of the entire CAT field, and is also one of the major tasks researchers now face. (Wen, 2011).

B. Research on Human-computer Interaction in Translation Technology

In the process of using the translation technology system, the human-computer interface, i.e. the human-computer interaction technology, is very important. Human-computer interaction is the process of information exchange between people and computers through interactive devices and interactive software.

To professional users of translation technology, the design of the human-computer interaction model is crucial. Even if the computer-aided automatic translation function is embedded in the current CAT software, most translators are reluctant to let the computer do the work and then revise the version done by the machine, but prefer to produce their own human-brain translation. On the one hand, it is because the results of computer translation are often unsatisfactory. On the other, the human-computer interaction model of computer-aided translation is too simple, which drags many users away from Machine Translation. For most non-professional users, the direct purpose of using computer-aided translation is not purely to translate, but for the convenience of their life and work, such as acquiring information conveyed in a foreign language, making friends, etc.. To these users, the computer-aided translation system should not be offered in the form of translation software, but can be embedded into other application software so as to be easily applied by users. This actually puts a very high demand on the human-computer interaction model in computer-aided translation (Liu, 2012).

The above two kinds of demands show that establishment of the human-computer interaction model in the translation system should make the computer-aided tools more convenient and effective for translators and other users to employ, in order to improve the efficiency and quality of their work with translation. However, the human-computer interaction system of translation technology now is still imperfect, and remains in the basic user-computer interface, so Lin (2007) and Dong (2015) argued that we should build some more humane modern human-computer interaction model in future, which turns the mode from “people around the machine” to “machine around people”. From the perspective of translation technology, establishment of the human-computer interaction system should be consistent with the basic way of human communication. Research on the human-computer interaction model has become a new hot subject in the field of translation technology.

On the other hand, the ideal human-machine interaction mode in machine translation should not only allow users to use the computer translation system more conveniently, but also let the system automatically collect users' information and using habits, so that the human-computer interaction not only functions as a tool for people to do the work and study, but also helps the computer translation system learn and upgrade. In the process of translation we will not expect the machine to solve all the problems exclusively, but try to finish the translation through human-machine collaboration, resulting in a virtuous cycle of the machine translation system and users that will greatly improve the quality of machine translation and users' experience, and push application of the machine translation system to a higher level. For example, Liu (2009) believes that we can select phrases which are more idiomatic and expressive while retaining the semantic meaning of the original by means of human-computer interaction to improve the quality of translation done by the translation system.

The above two aspects represent the two directions of the human-computer interaction model in the development of translation technology, and exhibit great application prospects and practical significance.

C. Research on Translation Technology Teaching and Translation Talents Training

With the increasing demand for applied translation talents in the industries, the world of education has paid more attention to the cultivation of translation talents. Relevant research on teaching and training translators is also being deepened gradually. From the aspect of curriculum, domestic research mainly stays at the macro level. For instance, Yu (2012) discussed the necessity of introducing CAT technology into the curriculum of translation, as well as the benefits that CAT technology can bring to translation studies and education. Li (2011) conducted an extensive survey and

answered the following questions in great detail: 1) How is the current situation of CAT teaching? What are the difficulties we face and what experience can be learned and carried forward? 2) In what ways do the computer-aided tools function? How and to what extent can they help translators in future? 3) How to teach people to use the computer-aided translation tools on the technical level and from the micro aspect? What are the effective teaching strategies?

As to CAT teaching, domestic research on this subject is relatively comprehensive in regard to master education. Some studies focus on CAT teaching for academic masters, such as the paper "Reflections on Teaching Computer-aided Translation" (Qian, 2009) which makes a systematic generalization and speculation on the teaching of relevant courses from eight aspects including the history of Machine Translation and computer-aided translation, principles of computer-aided translation, translation tools in the broad and narrow sense, etc. In addition, there's also exploration and research into the teaching and training of MTI (Master of Translation and Interpretation) students. For example, Liu (2015) delivered questionnaires to examine the status of computer-aided translation teaching in domestic colleges and universities with MTI program. The results show that the importance of CAT as a rising star in MTI education has been widely recognized. However, there are still a lot of problems in MTI-CAT teaching, such as limited faculty resources, shortage of funds and inadequate understanding of the translation industry, etc.

In addition, researchers have also discussed about the training of academic masters on computer-aided translation. Based on the constructivist education theory, Zhong (2012) probed into the specific implementation of the theory in the teaching process of the CAT course with regard to the features of the course and the target of training academic masters. It was found that the student-oriented teaching method can cultivate students' ability to participate in and manage large-scale translation projects; the interactive teaching mode in classrooms may improve students' learning efficiency; and using a variety of corpuses and online software resources to learn translation can help students improve their translation ability. These studies have broadened the research horizon of CAT teaching with considerable guiding significance for interdisciplinary research of CAT courses.

However, there are several problems in the traditional way of translation teaching. Firstly, the content of the course is dull and boring, the classroom atmosphere is poor, and the interaction between teachers and students is not good, so the teaching quality is usually poor. Xu (2014) and Li (2014) put forward some new ideas about translation teaching, believing that training should focus on cultivation of students' computer application ability, which relies on the computer-aided translation technology and task-based instruction, to improve students' translation ability through practice. Secondly, the traditional translation teaching shows no concern for market needs, so students lack opportunities to know and apply the CAT technology or receive training in actual practice. According to Cheng and Du (2016), traditional translation teaching needs reform, and esp. in English translation training some new content should be included, such as information inquiry technology, online translation technology, computer-aided translation technology, cloud translation technology and others, in order to fully display the practical, open and interactive features of this course, and improve the teaching efficiency and quality of talent training. For accurate and efficient translation, students should be proficient in application of computer-aided translation technologies.

In conclusion, translation teaching should stress improvement of the education system, while relevant research on training undergraduates and doctors should be complemented, so as to form an integral system where education on different levels interrelates. Besides, we should in teaching put emphasis on enhancing students' ability of applying technology.

D. Research on Terminologies of Translation Technology

Terminologies of translation technology form a relatively new research direction in the field of translation technology, which mainly concerns some specific terms appearing in the course of translation. Translation technology is constantly developing and changing, which in the meantime changes the ways how translators, amateurs and volunteers are widely involved in translation through online social media, video games, animation and other channels. This phenomenon has led to the emergence of a large number of generally recognized professional terms in this field. In addition, the popularity of online translation websites such as Google translation, Microsoft Bing, and Baidu translation has also created a great deal of terms. The terminologized language often appears in movie audition with subtitles for example, and translation dictionaries (O'Brien et al., 2014). If the tag suggests "see Documentary Translation", it means that readers should refer to the section "Documentary Translation". Meanwhile, for readers' convenience to learn the meaning of the terms, the writer also provides plain and simple examples of the original author to facilitate understanding. For example, in explaining "Back Translation", there is an experimental case of poetry translation provided by Holmes (Zhao, 2013, p.66).

The open translation technology adopted by amateur and volunteer translators is not restricted, and the style differs from man to man. Yet this type of translation done by the masses with pervasive terminologies still occupies a considerable market in documents, websites, operating manuals and even television programs and movies. Although such translation is not entirely clear and accurate, the free online translation systems are still very popular among the populace. However, it needs to be emphasized that in some sensitive cross-cultural situations, professional translation (and interpretation) services are still required (Zhang, 2016).

Since current studies on terminologies still remain at the initial stage, and are imperfect, the focus of future research may cover term definition, term localization, term innovation, term association practice in the process of

internationalization and some other fields.

V. REFLECTIONS AND PROSPECTS

A. *Develop Computer Technology and Cultivate Talents*

By investigating the existing translation technology systems, we find that there are still many deficiencies in this field. For example, the theory and practice are disjointed, and the translation technology idealistically designed by researchers cannot well integrate into the training of translation talents; the translation technology system is not perfect, as the machine usually fails to consider the context and translates words rigidly; computer-aided translation is mainly based on texts and strings in practical application with little regard to other grammatical features; in training talents on translation technology, the method of education is too monotonous and there is no relatively systematic teaching approach ready to be adopted. Therefore, researchers on translation technology should pay more attention to applications of computer in today's society, esp. using computer technology to improve the translation technology system, and the organic combination of machine translation and computer-aided translation to make translation more accord with the purpose of communication. Moreover, we should try to ensure effective use of the human-computer interaction technology and make it more humanized. In teaching, we introduce computer technology and develop diversified teaching methods to enhance the application ability of technical talents.

B. *Stress Ontology and Micro Research, and Emphasize Transformation and Interpretation of Local Information*

In the current age of big data, terminology translation in China has been closely associated with information technology. At present, theoretical construction and standardization of terminology translation in China need to be strengthened. In the meantime, establishment of Chinese translation theories should be based on the cultural and translational resources of the nation to form modern translation theories with national characteristics and the demeanor of a big country. We shall endeavor to achieve integration of Chinese and western theories as well as modern transformation of ancient Chinese translation theories. Besides, we need to do systematic collation of the terms, specify difficult and ambiguous terms and standardize term association, to make the terms unified and domestic output of terms consistent. In our efforts, domestic culture should always play the principal role in combination with western linguistic features to create new translation technology, new theories and new researches of our own. Moreover, it is necessary to stress the interdisciplinary nature of researches on translation technology, and analyze the advantages and disadvantages of current translation technology in China from different angles and on different levels, so as to discard the dross and keep the essential for the general improvement of translation technology.

C. *Reevaluate the Application of Translation Technology and Objectively Assess Its Two Sides*

Looking forward to the future, we are not sure of the special role translation technology plays in the globalized society, while translation technology and new technologies often intersect each other, which involves fairly uncontrollable factors and exerts great impact on the native and English cultures. Currently, the application of translation technology in the society is not high-level, because it is largely used by the populace with disorderly translation software while the platforms pervaded by the masses lack equipment of new professional translation technology. As users, developers or personnel indirectly involved in the research and development of translation technology tend to be more and more generalized, some experts have expressed worry about the situation, and insist that all stakeholders, including translators, buyers and sellers of translation services, should be educated about the basics and accessibility of translation technology. We should also endeavor to popularize the advantages and disadvantages of translation technology and its impact on international and cross-cultural communication. The theoretical research and practical operation of these aspects rely on further and in-depth studies of translation technology, which may help to develop a more reasonable, efficient and close-to-life mode of applying translation technology.

VI. CONCLUSION

To sum up, domestic scholars have shown more and more concern for translation technology in recent years with many research results obtained. The research hotspots focus on how to help Chinese culture go out and spread the English culture more effectively in China. Since the "18th National Congress of the Communist Party of China (CPC)", the central government has attached great importance to the "go-out" strategy of Chinese culture. The rejuvenation of China has attracted the world's attention to this nation and its unique charming culture, so our academic research should strive to re-establish the confidence of Chinese culture and adjust the direction and pattern of domestic scholarly studies. In the light of the current research hotspots and development trend, the author believes that the training of translation talents and innovation of translation theories should be strengthened in future to accelerate the transformation of translation technology into productivity, and provide strong foundation and support for translation of ancient Chinese classics into other languages, dissemination of traditional Chinese culture throughout the world as well as development of relevant industries.

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A Review of Studies on Linguaging and Second Language Learning (2006-2017)

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Abstract—Since Swain postulated the concept “linguaging” in 2006 to capture the role of language production in second language (L2) learning, a growing body of empirical studies has been conducted on linguaging. However, little research has reviewed these studies. The present paper reviews 15 empirical studies that were conducted over the past decade on linguaging in L2 learning, followed Vygotsky’s sociocultural theory of mind, and directly took linguaging as the treatment or part of the treatment. We distinguished task-prompted and teacher-imposed linguaging in the paper. All studies reviewed focused on teacher-imposed linguaging. On the basis of reviewing the foci and findings of the studies, we offer our critical comments and recommendations for future research.

Index Terms—second language learning, linguaging, sociocultural theory, grammar explanation, written corrective feedback, translation, critical review

I. INTRODUCTION

Since Swain (1985) put forward the comprehensible output hypothesis, various concepts like “output”, “verbalizing”, “verbalization”, “collaborative dialogue”, and “linguaging” have been employed to capture the role of language production in second language (L2) learning. Linguaging, as the most recent term, was postulated in Swain (2006) and considered more suitable and inclusive than other concepts. Particularly, output carries the image of language working as a conveyor of a fixed message, verbalizing and verbalization are assumed to refer to only speaking instead of both speaking and writing (Swain, 2006), and collaborative dialogue implies the exclusion of individual output and written output (Swain & Watanabe, 2013), whereas linguaging “conveyed an action - a dynamic, never-ending process of using language to make meaning” (Swain, 2006, p. 96). Since the postulation of the concept “linguaging” (Swain, 2006), a growing body of empirical studies on linguaging have been conducted (e.g. Moradian, Miri, & Nasab, 2017; Suzuki, 2012; Swain, Lapkin, Knouzi, Suzuki, & Brooks, 2009). However, little research has reviewed these studies. The present paper intends to make a critical review of the empirical studies on linguaging. We begin the review by defining the term “linguaging” and accounting the theoretical basis for its language-learning function, then critically review the foci and findings of relevant empirical studies, and finally offer our critical comments and recommendations for future research.

II. LINGUAGING AND THEORETICAL BASIS FOR ITS LANGUAGE-LEARNING FUNCTION

Swain (2006) was not the first scholar to use the term “linguaging”, but she endowed the term a new meaning. Earlier than Swain (2006), Lado (1979) used “linguaging” as a generic term to refer globally to various uses of language. Differently, Swain (2006) gave the term a new meaning, using it to refer to “the process of making meaning and shaping knowledge and experience through language” (p. 98), which is compatible with but different from the concept “self-explaining” (Chi, 2000). Swain (2006) advocates that “linguaging about language is one of the ways we learn a second language to an advanced level” (p. 96) and “it is part of what constitutes learning” (p. 98).

The language-learning facilitation function of linguaging is originated in the sociocultural perspective of mental development. The sociocultural perspective maintains that human beings’ cognition development including language learning is socially mediated, and that language is the most essential mediating tool (Vygotsky, 1978). Based on the Vygotsky’s sociocultural theory, language learning is situated in the sociocultural milieu in that it is constructed through interactions between individuals, physical artifacts (e.g. the computer and the textbook) and more capable others (e.g. teachers and peers), and is accomplished when the co-constructed knowledge is brought under self-control and autonomous use (Lantolf, 2011; Vygotsky, 1978). In this knowledge co-construction and internalization process, language functions as the agent, regulator, and mediator of language learning (Swain & Lapkin, 2011); particularly, it is linguaging that “serves to mediate cognition” (Swain, 2006, p. 97), including attention, recall, and knowledge construction in language learning. Linguaging embodies as speaking and writing, serving as vehicles “through which thinking is articulated and transformed into an artifactual form” (Swain, 2006, p. 97), about which one can language

further, with thought being completed and transformed and a new and deeper understanding being achieved. This leads to language learning.

Languaging can be task-prompted or teacher-imposed. Task-prompted languaging, taking the form of collaborative dialogue or private speech, results from performing such writing tasks as jigsaw, dictogloss, text-reconstruction, text-editing, picture description, and composition writing either collaboratively or individually (see review in Storch, 2013), and has been identified as language-related episodes in empirical studies. Task-prompted languaging has been substantiated to be able to enhance language learning (e.g. Swain & Lapkin, 1998, 2002) but it is incidental and cannot be manipulated for more effective and efficient language learning as it is restricted to solving language problems encountered during performing a task and does not allow learners to articulate their thinking intentionally. In order to take full advantage of languaging, pedagogically teacher-imposed languaging can be implemented. Teacher-imposed languaging is produced when languaging is treated as the task instead of the “by-product” of task performance; in empirical studies, languaging is the treatment or part of the treatment. This paper reviews the studies that involved teacher-imposed languaging and were published over the past decade (2006-2017). For the convenience of writing, in the remaining part of the paper, we choose to use languaging where we are referring to teacher-imposed languaging.

The reviewed papers were selected through searching our university library’s “resource finder”, a searching engine accessing such academic journal corpora as Elsevier Science Direct, Sage, Taylor and Francis, Springer, and ProQuest. We also searched China’s Web of Knowledge (the largest academic corpus containing almost all published journal articles and unpublished theses in China) so as to include the relevant papers published in China as well as those unpublished relevant theses. Another method we employed was to trace down the papers referenced in more recent studies in order to include all relevant papers as far as possible in our review. It should be noted that we excluded non-empirical studies, studies focusing on translanguaging, and studies concerning languaging from the psycho-cognitive perspective on language learning. Simply put, the paper mainly reviews those empirical studies that focus on languaging in L2 learning, follow Vygostky’s sociocultural theory of mind, and directly take languaging as the treatment or part of the treatment. It turned out that fifteen papers were qualified to be included in this review (Brooks, Swain, Lapkin, & Knouzi, 2010; Ishikawa, 2013, 2015; Ishikawa & Suzuki, 2016; Jia, 2015; Knouzi, Swain, Lapkin, & Brooks, 2010; Li, 2015; Liang, 2014; Moradian et al., 2017; Suzuki, 2009, 2012, 2017; Suzuki & Itagaki, 2009; Swain et al., 2009; Yilmaz, 2016).

III. A CRITICAL REVIEW OF STUDIES ON LANGUAGING IN L2 LEARNING

The reviewed studies can be categorized into two types predicated upon the modality of the languaging involved in them. Four of them concentrated on oral languaging while the other eleven investigated written languaging. It seems that there is an imbalance between the number of studies focusing on oral languaging and that focusing on written languaging, as an anonymous reviewer pointed out. Yet this is the reality within our review scope. We chose to stick to and reflect this reality in this paper. Then corresponding to the two types, we review the relevant studies in the following two sections.

A. *Studies on Oral Languaging in L2 Learning*

The studies focusing on oral languaging include Swain et al. (2009), Brooks et al. (2010), Knouzi et al. (2010), and Li (2015). They all examined the role of oral languaging in L2 learning. The first three studies are based on the same research project aiming for L2 learners’ learning of the French grammatical concept of voice. Of the three, Swain et al. (2009), using a pretest-posttest design, examined the effect of nine French L2 learners’ oral languaging about the French grammatical concept of voice on the acquisition of this grammatical concept, finding that all participants gained improvement in knowledge and application of the target concept but to different degrees, participants’ quantity of languaging was positively correlated with their more accurate and in-depth understanding of the concept, and that participants’ quality of languaging mediated the processes of understanding cognitively complex ideas. In order to further determine why some learners benefited more from languaging than others, Knouzi et al. (2010), through analyzing the languaging behaviors of a higher and a lower languager and tracing the development of their understanding of the French concept of voice in a microgenetic way, found that the higher languager not only produced more languaging but also engaged in better-quality languaging. Specifically, languaging served as a self-scaffolding tool for the higher languager, who could efficiently use it to solve cognitive conflicts, mediate mental processes, and construct meaning, while the lower languager tended to misinterpret the task and function of languaging, pursue different goals, and leave conflicts unresolved. Brooks et al. (2010), based on Vygotsky’s distinction between spontaneous concept and scientific concept, explored the role of languaging in mediating French L2 learners’ understanding of the French grammatical concept of voice and their written production of the targeted grammatical forms, and demonstrated two participants’ progress from having no knowledge to possessing an emergent knowledge of the French grammatical concept of voice through languaging about given explanations of the concept. To summarize, the three studies examined different aspects of the role of oral languaging in enhancing students’ development of the French grammatical concept of voice.

Li (2015) addressed the effect of pair and group oral languaging on the learning of English grammatical concepts of tense and aspect by Chinese EFL learners. The study, adopting a pretest-posttest design, recruited 9 participants who

showed different proficiency levels of English tense and aspect based on a Chinese-English translation task: 4 of high-proficiency, 4 intermediate, and 1 of low-proficiency. The 9 participants were allocated into 4 groups, respectively composed of 3 high-proficiency learners (3H), 1 high-proficiency and 1 intermediate learner (H-I), 2 intermediate learners (I-I), and 1 intermediate and 1 low-proficiency learner (I-L). During the treatment stage, all 4 groups/pairs languaged about the provided explanations about English tense and aspect displayed on PPT slides. Data analysis indicated that all participants gained improvement in their understanding of tense and aspect and the discrepant-proficiency pairs (i.e. H-I and I-L) improved more than the homogeneous-proficiency pairs/groups (i.e. 3H and I-I) as measured by pretests and posttests, which could be attributed to the fact that the former two pairs engaged in a larger amount of and more types of languaging than the latter two pairs/groups.

To summarize, all four studies observed the positive learning effect of languaging on grammar understanding and use, and they respectively revealed the impact of learners' existing grammar knowledge (Swain et al., 2009), quantity and quality of languaging (Knouzi et al., 2010), and proficiency pairing/grouping (Li, 2015), as well as the process of cultivating scientific concept about grammar (Brooks et al., 2010). Yet, the studies cannot inform us about whether languaging is more effective and efficient than other methods, say, teacher-fronted instruction in facilitating grammar learning since they did not incorporate any control or comparison group. In addition, although the effect of proficiency pairing/grouping has been explored (Li, 2015), it is not clear whether pair/group languaging is more effective than individual languaging.

B. Studies on Written Languaging in L2 Learning

According to what learners have languaged about, the studies investigating written languaging can fall into three categories, in which learners respectively languaged about written corrective feedback (e.g. Jia, 2015; Liang, 2014; Moradian et al., 2017; Suzuki, 2009; Suzuki, 2012, 2017; Yilmaz, 2016), translations (Ishikawa, 2013, 2015; Suzuki & Itagaki, 2009), and grammar explanations (e.g. Ishikawa & Suzuki, 2016). The three categories of study will be reviewed in the following three sections.

B1. Written languaging and written corrective feedback

Of the seven studies involving written corrective feedback, six focused on direct written corrective feedback (DWCF) while only one focused on indirect written corrective feedback (IWCF). The one focusing on IWCF (i.e. Suzuki, 2009) is reviewed first. Suzuki (2009) investigated the effect of languaging about IWCF on the improvement of L2 writing accuracy. Twenty-four Japanese EFL learners were required to complete a writing task in three stages: writing a draft; languaging about specific linguistic errors indirectly corrected (i.e. underlined or marked) in the draft; and revising the draft. Data analysis revealed that the average number of linguistic errors significantly decreased from the draft to its revision, and languaged errors were more likely to be revised, showing the positive effect of languaging. However, as the author realized, the study was limited in that it did not incorporate a comparison group so as to separate the effect of languaging from that of indirect feedback, and it did not examine the long-term learning effect or transfer effect of languaging by including a delayed posttest or a new piece of writing. Besides, in Suzuki (2009), the participants were observed to occasionally have difficulty in identifying, correcting, and explaining indirectly-corrected errors. Thus, whether providing students with direct written feedback would be a better choice became an issue and also an issue worth researching.

Studies exploring the effect of languaging about DWCF were conducted by Suzuki (2012, 2017) and other researchers following him (Jia, 2015; Liang, 2014; Moradian et al., 2017; Yilmaz, 2016). Suzuki (2012) was the first to address the effect of written languaging in response to DWCF on L2 writing accuracy. Again twenty-four Japanese EFL learners were invited to complete a writing task in three stages as done in Suzuki (2009), but in Suzuki (2012) an English-native speaker provided learners with direct corrections of lexis- and grammar-based errors and learners languaged about these direct corrections in writing. Data analysis found that written languaging about direct feedback helped learners successfully revise those errors in immediate writing revision, and learners gained improvement in the correction of both lexis-based and grammar-based errors.

Yilmaz (2016) is a replication of Suzuki (2012) in the Turkish EFL context. 17 Turkish learners were required to write a paragraph and then received direct corrections from their teachers for their paragraph. After that, they made languaging about the direct corrections followed by revising their paragraph. Results revealed that errors were significantly reduced on the revised paragraphs, and more successful languaging about direct corrections led to more successful revision of errors.

Considering that Suzuki (2012) did not isolate the effect of languaging from that of feedback, Moradian et al. (2017) did a further study to separate the effect of languaging from that of DWCF by including a control group. Specifically, two Iranian EFL groups were allocated to complete a writing task on the same prompt in three stages: writing the first draft, receiving DWCF, and revising the first draft. The only difference was that one group merely reviewed the DWCF on their drafts while the other group not only reviewed the DWCF but also languaged about the DWCF. An analysis of the two groups' performances revealed that both groups made significant gains in grammatical accuracy of their revised writings, but that the DWCF-plus-languaging group gained significantly more learning than the DWCF-reviewing group, proving the effect of languaging.

Jia (2015), a study conducted in the Chinese EFL context, was also built on Suzuki (2012) but incorporated both

control groups and delayed posttests. The study invited four groups of Chinese EFL learners (i.e. experimental group 1/EG1, experimental group 2/EG2, control group 1/CG1, and control group 2/CG2) to complete a writing task in three stages: writing the first draft of a composition, receiving DWCF, and revising the first draft. The differences between the four groups were that both EG1 and EG2 languaged about DWCF while both CG1 and CG2 reviewed DWCF at Stage 2, and both EG1 and CG1 revised their first drafts immediately following stage 2 whereas both EG2 and CG2 revised their first drafts two weeks later. The study found that written languaging helped learners successfully correct errors in both immediate and delayed revisions, written languaging helped reduce errors both in grammar and lexis, and written languaging together with DWCF mediated learners' self-regulation during revision.

Liang (2014) examined the effect of Chinese EFL learners' written languaging on text revision as well as the differences between learners' languaging about direct written corrective feedback (DWCF) and indirect written corrective feedback (IWCF). The study required twenty-two students to complete three writing tasks with each going through three stages: writing the first draft, receiving both DWCF and IWCF depending on the teacher, and revising the first draft. Of the twenty-two students, twelve made languaging about the DWCF and IWCF they received while the other ten merely reviewed the corrective feedback on their compositions. Results revealed that written languaging helped error correction, both languaging about DWCF and that about IWCF were associated with improved accuracy, but that students languaged more about DWCF than about IWCF in terms of both quantity and quality. Yet, the study did not examine the potential different effects of languaging about DWCF and that about IWCF on text revision.

Suzuki (2017), using the same data as that in Suzuki (2012), investigated the effect of quality of written languaging on L2 learning, particularly intending to uncover the relationship between the quality of written languaging and the success of students' immediate revision of essays. He identified three categories of written language episodes (WLEs): noticing only (i.e. explanation without reasons and metalinguistic terminology), noticing with reasons (i.e. explanation with reasons and/or metalinguistic terminology), and uncertainty (i.e. "I don't know" episode). Results showed that both noticing only and noticing with reasons contributed to accuracy improvement. Thus, Suzuki considers written languaging as an effective mediating or retrospective tool for problem-solving in the development of L2 learning.

In summary, current studies concerning written languaging about corrective feedback have proved the learning effect, including immediate and delayed effect, of written languaging, and found the association between languaging quality and learning effect. Future studies can explore the transfer effect of written languaging about corrective feedback by adopting a new writing task as the posttest. More studies are also needed to examine the potential learning effect of written languaging about DWCF and languaging about IWCF. Researchers can also investigate the role of written languaging used together with other feedback approaches like writing reformation or provision of writing models.

B2. Written languaging and translations

In addition to examining the learning effect of languaging about corrective feedback, researchers have also investigated the language learning effect of languaging in translation tasks (i.e. Ishikawa, 2013, 2015; Suzuki & Itagaki, 2009). Suzuki and Itagaki (2009) in a seminal study examined the relation between type of grammar exercises, level of L2 proficiency, and type of written languaging in Japanese EFL learners' performance of grammar exercises. The so-called grammar exercises were actually Japanese-English sentence translation and English-Japanese sentence translation, respectively being production-oriented and comprehension-oriented. 141 Japanese EFL learners were divided into two groups (high-intermediate and low-intermediate) based on their English proficiency, and then each group was randomly allocated into two subgroups. Each learner in the four groups was then asked to perform one type of translation task. In addition, students were also required to write in Japanese whatever they were thinking about while performing the translation tasks. The authors identified participants' languaging as three types: L1 lexis-oriented languaging, L2 lexis-oriented languaging, and grammar-oriented languaging. By analyzing the languaging data, the authors demonstrated that type of translation task and level of proficiency were both likely to determine the type of languaging. Specifically, (1) participants who performed comprehension-oriented translation were found to generate more grammar-oriented languaging than those who performed production-oriented translation, and (2) the high-intermediate proficiency participants engaged in more grammar-oriented languaging than the low-immediate proficiency participants did. However, the study did not examine whether languaging leads to L2 learning, and if so, how.

In response to the deficiency of Suzuki and Itagaki (2009), Ishikawa (2013) addressed whether written languaging in performing translation tasks actually facilitated L2 learning, particularly Japanese EFL learners' learning of tense consistency, by using a pretest-posttest design. In the study, written languaging was named as metanotes. Following a translation-based metanote-taking practice, the participants, fourteen Japanese EFL learners took a grammar-recognition pre-test, which requested participants to judge whether an English sentence was grammatically correct, and if not, to correct the sentence. Based on the pre-test result, the participants were divided into two groups, an experimental and a control group, of a similar proficiency level. Then the treatment was conducted in three stages: completing a translation task; participants checking their own translation with a model translation; and taking a posttest and completing a questionnaire. The important point is that the experimental group was asked to take metanotes in Stages 1 and 2 while the control group was not. Data analysis showed that the participants did not focus on the target form (i.e. tense consistency) as much as expected, and the participants did not always accept the provided translation model even when they noted the mismatch between their translation and the model translation. Thus, it is of no wonder that no learning

effect was observed from comparing the pretest and the posttest, especially so when the pretest and posttest did not match what students languaged about in the treatment. Yet qualitative analysis demonstrated that metanotes might facilitate L2 learning.

On the basis of Ishikawa (2013), Ishikawa (2015) investigated how L2 proficiency and task outcome affected written languaging, with written languaging still taking the form of metanotes, in Japanese EFL learners' performance of translation tasks. By administering a placement test, 24 Japanese EFL learners were evenly assigned to two groups: a higher-level group/HG and a lower-level group/LG. Considering that the participants in Ishikawa (2013) did not produce many grammatical metanotes, Ishikawa (2015) provided more metanote-taking practice for the participants. Both groups did the translation task in three stages: completing the translation task with metanotes, checking translation with a model translation while taking metanotes, and completing an exit questionnaire. Results revealed that HG produced more correct translations than LG; HG took more metanotes than LG without reaching statistical significance though; both groups took more lexis-notes than grammar-notes but HG took more grammar-notes than LG did; neither group took many metanotes on tense and tense consistency; and that participants took more metanotes when their translations were incorrect.

To conclude, existing studies concerning written languaging about translations indicate that in order for translations to facilitate language learning, it is essential to inform learners of what they should language about. Should it be linguistically correct mismatches between students' translations and model translations, or incorrect or improper parts in students' translations? If it is the former, even when students note the discrepancies, they may not necessarily accept the model as found in Ishikawa (2013). Instead, it is more likely that the latter, that is, incorrect or improper parts in students' translations will lead to students' uptake and learning. In actuality, translations are similar to students' compositions since they are both language output. Considering that translations are common activities in language learning, it is worthwhile to examine the learning effect of translations and the learning effect of languaging in performing translations, but future related studies should distinguish languaging about linguistically correct mismatches and languaging about incorrect or improper parts.

B3. Written languaging and grammar explanations

We found one study which has dealt with the effect of written languaging about grammar explanations on L2 grammar learning (i.e. Ishikawa & Suzuki, 2016). Ishikawa and Suzuki (2016) involved three groups of participants: the group engaging in written languaging (+WL group), the group performing grammar exercises (-WL group), and the control group only taking the pre-test, immediate and delayed posttests (a recognition test and a translation test). The treatment was conducted in the following procedure: (1) In Week 1, all three groups took a pre-test, which was a recognition test containing ten sentences regarding the target grammatical structure - the hypothetical conditional in English. (2) In week 2, the +WL and the -WL groups were asked to read explanations on the target structure first, and then the +WL group were required to write down their understanding of the target rule (i.e. written languaging), whereas the -WL group were asked to work on a grammar exercise related to the target structure. After that, both the +WL and the -WL groups took a posttest. (3) One week later, a delayed posttest was administered to all three groups. Results showed that both the +WL and the -WL groups outperformed the control group on the immediate or delayed posttest, but only the +WL group scored significantly higher than the control group regarding the result of their delayed posttest, demonstrating the facilitative effect of written languaging. Ishikawa and Suzuki (2016) is similar to Swain et al. (2009) in research design, the difference being that different grammar items were targeted and the former involved written languaging while the latter oral languaging. Apparently the status-quo in this respect shows that more studies are warranted to explore the effect of written languaging on the learning of other grammar items by involving longer reading input and output, instead of grammar explanations and sentence translations, respectively in the treatment and posttest.

IV. CRITICAL COMMENTS AND DIRECTIONS FOR FUTURE RESEARCH

This review has focused on the studies in the past ten years, especially those empirical studies that took languaging as the treatment or part of the treatment. Our review reveals that current studies have proved the learning effect of both oral languaging and written languaging. Yet, studies involving larger samples and exploring longitudinal learning effect or learning transfer by incorporating new writing tasks as posttests are still needed.

In terms of research theme, the reviewed studies have examined quite a number of issues, including the learning effectiveness of languaging (e.g. Suzuki, 2012; Swain et al., 2009), the relation between languaging quantity and language learning (e.g. Knouzi et al., 2010), the relation between languaging quality and language learning (e.g. Suzuki, 2017), the mediating function of languaging (e.g. Brooks et al., 2010), and the association between proficiency pairing and languaging (e.g. Li, 2015). Despite the wide coverage, more themes can be investigated building on existing studies. One possible area is the effect of training. Current studies have included training as part of the experiment (e.g. Ishikawa, 2015), but no study has particularly examined the effect of languaging training. Training is especially necessary considering that neither oral nor written languaging is a natural part of language learning, because students are often required to review teachers' feedback on their writing but seldom required to explain each feedback point either orally or in writing.

Another research direction is investigating whether oral languaging and written languaging would result in different

learning effects. As reviewed in this paper, current studies have examined either oral or written languaging. In spite of the argument for the equivalence of oral and written production (e.g. Suzuki, 2012), there are also arguments (Harklau, 2002; Wolff, 2000) for and research findings (e.g. Niu, 2009) about the superiority of writing over speaking in language learning. It is hence necessary to find out whether modality of languaging would make a difference in language learning, and if yes, how.

The third possibility is examining the learning effect of pair or group languaging. As our review indicates, current studies on languaging have mainly concentrated on individual languaging, whereas the effectiveness of collaborative learning has been empirically substantiated (see Storch, 2013). It is worthy to explore the learning effect of collaborative languaging as well as learners' interaction and scaffolding dynamics in collaborative languaging.

In addition, student stances on languaging could be researched. Research on student stances in making languaging is meaningful because it relates to languagers' agency and motives in doing the activity and can illuminate individual differences. However, we still have little knowledge about student stances and motives for different modes of languaging (i.e. oral, written, individual, collaborative, face-to-face, or computer-mediated languaging) and how student stances and motives would impact on their languaging performance and hence language learning. Studies are warranted in this direction.

One more direction concerns languaging in virtual online space. Given the important role of technology in education, technology-mediated language teaching and learning have become an indispensable research area. However, few studies have been conducted on languaging in the technology-mediated environment. Studies are needed to examine the impact of online languaging (e.g. conducted via skype, wechat, or QQ on the computer or mobile phone) on language learning and to explore how online languaging can be incorporated into online instruction, as well as teachers' and students' perceptions about the usefulness of languaging in virtual space.

A final research direction is applying experimental research about languaging to authentic classroom pedagogy. The most valuable return of doing language learning research lies in using research results to innovate teaching practice and increase learning efficiency. However, current studies on languaging are mainly confined to experimental environments in the Canadian French L2 context and the Japanese, the Chinese, the Iranian and the Turkish EFL contexts, and applied to limited activities like writing feedback, translation, and grammar explanation. Therefore, classroom-based studies are needed to understand how languaging can be incorporated in real-life teaching practices, particularly in different pedagogical activities and various pedagogical contexts, and how teachers can use languaging to improve practice and enhance students' language learning.

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Reconstruction of Local Wisdom for Character Education through the Indonesia Language Learning: An Ethno-pedagogical Methodology

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Abstract—Developing good characters may take quite a process of enculturation early at the primary schools. Character education may include local wisdom or local knowledge learnt through the Indonesia language curriculum. Bali's local wisdom, which adheres in the Hindu philosophy, is potentially rich for the development of character education's themes and sub-themes. The central themes and sub-themes fleshed out from the Hindu philosophy are coherently tied into a system of meaningful moral entity. Children may learn the moral characters contextually and meaningfully through the national language of Indonesia at schools. However, caution should be taken as the themes and the sub-themes are critically beyond the first and second graders' cognitive and moral development stages.

Index Terms—Indonesian language learning, character education, local wisdom or local knowledge

I. INTRODUCTION

Local knowledge may often be termed as local wisdom or local genius (Purna, 2010: 2). Since the implementation of *Undang – Undang Otonomi Daerah Nomor 22/1999*, local wisdom or local genius becomes a popular discourse for character education. Hobsbown (in Mudana, 2003) defines it as a set of practices determined by clear or subtle rules, rituals, and/or symbolic characteristics. Local wisdom or local knowledge is often used to mediate a set of norms, values, morals and ethics through repeated behavioral practices, which imply a balance between the past and the present times (Purna, 2010: 2). Local wisdom or local genius may often function as a moderator variable for negative characters. As information technology develops swiftly, local wisdom or local genius tends to be marginalized and/or even eroded into a complete absence (Choesin, 2002:1). Histories often disclose the fact that whenever developments created negative impacts on human wellness, local wisdom or genius offered a moral therapy to such an illness. It is widely believed that local wisdom or local genius originates from a belief system which manages the life of a society (Purna, 2010: 3). As Razali (1987:11) states that a belief builds power beyond human ability. This power will govern human behaviors. When it is added with experience, it will become a character (Geertz, 2000: 50 – 51). Religion is subsumed under social category. As a social category, religion becomes a social phenomenon pivoting around the non-empirical axis to achieve safety, security, tranquility and wellness (Hendropuspito, 1990:34).

Adhering to Geertz's (2000) and Hendropuspito's (1990) inspiring ideas, local wisdom or local genius should become good behavioral governance for achieving safety, security, tranquility and wellness. Therefore, learning religion, which is pivoted around local wisdom or genius, should get a firm place in the school curriculum, especially for character education. Through language learning, especially the national language of Indonesia, local wisdom or genius could be communicated meaningfully to young children. So is the case with young children in Bali, they will develop good characters by knowing, understanding and applying the local wisdom or local genius, which is based on the Hindu philosophy. According to Ahmad (2010:4), local wisdom or local genius provides references for good conduct since it contains codes of relationships between human and God, human and nature, as well as human and other human or *Tri Hita Karana* (Suhardana,2006:50).

Harmonious co-existence needs people of good characters. Anthropologically, character education is educating people to retain morally good cognition, affection and action (Endraswara, 2013:1). While, Kueller (1983:1) states that "Anthropology is the study of mankind and his ways of living." Both statements contain a moral message, i.e., human ways of living could not be separated from their own characters. Likewise, when a teacher could manage his anger, the process of learning will be smoothed. Contrastively, when an anger is afore-driven, a social conflict will certainly appear (Rasna, 2013:14). Negative social phenomena will create clashes between two individuals and/or among groups in the society. For example, adolescents convoyed on roaring motor cycles without helmets would certainly create chaos to pedestrians and the police (Bali Post, Monday 8th April 2013:3).

Nowadays, Indonesia is on the verge of collapse in morality. People ran in amuck had caused material damage and loss, for examples, the Bali Nuraga case, Sumbawa, district and provincial elections. They had left misery and vandalism behind. This situation has been created by people of no-good-characters. The situation is worsened with non-equitable social welfare, corruption, nepotism and the likes. Moreover, political figures often play a role as a state property's predators. This situation has become a vicious circle, where to begin a solution and when to terminate a bad deed is surely chaotic (Rasna, 2002:1). Good characters could only be developed through education and it should be started as early as developmentally appropriate. Regardless of the frustration, education still offers the best solution ever. However, quality education is still rare in Indonesia, let alone good character education (Suryadi and Tilaar, 2003:123).

It is widely known that quality education is dictated by good learning objectives, learning materials, learning approaches/methods/techniques, time allotment, media, learning sources, and assessment of learning process and outputs. Moegiadi (1984) has shown that the use of good books will discriminate indexly between high and low achievers. The World Bank has also given special attention to quality of course books in schools in Indonesia (World Bank Report, 1996). Moreover, Galib (1993:1) recommended that education quality management should be based on the needs of the learners themselves. He suggested that learning materials should ease children in constructing knowledge cognitively, affectively and in psychomotor way. Siregar (2003:5) added the conceptual ecology will facilitate children to construct knowledge.

The above ideas inspire the necessity to implement Balinese local wisdom or genius as a vehicle for character education in learning the national language of Indonesia in the Elementary Schools in the Province of Bali. Character education containing the Balinese local wisdom or genius will facilitate contextual interaction during learning (cf. Posner, 1992; Strike and Hewson, 1992). Halliday and Hassan (1992) convinced that learning materials containing local knowledge systematized lingually will facilitate understanding. (cf. Burbles and Linn, 1992). In short, the reconstruction of course materials in curriculum of the national language of Indonesia is of prime importance for character education with the Balinese local wisdom or knowledge (Hidayat, 1990:6).

II. METHOD

A. Research Design and Respondents

The present research was of a mixed design. It was aimed at exploring the central learning themes and sub-themes for character education with a perspective on the Balinese local wisdom or knowledge. The local wisdom or knowledge will substitute the themes and sub-themes in the Indonesian language learning curriculum for the first and second graders. The corresponding themes and sub-themes derived from the Balinese local wisdom or knowledge were described and surveyed systematically. Therefore, the implemented research design was of a descriptive survey (Gall, et al, 2007). Viewed from the data collection methodology, this research was of a qualitative study. The local wisdom or knowledge suitable for character education was in the form of qualitative data. The data were directly informed by an expert in Hindu philosophy.

B. Data Collection and Analysis

Data were gathered directly from the expert through in-depth interview. It applied a question-note taking-excerpting-verification technique. The expert was asked the corresponding themes, sub-themes and the authentic sources of the Balinese local wisdom or knowledge suitable for substituting the themes and sub-themes in the 2006 Curriculum. The themes and sub-themes were written in terms of text genres, namely; description, narration and exposition. The obtained data were analyzed descriptively. The lexical and grammatical items contained in the texts will be used to develop language skills such as listening, speaking, reading and writing in the national language of Indonesia.

III. RESULTS AND DISCUSSION

A. Research Findings

The research findings mainly consisted of themes and sub-themes extracted from the Balinese local wisdom or knowledge appropriately implemented as learning materials for character education at early levels in elementary schools. They will be used to substitute the themes and sub-themes for character education in the Indonesian language learning curriculum at the first and second grades of elementary schools in the Province of Bali.

There are 8 central themes collected from the Balinese local wisdom or knowledge suitable for first graders of the Elementary School, namely: (1) *Myself*, (2) *My Hobby*, (3) *My Activity*, (4) *My Family*, (5) *My Experience*, (6) *Clean, Healthy and Beautiful Environment*, (7) *Objects, Pets and Garden Around*, (8) *Natural Incidence*. Whereas, there are 32 sub-themes altogether. They are (1) *I and My New Friends*, (2) *My Body*, (3) *I Take Care of My Body*, (4) *I Am Special*; (5) *I Like Sports*, (6) *I Like Singing and Dancing*, (7) *I Like Drawing*, (8) *I Like Reading*, (9) *Morning Activity*, (10) *Noon Activity*, (11) *Afternoon Activity*, (12) *Night Activity*, (13) *Members of My Family*, (14) *My Family Activity*, (15) *My Extended Family*, (16) *Family Togetherness*, (17) *Childhood Experience*, (18) *Experience with Friends*, (19) *Experience at School*, (20) *Unforgettable Experience*, (21) *Home Environment*, (22) *Milleau Environment*, (23) *School Environment*, (24) *Keeping Clean and Healthy Environment*, (25) *Animate and Non-animate Objects Around Me*, (26)

Animals Around Me, (27) Plants Around Me, (28) Forms, Colors, Sizes and Surfaces of Objects, (29) Climate, (30) Dry Monsoon, (31) Wet Monsoon, and (32) Natural Disasters.

Good characters could be developed through learning the Indonesian language. For example, theme **Myself** which runs: “*Purify your senses, but thoughts are purer than senses. The purest of budhi is atman. Pure atman will manage thoughts and smart thoughts will manage the sensitivity of senses*” (Bhagavadgita XIII.23; Wrehaspati Tattwa 24). This text stresses the importance of enhancing the quality of senses by thought which in its turn can be improved by *atman*, which is the purest *budhi*. The Hindu concepts can be learned by young children through lexical and grammatical items directly through listening, speaking, reading and writing in meaningful context.

Moreover, young children will learn that good thoughts will cherish *budhi* and *atman*. In Hinduism or Buddhism, human beings are endowed with *budhi* which helps in making good decisions (Jayaram V., 2001). *Budhi*, according to the tantric scriptures, is the target which is reflected by the radiance of *atman*. *Budhi* enables us to tell the good apart from the bad. It is the power that pushes us to respond to the environment. However, it does not only help us in making impartial decisions, but it also helps in heightening the ability to see things clearly, understanding them fully, learning something quickly and thinking clearly, using experiences and knowledge sensibly to enable us to understand and appreciate what happens around us in an appropriate way.

We understand, interpret, act, decide, develop our beliefs, preferences, and control our lives at the dictate of *budhi*. In the absence of *budhi*, we are left under the control of our passions. Consequently, we will stop ourselves from thinking and doing things that trap ourselves in reincarnation. We will always suffer as we fail to make a balance during the union and separation of the senses and the reason with the things being perceived.

Similarly, the theme **Family Togetherness** which runs: “*A state has to protect the existence of asrama dharma and varna dharma. It means that my big family includes all creatures live as brahmachari, ghrastha, wanaprasta and sanyasin*”. Similarly, all colors be it *brahmana, ksatriya, vaisya or sudra* should live based on *asrama dharma dan varna dharma*” (Manawa Dharmasastra VII.35). Colours influence our perceptions and interactions. Each colour stimulates our mental, physical and psychological states in a different way. They affect moods, feelings and emotions, metabolism, blood pressure and strain to the eyes. Red, orange and yellow are colours that make us feel warm and comfortable. They also stimulate in us a strong desire or cause us to get angry, while blue, purple and green are colours that calm us down and make us sad.

Colours in Hinduism also represent different qualities. The paintings of gods and goddesses show them wearing dresses and accessories in colours indicating their characters. The colours are more than decorative. Offerings have the some basic colours of red, yellow, green and white. The colours come from leaves, herbs, flour and other natural substances

Red has sensual and pure connotations. Hindus use red colour to celebrate important religious events that are related to life cycle, such as birth, marriage and death. The forehead is given a red mark during important occasions. People throw red powder on statues of deities and phallic symbols during prayers. Red also represents bravery. Gods and goddesses who are believed to be the protectors against evil, who are kind and brave are dressed in red. Before a dead woman is cremated, she is wrapped in red cloth.

Saffron is the colour which is believed in Hinduism to be the most sacred colour. It symbolizes fire capable of purifying sin. It also indicates forbearance. Thus it is used by holy people and ascetics who have rejected the world. They wear saffron dresses to seek enlightenment. It represents life and happiness in Maharashtra. Green symbolizes nature, happiness and life. It brings peace to our mind.

Yellow represents competence and stimulates us to meditate. It is the colour of Spring. Lord Vishnu wears a yellow dress to symbolize a representation of knowledge, so do Lord Krishna and Lord Ganesha. White is a mixture of seven different colours and symbolizes all the qualities in a small amount, like chastity, tranquility, harmony and enlightenment. Hindu painters the goddess of knowledge, Saraswati, in a white dress in a sitting position on a lotus, which is also white. The Brahmin is dressed in a white dress. The high growth in spirituality is symbolized in white. Thus Hindu religious leaders use white ashes to cover themselves to represent their spiritual rebirth. When Hindus mourn they are dressed up in white.

Blue is the dominant colour of Nature (sky, the oceans, the rivers and the lakes, etc.) It symbolizes bravery, determination, stable mind, strength in character, Lord Rama and Lord Krishna wear blue dresses to represent their struggle for the good of humanity that protects it against evil. All creation is made up of the three *gunas* or qualities that balance nature. The colours of white, red and black are regarded to represent these qualities. *Sattva*, peaceful agreement and chastity, by white; *rajas*, power and strong desire, by red; and *tamas*, motionlessness and lack of knowledge, by black.

There are also 8 central themes gathered from the Balinese local wisdom or knowledge suitable for second graders, namely : (1) *Harmonious Life*, (2) *Playing in the Environment*, (3) *My Daily Duty*, (4) *I and My School*, (5) *Clean and Healthy Life*, (6) *Water and Sun*, (7) *Caring Pets and Plants*, (8) *Home and Journey Safety*. Whereas, there are 32 the sub-themes, they are: (1) *Harmonious Home Life*, (2) *Harmony with Friends*, (3) *Harmony at School*, (4) *Harmony with People Around*, (5) *Playing at Home*, (6) *Playing at Friend's Home*, (7) *Playing at School*, (8) *Playing at Recreational Sites*, (9) *My Daily Duty at Home*, (10) *My Routine Tasks at School*, (11) *My Duty in Religion*, (12) *My Task and Social Life*, (13) *My School Tasks*, (14) *Extra-Curricular Activity*, (15) *My School Environment*, (16) *My Achievement at*

School, (17) Clean and Healthy Life at Home, (18) Clean and Healthy Life at School, (19) Clean and Healthy Life at Playground, (20) Clean and Healthy Life in the Vicinity, (21) Water, (22) Earth, (23) The Sun, (24) Nature Around Us, (25) Animals Around Us, (26) Caring for Pets, (27) Plants Around Us, (28) Caring for Plants, (29) Rules of Home Safety, (30) Home Safety, (31) Travel Safety, (32) Tour Safety.

The sub-theme **Myself and My New Friend** which runs: “*I am a whole body. My body is Purusa and Pradana*”. “*After birth, my new friend is Stavira or plants, animals and human beings, for example: my neighbors, my close friends who I play games with*” (Katha 1.3. 3-4; Bhagawad Gita XIII.23; Wrehaspati Tattwa 24). Friendship is defined widely as includes plants, animals and human beings. Bodily parts are understood as an integrated physical and mental entity.

True friends remain no matter what has changed over time. Friendship is a mixture of love, loyalty, respect, truth and fun. People are close to each other because of having common interests. In a close relation one feels comfortable and safe. A true friend is rare. With a true friend, one does not have to be careful in expressing oneself. He or she knows more about you than yourself and is always on your side. He or she is present in time of trouble. He or she will come to help you when you face difficulties in life.

There are many different qualities that define friendship such as trust, unconditional love, companionship. People define friendship based on their experiences. Mythologies have stories about friendship. Friendship is a relation that has been cultivated continually. Well known stories about friendship can be read in mythologies. The stories say that you would be very lucky if you found a faithful friend because it means that you have found something indispensable. Friendship is dynamic. To have a healthy relation a child has to learn to accept others’ behaviours and to adjust his or her behaviours in order to be accepted by others and he or she needs to learn when to be with a friend and when to be alone. Friendship helps children to develop their emotional maturity. It needs to be developed from time to time if it is going to survive.

Children start to make friends when children start to get along with other children. Parents need to take care of the kind of friends their child chooses until he or she is able to between right and wrong. When a child makes friends with children who have a bad character, this means that it is more likely for him or her to develop a bad personality. Wrong peers or lack of socializing can cause the children to suffer from severe psychological traumas and disorders, which will end up with social maladjustment. Choosing correct peer group for a child is the first step toward the attainment of a good personality for him or her. Both positive and negative experiences help in refining the child’s personality. Thus it is essential for us to find friends who agree most of the time with us.

Another example of the Balinese local wisdom or knowledge suitable for character education, especially for the second graders could be described as the following. The theme **Harminous Life** which runs: “*With rta, God the Almighty rule nature for wellness. When rta and dharma are in line with norms and ethics, it will develop synergy among elements to create peace and harmony between human and human, human and nature, human and the Prime Cause. Harmony exists when dicipline and order are developed accordingly*” (Manawa Dharmasastra VII.14). According to the text, harmony and peace in life will be experienced when *rta* and *dharma* are in accord with norms and ethics. Hence, children should learn good norms and ethics to create harmony and peace in their life.

Likewise, the sub-theme **Harmonious Life in the Family** which runs: “*Every home has to be divided into three sections, namely; prayer site or hulun karang, Dewa Pitara or ancestors, a place to live at, and people to live at, like: father, mother, children. Children who live at home are at the stage of brahmacarī*” (Manawa Dharmasastra VII.14). When sounds are in tune with each other we have harmony. Best friends can be maintained if they keep in harmony. It means they agree with each other in what they perceive. To keep in harmony at home, the house has to be divided in such a way that ensures a harmonious relation between human and human, human and nature and human and the Creator. Other words with related to harmony in meaning are unity, peace, friendship, consistency. The antonyms include clash, clang and dispute.

In one sense, harmony is a concept that indicates that there is love, affection in between different people, regardless differences in gender, race, religion, other social and cultural variables. Harmony is supported and encouraged in the National Constitution of Indonesia. Every citizen is free to choose and practice any religion and belief. This will make different traditions co-exist harmoniously. Any one has to remember that an excessive devotion to his or her religion at the expense of condemning other religions will cause him to harm his or her religion. Thus, a good inter-religious relation should be maintained from time to time if the objective is to live in harmony with each other. One should respect the doctrines of other religions.

B. Discussion

The afore-mentioned Balinese local wisdom or knowledge could be authentically used to develop themes and sub-themes for young learners, whose religion is Hinduism. The character education could also be implemented through the Indonesian language learning for young children. Themes and sub-themes derived from the Balinese local wisdom are realistic and relevant to learning the Bali’s social, cultural and religious values. The social, cultural and religious values nested in the Balinese local wisdom seems to strengthen the universalism of truth and morality. Moral universality, therefore, is a meta-ethics. It means that moral truth contains no biases in terms of culture, race, gender, religion, nationality and sexuality (cf. Syariati, 1996; Scott, 2000; Sadullah, 2008; Adib, 2011). Therefore, character education should contain universal social, cultural and religious values developed in the young learners’ moral repertoire. However, the universality of the social, cultural and religious values should not neglect the idiosyncrasy of Hinduism.

For instance, a lexical item such *atman* should emphasize the perfection of senses in order to shape *budhi*. In Hinduism, the purity of *atman* will govern *budhi* or cognition. Consequently, pure *atman* and conscious *buddhi* will in turn shape actions.

Similarly, the theme of Myself could be broken up into parts as I and My Friends, My Body, I Take Care of My Body, I am Special. This theme should be explored as an existence of Self to be juxtaposed with Others. Self is understood as whole *Purusa* and *Pradana*. Others are not meant solely to humans, but animate and inanimate objects, which include plants, animals, or water, air, earth, or ether. Through these young children learn how to interact and maintain harmonious interaction with animate and inanimate beings. Young children will learn parts of the body as well as five important elements, such as solid substance, fluid substance, hot substance, air, and ether called *Panca Maha Bhuta*. In the Balinese local wisdom, the senses are metaphorically called the carriage, while cognition is the horses. Similarly, *buddhi* is compared to a rider, while cognition is the laces. Maintaining healthy body and soul, one has to take care of the carriage, the horse, and the will. This moral religion is transmitted through young learners by observing the daily religious life in family or in the community. I take care of myself is an obligatory morality to the Balinese Hinduism.

In the Balinese local wisdom, all Balinese should believe in God the Almighty and conduct regular *bhakti* or prayers. Take care of the body and soul will maintain good health throughout life. Through prayers, good characters will be developed, and subsequently will condition *bayu*, *sabda* and *idep* or power of knowing, saying and thinking or else *Tri Kaya Parisudha*.

The teaching of moral and religious characters should take into account the Piaget's moral development (Jamaris Martini, 2001). Balinese local wisdom will certainly develop young children to morally smart in thinking, saying and acting in daily life. Piaget asserts that social problems and dilemma could be developed through healthy interaction with the environment. Kohlberg believes through moral reasoning, young children learn to make moral decisions. Kohlberg also emphasizes that moral logic and morality develop through stages appropriate with children's moral and cognitive development. Therefore, local wisdom nested in folklores and folksongs are beneficial to children's character development. Thomas Lickona adds the necessity of developing children's character through education which is appropriate with their moral and cognitive development or *Developmentally Appropriate Practice*.

IV. CONCLUSION

Character education involves many disciplines. The purpose is to educate the students to become more developed in perception, intelligence, emotion, and social relation, and morality. However changes occur in all aspects of life due to globalization. The students are expected to have Awareness and social control mainly derive from the society as the owner of language, literature, and culture. The students are expected to possess good social, cultural and religious knowledge and understanding of the Balinese local wisdom in Indonesia. The awareness, self-awareness, could create the character building of the nation like *atman*, *bayu*, *sabda*, *idep*, *Panca Maha Bhuta*, etc. This study was aimed at finding out the Balinese local wisdom or knowledge which can be used to develop good characters in young children in Bali. This study was a combination of field research and text analysis of semiotic symbols. The twofold objectives of Indonesian education system are to train the students to pursue careers in their lives and to educate them to become good citizens who are ready to take an active part in promoting a better democratic life. Character education fits for the second aim very well.

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I Speak Chinese but I Am Teaching English: Exploring the Influence of Nonnative Speakership in the Construction of Language Teacher Identity

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Abstract—This research aims to explore how two Chinese English-as-a-foreign-language (EFL) teachers construct their professional identity as nonnative English teachers with the influence of the social factor – nonnativeness. It adopts a modern approach of identity that its formation is an ongoing process, and Wenger’s (1998) theory of identity that one acquires identity through the participation in various communities of practice. It is designed to be a qualitative study of two Chinese EFL teachers’ construction of teaching identity. The subjects negotiate the meaning of “teaching English” within various communities of practice. Findings suggest that the process of negotiation begins long before they enter their teaching career. And this process has been going through the whole process of identity construction. Findings also reveal a dual identity discursively constructed by the two subjects – both as an English teacher and learner. In addition, their nonnative speakership has played a significant role during the formation of teaching identity and has greatly influenced the way they teach. Finally, being nonnative can be advantageous in terms of language teaching.

Index Terms—nonnative speakership, communities of practice, professional identity

I. INTRODUCTION

In language education, there has been a deeply rooted idea – the native speaker¹ fallacy (Phillipson, 1992), which argues that the most ideal language teacher is the native speaker of the target language. As a result, native speakers of English are more welcomed even when they don’t have teaching experience. In fact, many private language schools “prefer white only” (Shao, 2005) when hiring English language teachers and almost in all institutions native English-speaking teachers (NESTs) are better paid than nonnative English-speaking teachers, sometimes twice the salary (Yang, 2011).

In China, where most English teachers are nonnative English speaking teachers, it is of great significance, therefore, to explore how their nonnative speakership influences the way the teachers perceive themselves as nonnative English speaking teachers. It is with this intention that this research is conducted with the following research questions:

(1) *What is the professional identity constructed by the two subjects?*

(2) *How does nonnative speakership play a role in the construction of teaching identity?*

Identity, in modern times, is defined as what we know, what is foreign and what we choose to know, as well as how we know it (Wenger, 1998). It is the process of interpreting oneself as a certain kind of person and being recognized as such in a given context (Gee, 2001). Norton (2000) adds in the aspect of “how a person understands possibilities for the future” when studying identity.

In other words, identity is not a fixed, stable, unitary, or internally coherent phenomenon but is multiple, shifting and in conflict. It is not context-free, either; it derives from individuals during the interaction with society (Varghese, Morgan, Johnston & Johnson, 2005).

Gee’s (2001) proposes that, one might have a “core identity” but operates in multiple forms across different contexts (p. 99). This multifaceted nature of identity enables individuals to present different forms of self under different situations, as in Jackson’s (1981) classification² of identity. Professional identity is one of the presentations, is individuals’ presentation of self in the context of a specific profession.

Wenger (1998) describes the process of identity formation as developed within various communities of practice³ (also known as CoP). He proposes that one constructs his/her identity when he/she participates in various communities of practice. When participating in the practices of these communities, one negotiates the meanings which contribute to

¹ Braj Kachru’s (1992) defined “native speakers of English” as speakers from six countries, namely, the UK, the US, Australia, Canada, Ireland and New Zealand. Speakers out of these countries are referred to nonnative English speakers.

² Based on the situated nature of identity, Jackson (1981) identified several types of identities: associational identities; kinship identities; peer identities; recreational identities; religious identities; professional identities, etc.

³ A community of practice, is a group of people who share an interest, a craft, and/or a profession (Lave & Wenger, 1991).

one's learning. Identity, then, is a way of talking about how learning changes whom we are and creates personal histories of becoming in the context of the communities.

Teachers' experiences in these communities, classroom and school environment, educational policy, as well as other social factors, can all have a great impact on the formation and maintenance of one's teaching identity (see Olsen, 2008). Conversely, the teaching identity constructed within the professional communities, poses an impact on the teacher's participation and engagement in the communities.

To sum up, one's identity is constructed through his/her engagement in various communities of practice. Then, identities formed through participation within various communities of practice are expressed in discourse, which consist of a system of beliefs, attitudes and values that exist within particular social and cultural practices (Danielewicz, 2001; Varghese, Morgan, Johnston & Johnson, 2005).

In other words, identities constructed in the practices can be revealed through discourse in one's narratives. Based on this framework and the qualitative nature of the two research questions addressed previously, this study is designed to be a twin case study of two Chinese EFL teachers' construction of professional identity. It aims to explore the role of nonnativeness in the formation of their teaching identity.

By answering these two questions, this study is to provide a useful lens to examine nonnative English speaking teachers' professional identity in general, Chinese EFL teachers' in particular. It hopes to contribute to the literature of identity formation by means of incorporating the social factor – being nonnative, into the study of professional identity.

What needs to be clarified is that this study adopts Kachru's stance by, in the remaining sections of this paper, referring to "native speakers of English" as speakers coming from the inner circle while "nonnative speaker of English" as speakers from the outer and the expanding circles in his model of world Englishes, only for the pragmatic use of this dichotomy. It must be noted, however, that no derogatory judgment is intended when using these terms.

II. METHOD

This research is designed to be two case studies since a case study provides us with "a thorough understanding of how the process develops" (Swanborn, 2010). It is a twin-case study of two Chinese EFL teachers' construction of professional identity in the hope of gaining rich information about the topic.

The two participants are purposefully chosen from a university of South China, with one male teacher and one female teacher in order to generate as much and diversified information as possible. Doris, having teaching English for 13 years, has always considered herself both a language teacher and learner. Don, with more than 18 years' teaching experience, described his career as a process of breaking away from cliché traditions of language teaching and learning.

Data were collected through face-to-face interviews with the two participants, each lasting about 50 minutes. Questions were semi-structured and centered around the subjects' negotiation of meanings of language teaching and their perception of being a nonnative language teacher. Triangulation was achieved through classroom observation and follow-up talks after the interviews.

The process of data analysis was guided by the research questions addressed at the beginning of this paper and data were developed and interpreted into three themes: identity formation, dual identity and making good use of being nonnative.

III. FINDINGS

Developing a teacher identity involves the process of "gaining insights of the professional practices and the values, skills, knowledge" (Chong, Ling & Chuan, 2011) required and practiced within the teaching profession. The subjects were found to have gone through a complex negotiation of the insights of "English teacher" and "English teaching" over a long period of time. It began as early as they stepped into school communities as students, university communities, intern community and throughout their teaching career. This process developed gradually over the trajectory of becoming a teacher.

Identity formation: an ongoing process

Before school, the image of "a teacher" mostly came from what their parents told them. As students, they began to negotiate the meaning of "teacher" through their involvement in practices within the school community. Their interactions with teachers and their observation of teachers' behaviors played a big part in shaping the meaning of "teacher" and "teaching", "especially when in early schooling days" (Don).

In Doris' memory, teachers always stood in the front of the class, which was an image of "almighty". While Don admitted that he didn't quite remember the way the teacher taught but he was very impressed with the teacher's "authority": teacher gives orders and students obey. As a result, the meaning of an English teacher, in these early communities, is negotiated to be one who knows everything well about English:

Extract one

I didn't begin to study English until I was in the middle school. In my mind, my English teacher should be a very good speaker of English and understands everything in English. It was silly of me to think that way, you know. (Don)

These early images, which focused on English teachers' expertise in the language, were later believed to be "immature and silly" (Don). And this is due to the deeply rooted concepts that a teacher needs to be knowledgeable and

omnipotent and is often idolized by students. Doris also described her surprise when she saw her English teacher doesn't know the meaning of a particular word:

Extract two

I thought she (the teacher) was not a good teacher because she failed to answer a question raised by one of my classmates and she claimed that she needed more contemplation. I was thinking: how come could this have happened? She is AN ENGLISH TEACHER!

As a middle school student, Doris concluded that her English teacher was not a good teacher because she couldn't answer students' question promptly. "Knowing everything about the subject" had become the premise for being a good teacher for the two subjects at a young age.

The process of negotiation of meanings continued with time going on. After finding themselves doing well in the subject of English, they decided to choose English as their major in the university. When studying in the university, student teachers were trained toward "proficiency" and "professionalism". As a student, Doris didn't see professionalism as important; instead, she had spent plenty of time working toward proficiency. She justified her efforts to improve her language proficiency:

Extract three

As an English major, I need to be highly proficiency in the language itself; otherwise, how can I teach in the future? Foreign teachers speak English ever since they were born. But we are different and it is much more difficult for us. All the four years witnessed my hard work of studying the language, but compared with the native speakers, we are always in the unfavorable situation.

Doris expressed a strong determination to further her study in the field of English language and education for she believed that the first thing for her to do is improve her English proficiency so that she might construct an image of a proficient English speaker among students while might empower her identity as a language teacher.

After entering the teaching community, the subjects began to realize, from their engagement in teaching, that a qualified English teacher not only needs to be proficient in English, but needs many more professional qualities. Apart from being proficient in English, they added in more rich meanings to the concept of "an English teacher": experienced, knowing how to teach, knowing the students well, well-informed.

In addition, it is only within this community of practice, did the subjects begin to think about the issue of being nonnative as a language teacher. They were exposed to the way native speaking teachers teach and the fact that these two types of teacher are paid discriminately. When knowing that many students prefer being taught by native speaking teachers, Doris once had "identity crisis":

Extract four

I began to question my own qualification as an English teacher. I had never studied in an English-speaking country, nor had I ever been to any of these countries. I was not confident at all when I spoke English, especially with native speakers. As a new teacher, I was frustrated and was wondering how the language should be taught.

"Identity crisis", refers to the phenomenon that nonnative English-speaking teachers often experience "fear, anxiety and confusion" (Liang & Rice, 2006, p. 167) when struggling between two "inner selves": professional self and nonnative self.

The identity crisis had come as a result of Doris' lack of experience in teaching English and language immersion. To deal with this crisis, she kept reflecting her own way of teaching and went into many colleagues' classroom in order to overcome the "disadvantage of being nonnative". Don also expressed his concern of being nonnative and reckoned that he had to improve his teaching skills "as a compensation of being less proficient in English than the native speakers".

In this process of identity construction, Doris continued to argue that it is the traditional way of English education, which could be described as "silent English"⁴, that resulted in their speaking incompetency. She explained that English learners of her generation had been the victim of it and she didn't want her students to follow suit.

Don also related his own language learning experience to his daily teaching. He recalled the traditional teacher-talk dominated teaching style when he was a student, and labeled it cliché. It is the idea of "breaking away from the cliché way of teaching English" that had played an important role in building up Don's own style of teaching:

Extract five

I always encourage students to talk in class and focus more on the practical use of the language so that, unlike my generation, they would be able to use the language after years of learning. Therefore, I have been trying to avoid the teacher-dominated classroom and advocate student-based style. I give plenty of time in class for students to talk.

As can be seen from the extract, Don has placed great emphasis on improving students speaking competency in his classroom. This was further reified in her classroom instruction where she arranged her students to practice their oral English for about 30 out of 45 minutes, either individually or in pairs.

Don's teaching focus has resulted from his perception that "nonnative speakers of English find a lot of difficulty in listening and speaking". That is, nonnative speakership has greatly influenced the way they teach.

To sum up, the subjects had never ceased to negotiate the meaning of "English teaching" even after they entered the teaching community. This echoes the previous claim that identity formation is an ongoing process (Gee, 2000; Van

⁴ The phenomenon of "silent English" indicates the fact that many students are extremely good at reading and writing English, but fail in listening and speaking.

Zoest & Bohl, 2005) and it is not fixed (Varghese, Morgan, Johnston & Johnson, 2005). The subjects have put “a high English proficiency” as a priority as an English teacher and setting up a powerful image of an English teacher among students is necessary.

Dual identity: an agency for teacher development

Doris kept emphasizing that she is still an English learner. As a teacher, she didn't give up further studying English in her spare time in order to get closer to “the height of a native speaker”. She knew pedagogy is also essential for a teacher, but for a language teacher, “proficiency is nonetheless more important” and since she was nonnative she needs to spend more time on it.

And Doris was not alone in this respect. Don also expressed his concern about being nonnative while having to teach the language:

Extract six

I feel extremely nervous when a foreign teacher walks into my classroom. I am afraid that I might make mistakes when speaking or teaching English. You know, it feels bad. And it is discouraging by all means.

Both Doris and Don admitted that they spent much more time preparing for the class which was to be observed in this study, for they “didn't want to make too many mistakes when speaking English and they (mistakes) were sure to be detected by the observer” (Don). This has, to a large extent, revealed their uncertainty of their spoken English.

Among all the language skills, reading is the skill the two subjects are most confident about and they both showed dissatisfaction toward their speaking competency. As a nonnative English speaking teacher, Doris said that sometimes she could not reach both fluency and accuracy simultaneously when speaking English.

Extract seven

You know I have never been to an English speaking country and speaking has been a problem for me. I usually very hard to achieve both fluency and accuracy but the fact is that I can't do it well. For me, I could only guarantee fluency and I should say I make grammatical mistakes frequently (Doris).

Encountering the same problem, Don, however, paid more attention to accuracy than fluency. He has been emphasizing the importance of “producing accurate sentences” all the time in terms of his learning and teaching English. He insisted that as a language teacher, it would depower his image among students if he makes mistakes in his utterances of English.

Observation in the classroom also indicated an obvious distinction between Doris' and Don's choice of “fluency or accuracy as the priority” when using English. Doris, in order to present herself as “a fluent speaker of English”, chose to use English as the medium of instruction in class and only use Chinese occasionally; in addition, she encouraged students to adopt an all-English approach in class. As a result, some small errors were detected without causing any communication failure, however.

Don, on the other hand, had spoken English with serious caution for fear that he “might set up an image of an incompetent language teacher because of the errors” (Don). Don's choice had impelled him to push his students to produce utterances with “correct pronunciation and grammar” (Don's discourse in class) in class.

Based on their perception of being incompetent in speaking English, both Doris and Don claimed that they had always been on the way to improving their English competency even after they began to teach the language. In order to reach a native-like proficiency to “compensate their nonnative speakership” and their “Chinese accent” (Don), Don attributed a certain amount of time every day to reading and listening in English.

Extract eight

We have been speaking Chinese for decades and it is difficult to change (the accent) when we speak English. I mean, the accent. We have been working hard to get rid of the Chinese accent since we began our study in the university as English majors. But no matter how hard we've been trying, the fact is that we have to bear that accent all the way.

Extract eight witnessed Don's efforts to get rid of the Chinese accent while speaking English and this partly revealed his admiration of speaking standard English as an English teacher. Even after he began his teaching career, he still worked hard toward this move – a native-like accent and competency of English.

Both the two subjects admitted to their dual identity – both as a teacher and a learner of English language. This awareness often helps them “to keep moving forward academically” (Doris) and “to be informed of all sorts of educational development” (Don). “Positioning ourselves as learners impels us to take in new things all the time.” Don says. What lies behind these efforts is the motive to become more proficient in English language and competent in English teaching.

In other words, the two teachers' awareness of the nonnative speakership of English, has become the agency for them to develop themselves as teachers. Teacher agency, as described by Beijaard, Meijer, and Verloop (2004), refers to the active pursuit of professional development and learning in accordance with an individual's goals. there are various ways in which teachers can exercise agency, depending on the goals they pursue and the sources available for reaching their goals.

Apart from devoting time to improve their English competency, Doris and Don both look forward to a language immersion period in an English-speaking country. They believed that such an immersion would surely improve their competency as well as confidence in teaching English.

Extract nine

We didn't have language immersion program in university, which was still a pity. We were definitely made in China, never experiencing any form of English culture. However, we are teaching English. If there were opportunity for an immersion, I would definitely go.

Don owed his speaking incompetency to the fact that he hasn't stayed in any English-speaking country for any period of time. He added that, if he had, things would have been different. Doris expressed her determination to pursue a doctor's degree in order to "make up for being nonnative":

Extract ten

We could never be comparable to NESTs in terms of language proficiency. Therefore, what we can do to make up is get higher diploma to be competent as referred to as a language teacher. Sometimes students are critical about their teacher if s/he doesn't have high certificate. We become more confident once we are armed with a higher diploma.

It is apparent that the heightened awareness of the dual identity had led to a strong sense of agency: Doris had hoped to pursue a higher degree in related field for she believed she would be more confident as long as she has the doctor's degree, which would greatly empower her qualification as an English teacher, despite her nonnative speakership in English.

Despite their awareness of the dual identity, Doris insisted that, in front of students, teachers should position themselves, first of all, as a teacher rather than a learner. Otherwise, "teacher identity would be in danger". She wanted to build up an image of "a fluent speaker" when she was teaching in the classroom. "When I am away from campus, I am an earnest learner of English. But when I return to class, I am a teacher of English." She managed to keep a balance between these two identities.

They tend to display their teaching identity more in classrooms while present themselves as learners after class when they are either alone or interacting with people, especially those whose English proficiency is perceived to be superior to theirs.

What is worth noting is that there had appeared a discrepancy of Doris' perception of "language teacher" after she entered the teaching community: Doris used to attribute the quality of making errors to an unqualified English teacher; however, she put more emphasis on fluency rather than accuracy in her teaching activities. This has again proved the previous finding that identity is not fixed but keeps refreshing itself all the way.

Making good use of being nonnative

While admitting that many students prefer to be taught by native speakers of English, the two subjects claimed that being nonnative also has its advantages in teaching English. Don referred to the limitation of native speaking teachers as "their taking the use of English for granted and ignorance of the process of learning the language":

Extract eleven

These NESTs (native English-speaking teachers) speak English for granted and they won't be able to know students' difficulties in learning this language. Furthermore, most of them don't speak Chinese, which causes problem in communication sometimes.

Doris added that "NESTs don't know much about Chinese students' situation". That is, NESTs are not familiar with Chinese culture and students' personalities, which hinder the two parties from effective communications. "These foreign teachers often teach according to students' needs in their own countries, which causes many shocks," she explained.

As a result of the limitations, Doris argued that "there are some subjects that NESTs are not suitable to teach, such as intensive reading, grammar, translation and alike". Local teachers are to fill the gap between students and native speaking teachers, according to Doris.

Don further pointed out that to make the best of the native and nonnative teachers, some form of cooperation between them should be introduced so that they complement with each other:

Extract twelve

We want to know more about the language itself and its culture as well and they (native speaking teachers) need to better understand our students' difficulties and needs. More communication or cooperation should be introduced.

Don believed that communicating with native speaking colleagues is another form of language immersion and undoubtedly it would help improve his English competency by any means. Therefore, he hoped that there would be cooperation between them.

In addition, Don pointed out that his own experience in learning English can benefit his students for they share similar first language influence. And this cannot be achieved through native speaking teachers. In other words, he makes himself a language model for his students, which he believed facilitates students' learning:

Extract Thirteen

I often communicate with my students my own English learning experience. We have the same native language, which undoubtedly poses great impact on second language learning; and I understand better what their difficulties are so that the learning process may be much easier.

Don was also observed to communicate with students after class sharing his own understanding and experience of English learning as well as how he coped with the difficulties. During the talks, they primarily used Chinese, which is their mother tongue. He later expressed his "gratitude to his mother language" which had greatly promoted the communication with his students. And he believed that it would have been even harder if they were to use English only.

Don's description of the role his own learning experience plays in helping with students' learning process can be

interpreted as the “language learning model for students” (Kirkpatrick, 2008). In his *World Englishes*, Kirkpatrick argued that a good language teacher acts a language learning model for his / her students.

To sum up, the construction of being a nonnative English-speaking teacher is an ongoing process within various communities of practice. During the process, these teachers have perceived themselves as both an English teacher and learner all the way throughout their career development. This dual identity has, on the other hand, functioned as the agency for their own development in terms of language teaching. Though nonnative, the teachers believe that they have their own advantageous qualities over native English teachers in many ways.

IV. CONCLUSION

Being nonnative is a significant element in the construction of teachers’ professional identity as a nonnative English speaking teacher. It doesn’t appear in the subjects’ negotiation of the meaning of “English teaching” until they enter the teaching community. And ever since it plays a part, it continues to have an impact on their identity formation. It goes through the process of constructing and reconstructing teaching identity while teachers negotiate the meaning of “language teaching” and “language teacher” in their teaching practice.

As a nonnative English-speaking teacher in China, the subjects have to face up to their dual identity – both a language learner and teacher. They hide the learning aspect of identity when in the classroom and disclose it when engaging in learning communities such as talking to native speakers. This has in agreement with Wenger’s (1998) that identity is a nexus of multi-memberships in various communities.

This dual identity, on the one hand, has positioned themselves under an unprivileged status as compared to the native speaking teachers in the first place. In order to be competitive, these teachers are under the pressure of reaching a native-like proficiency of English, which is a second language studied through formal education.

On the other hand, it has also become the agency for teacher development. By pursuing language immersion programs as well as a higher certificate in English teaching, the subjects have been on the way to improving themselves in terms of both language and teaching competency so as to empower their teaching identity as a nonnative speaking teacher.

Being nonnative poses great influence in the way the teacher teaches. The subjects have come a long way from their early education of English and spare no efforts in class to encourage students to talk in order to avoid learning “silent English” as they did. This has resulted from their nonnative speakership which contributes to their lack of competency in speaking the language.

Despite the perceived disadvantages of being nonnative, the subjects also see their advantages in teaching English as nonnative speaking teachers and believe they have their own privileges over native speakers. First of all, their own experience of learning English may well help students since they provide a successful language learning model for them. Secondly, they know students and Chinese educational context much better, which they believe will facilitate both teaching and learning. Thirdly, there won’t be communication failure with students, which native speakers often encounter.

To summarize, for non-native English-speaking teachers in China, the dual identity both as a teacher and a learner is critical along the trajectory to become an English teacher. It has penetrated the process of identity formation for the Chinese local English teachers and should not be ignored while studying their professional identity.

V. DISCUSSIONS AND IMPLICATIONS

Traditional ways of English teaching have led to what is recognized as “silent English” over the decades, which indicates one is unable to speak English even he/she has acquired quite a proficiency in reading and writing. Most Chinese students claim that among the language skills, they are most confident in reading and writing (Zhang, 2014) and least confident in speaking. This study partly reveals the English education outcome that people of the two subjects’ age (around 35 years old and older) have received.

In addition, an overall low level of English proficiency exists under the Chinese context. Students find themselves unable to use English freely even after decades’ English learning in various levels of education. Teachers, as well as policy makers, then need to see to it that the purpose of students’ learning English is to put it into use. It is, therefore, of great importance that the teacher-centered English classroom be critically evaluated while up-to-date and effective classroom instructions and activities be explored.

A “native-like” English proficiency has been claimed to be difficult under the Chinese context, where a favorable English language environment is lacked. English teacher preparation programs in China don’t offer any immersion program for student teachers nowadays. As a result, speaking has become the biggest challenge for them. These teachers, though having been exposed to modern language teaching and learning theories and practices, have recognized an urgent need of altering this situation.

This study is only a prelude study of Chinese English language teachers’ professional identity in terms of the small scale and the methodology used. It is anticipated to bring up the issue of native / nonnative in China so that it is incorporated into English teacher education since it plays an essential part in identity formation. It is also anticipated that this research may help nonnative language teachers to face up to their dual identity and make good use of it to

facilitate both teaching and learning.

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The Investigation of the English Grammar Learning Strategy of High School Students in China

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Abstract—The article conducts a questionnaire survey and interview on the students in a high school in Hubei Province of China. The result indicates that the level of high school students' grammar learning strategy is low. Among the three factors of grammar learning strategy, the cognitive strategy ranks first, then the meta-cognitive strategy and social-affective strategy. And the grammar learning strategy is not correlated with English grammar achievement. The research result demonstrates that there is great difference between female students and male students in English grammar strategy using and grammar score. This outcome is conducive to knowing better about high school students' condition of grammar learning strategy using, and supplying some reference for enhancing the high school English teaching efficiency.

Index Terms—high school students, grammar, cognitive strategy, meta-cognitive strategy, social-affective strategy

I. INTRODUCTION

Since the 1970s, the research focus in the second language acquisition has shifted from teachers' teaching to students' learning in order to develop students' learning ability, which is vital for students' English study. The language learning strategy refers to a series of methods or behaviors used by learners to understand, learn, and memorize language information (O'Malley & Chamot, 1990). Since 1970s, with the emphasis shift to applied linguistics from "teaching" to "learning", the learning strategy has aroused widespread concern of linguistic experts (Flavel, 1971; Aek Phakiti, 2003; Wen, 2004; Pei, 2014; Gao, 2017; Huang, 2017). The domestic and foreign language researchers have carried out a lot of research in different aspects to study the language learning strategy from the classification, factors, the relationship between the learning strategy and learning achievement, learning strategy training, some language skill teaching such as reading, writing, listening, vocabulary, and come to agreement, namely, the language learning strategy is an important means for students to learn (Rubin, 1987; O'Malley & Chamot, 1990; Gong, 2008; Chang, 2012).

It is well known that grammar is one of the three elements that make up the language system, and it is also a difficult point in the English teaching. For a long time, English grammar has been a difficult and hot issue in English teaching and has been a headache for many teachers and learners of English. In the high school stage, English teaching with grammar as the key link takes up a great deal of time for teachers and students, but the effect is not obvious. The grammar studies in the past focused more on the teaching of teachers, but not much on the learners.

Domestic and foreign experts and scholars on the English grammar learning strategy also do some research, which mainly focuses on the grammar learning achievement, language background, educational background, teaching mode, gender, and factors (Glu, 2005; Pawlak, 2012; Zhang, 2006; Wang, 2013; Liu, 2017; Wang, 2017). Some empirical studies show that the overall awareness of high school students using of grammar learning strategy is not strong; The English grammar strategy and English learning achievement are positively related; The frequency that female students use grammar strategies is significantly higher than that of male students (Chen, 2006; Pei, 2014).

In short, the current study of English grammar learning strategy is relatively scarce, and the subjects are usually English majors or graduate students in key universities, while the study of high school students is particularly deficient. At present, the English teaching for high school students is very important and decides students' future career. This study intends to study the condition of high school students' grammar learning strategy using based on characteristics of high school students, to seek a deep knowledge of the English grammar learning strategy, and aims to explore a reliable path to improve the high school English teaching quality.

II. RESEARCH METHODS

A. Subjects

The subjects of this study are Grade One students in a high school in Hubei province of China. A total of 176 students, including 87 female students and 89 male students, are from three classes of similar English level.

B. Research Instrument

In the study, questionnaires, test papers and interviews are used to obtain data. The questionnaire employs "the questionnaire of English grammar learning strategy for high school students" (The questionnaire is adapted from Cheng's (2002) questionnaire of English grammar learning strategy). The questionnaire uses Likert five scoring system (Oxford, 1990) which argues that if the mean is higher than 3.5, it shows that the strategy is used more frequently; If the mean is between 2.5 and 3.4, students sometimes use this strategy; If the mean is less than 2.4, it means that the strategy is rarely used.). The questionnaire consists of 50 items, including three factors: cognitive strategies, meta-cognitive strategies, social/affective strategies (based on dimensions of learning strategies by O'Malley & Chamot (1990). The author tested the reliability and validity of the questionnaire and made the item analysis. The reliability of the questionnaire is 0.945. The questionnaire was issued and retrieved in the third week of class in the autumn semester of 2016, and the actual recovery of effective questionnaires were 170 copies. The grammar test is measured by 100 points, whose reliability is 0.837. The test paper was also distributed in class in the third week and collected in class. A total of 15 students (three from each class) who were randomly chosen from 3 classes, were interviewed. The interview time of each student was 5 minutes. The main purpose is to make a reasonable explanation for the questionnaire.

C. Data Processing

In this study, SPSS22.0 software is employed to make descriptive statistics analysis of 170 valid questionnaires and test scores.

III. RESEARCH RESULTS AND ANALYSIS

A. General Usage of English Grammar Learning Strategy

Through the descriptive statistics of students' grammar learning strategy, the results (Table 1) show that high school students have a lower level of using grammar learning strategy, and they only sometimes use these strategies. The results of the interview also show that high school students generally find English grammar difficult, dislike grammar learning, and do not know how to use effective learning strategies, either. The cognitive strategy is the most frequently used, followed by the meta-cognitive strategy, and social/affective strategy ranks last. The results of this study are inconsistent with those of Ma's research (2014) (the frequency order from high to low is: the affective strategy, the cognitive strategy, the meta-cognitive strategy). The differences in results may be due to the differences between subjects.

TABLE 1.
DESCRIPTIVE STATISTICS OF GRAMMAR LEARNING STRATEGY AND ACHIEVEMENT (N=170)

	mean	SD
total strategy	2.812	.482
cognitive strategy	3.398	.737
meta-cognitive strategy	3.013	.718
social /affective strategy	2.865	.726
grammar score	65	13.243

Relatively speaking, high school students' knowledge memorizing and cognitive ability of grammar learning is the highest, but the social/affective strategy is rarely used, students are not used to communicating with others to learn grammar, and they are not accustomed to regulating their learning emotion through self dialogue ("self-talk").

B. The Differences between Female and Male Students in the Usage of English Grammar Learning Strategy

The descriptive statistics of grammar learning strategy using shows that the mean of the strategies used by female students are higher than those of male students, which indicates that female students' using frequency of grammar learning strategy is much higher. The further independent sample T test shows (Table 2) that the difference between female and male students is significant, and the differences in the three strategies of cognitive strategy, meta-cognitive strategy and social/affective strategy is significant at the 0.001 level. There is also significant difference between female and male students in the score of English grammar, and average speaking, male students score higher than female students.

TABLE 2.
INDEPENDENT T-TEST OF FEMALE AND MALE STUDENTS IN GRAMMAR LEARNING STRATEGY AND ACHIEVEMENT (N=170)

	gender	mean	SD	T	sig.
cognitive strategy	M	3.216	.748	-3.261	.02
	F	3.407	.679		
meta-cognitive strategy	M	2.873	.683	3.817	.00
	F	3.158	.592		
social /affective strategy	M	2.791	.783	3.169	.017
	F	2.993	.697		
grammar score	M	63	1.217	2.82	.03
	F	67	.849		

The interviews also confirm the findings to some extent. Because the grammar learning is boring and sometimes

difficult, students generally do not have a very positive attitude towards it. However, compared with male students, female students are more likely to regulate their grammar learning mood, and they can consciously cultivate their interest in grammar learning, and gradually enjoy grammar when they are challenging grammatical problems. Although female students are sometimes very passive in learning, but they can also be very conscientious in learning. As a result, female students are better at using affective strategy than male students in grammar learning. In the grammar learning process, female students can actively seek teacher's help, exchange experience with other students, and they use more social strategies than male students. Because in social language practice, female students can actively participate in communication, they can cooperate with teachers and students and turn to them for grammar learning guidance and help. The female students' goal and plan of learning grammar is much clearer, and their desire to achieve grammar learning goals is far stronger, and their meta-cognitive awareness is stronger than that of male students. In the use of cognitive strategy, female students are better at using effective learning methods to improve learning efficiency than boys. Female students learn very carefully, and they are good at collecting mistakes and errors in the grammar exercises, and they often use colored pens to mark the correct answer. However male students rarely do so and they merely look at the mistakes on the test paper, marking directly on the paper.

C. Ten Most Used Grammatical Learning Strategies

The descriptive statistics of grammar learning strategy questionnaire shows that (Table 2): the ten most frequently used grammar learning strategies are as follows: Q33 ("First review the grammar points, and then do grammar exercises.") Q6, ("When I'm learning grammar, I pay attention to understanding and caring for other people's feelings.") Q24 ("I pay attention to my progress and weak points in learning grammar.") Q41 ("When I learn new grammar, I use existing grammatical knowledge to help me understand.") Q13 ("In English communication, I concentrate on the expression of meaning.") Q7 ("I pay attention to adjusting my emotions in grammar learning.") Q25 ("I'm actively exploring ways of learning English grammar.") Q2 ("I have a positive attitude toward learning grammar.") "Q43 (Before grammar class, key points and difficulties are singled out and given special attention to in class.) And Q3 ("I gradually develop confidence in learning grammar.").

TABLE 3.
DESCRIPTIVE STATISTICS OF MOST FREQUENTLY USED GRAMMAR LEARNING STRATEGIES (N=170)

item	min	max	mean	SD	rank	item	min	max	mean	SD	rank
Q33	2.00	5.00	3.73	.97	1	Q7	2.00	5.00	3.32	.89	6
Q6	1.00	5.00	3.61	.98	2	Q25	1.00	5.00	3.30	.96	7
Q24	1.00	5.00	3.52	1.03	3	Q2	1.00	5.00	3.30	1.12	8
Q41	1.00	5.00	3.47	1.01	4	Q43	1.00	5.00	3.28	1.14	9
Q13	1.00	5.00	3.46	.87	5	Q3	2.00	5.00	3.27	.83	10

Of these ten grammar learning strategies, only Q33 and Q6 have a mean higher than 3.5, indicating that students often use these two strategies. Students often review and practice again. This strategy is an effective learning strategy. In the English classroom teaching, teachers also attach great importance to this strategy, and review can make grammar learning more systematic and rational. When students learn English grammar, although they feel bored, yet sometimes understand other people's learning feelings, and students have a certain empathy. The mean of the other eight strategies is between 2.5 and 3.4, indicating that students only sometimes use these strategies. The standard deviation of Q2 and Q43 is larger, which indicates that students have great differences in understanding their own situation and dealing with key and difficult points pre-class and in class. The minimum mean of Q3 shows that most students use this strategy occasionally or sometimes, which shows that students' grammar motivation and self-confidence are generally weak.

D. Ten Least Frequently Used Grammar Learning Strategies

The ten least frequently used grammar learning strategies are as follows (Table 3): Q20 ("I often communicate with my e-pals via Internet chat.") Q19 ("I often improve my knowledge of grammar with other students in correcting written or grammatical exercises.") Q18 ("I'm explaining my grammar knowledge to my classmates, so as to strengthen my grammar.") Q16 ("I often ask teachers for help in class or after class when I have problems or confusion with grammar.") Q50 ("In learning grammar, I am good at using charts, drawings, etc. to understand grammatical rules.") Q10 ("I'll ask the teacher and my classmate to explain some grammatical knowledge and give an example.") Q11 ("I often talk with my classmates about the grammar I've learned.") Q17 ("I often share my experience in grammar learning with my classmates, especially those who speak English well.") Q26 ("I actively participate in grammar learning activities both inside and outside the class, such as lectures on grammar.") And Q45 ("When you practice grammar rules, think of a picture or situation that can be used in that grammatical case.").

TABLE 4.
DESCRIPTIVE STATISTICS OF LEAST FREQUENTLY USED GRAMMAR LEARNING STRATEGY (N=170)

item	min	max	mean	SD	rank	item	min	max	mean	SD	rank
Q20	1.00	5.00	2.04	1.07	50	Q10	1.00	5.00	2.53	.99	45
Q19	1.00	5.00	2.35	1.19	49	Q11	1.00	5.00	2.58	.96	44
Q18	1.00	5.00	2.41	1.12	48	Q17	1.00	5.00	2.60	1.18	43
Q16	1.00	4.00	2.44	.93	47	Q26	1.00	5.00	2.63	1.06	42
Q50	1.00	5.00	2.44	1.15	46	Q45	1.00	4.00	2.68	1.03	41

Q20, Q19, Q18, Q16, Q10, Q11 and Q17 all belong to social/affective strategies, students rarely use social / affective strategies. It means that students seldom communicate with teachers, classmates or friends to learn grammar, not good at using social learning resources. The mean of Q20 and Q19 are less than 2.4, indicating that students rarely use these two strategies. The deviation of Q19 is as high as 1.25, indicating a large difference between students. The using frequency of Q50 and Q45 is very low, and generally students are not good at simplifying and visualizing grammar knowledge. An important objective reason for the low using frequency of strategy Q26 is that schools rarely carry out grammar learning activities both within and outside the classroom.

E. Relationship between Grammar Learning Strategy and English Achievement

Through the Pearson correlation analysis of English grammar learning strategy, all the sub strategies and English score (Table 4), the results show that there is no significant correlation between them.

TABLE 5.
PEARSON CORRELATION ANALYSIS OF GRAMMAR LEARNING STRATEGY AND GRAMMAR SCORE (DOUBLE TAIL)

	meta-cognitive strategy	social /affective strategy	cognitive strategy	total strategy
grammar	-.039	.152	.058	.081
score	.717	.331	.669	.543

** Correlation is significant at the 0.01 level (double-tailed).

The English grammar learning strategy has some influence on English learning achievement, but they are not related. This is very different from the research result of Pei's (2014). Pei's research shows that there is a significant positive correlation between English grammar scores and grammar learning strategies, and the language learning nature, concept and achievement are positively related. The reasons may be that the subjects of study are different, and the learning experience and learning level of the subjects are different. Moreover, the grammar learning strategy may be only the intermediate variables that affect English learning achievement.

IV. DISCUSSION

The survey results show that the level that high school students use English grammar learning strategy is very low, and the using frequency of three elements of grammar learning strategy ranks from high to low: cognitive strategy, meta-cognitive strategy, social / affective strategy. Besides, the research result demonstrates that there is significant difference between female and male students in English grammar strategy using and grammar score. The grammar learning strategy and English grammar scores are not related. This result has some implications for high school English grammar teaching.

A. To Conduct Grammar Strategy Training

The survey results show that high school students' awareness of using English grammar learning strategy is generally weak, and the using level is low. Students have many misconceptions about grammar learning. Many students are tired or afraid of grammar learning. To change the negative attitude of students' English grammar learning, and to improve students' grammar learning strategy using level, strategy training should become an important part of English teaching for high school students. Teachers must learn and grow continuously, and grasp the latest and most comprehensive grammar teaching strategies. In order to strengthen students' strategy using awareness, necessary grammar learning strategy guidance and training should be carried out, for example, delivering lectures on grammar knowledge, guiding students to use a variety of suitable grammar learning strategies, and guiding them to form their own strategy.

B. To Enhance Students' Awareness and Level of Social / Affective Learning Strategy Using

The social/affective strategy refers to the fact that learners promote grammar learning by communicating with others, and how learners develop and regulate their emotions during learning. The survey results show that high school students' social/affective strategies is least frequently used, high school students rarely use social/affective strategies, and their emotional management ability is low, which should arouse the attention of educators. The teachers should pay attention to the training of social/affective strategy, and help students build up confidence in learning grammar. Students should also learn to cooperate with others to study, and enhance their own emotional regulation ability. Besides, teachers should create free, harmonious and pleasant communicating environment and atmosphere to help students overcome the negative emotions. Teachers should not only pay attention to teaching the rules of grammar, but should also pay more attention to the practical application of grammar, and guide the students communicate with each other and learn grammar more efficiently.

C. To Explore Appropriate Teaching Methods

To improve the high school students' grammar score and using level of grammar learning strategy, the teacher should actively explore effective methods of grammar teaching, and should adopt appropriate teaching methods, such as, communicative language teaching method and task-based language teaching method, guiding exploration method, cooperative teaching method and etc. To arouse students' interest in learning grammar, the teacher should let students

focus on practical using ability, and pay attention to grammar competence. In addition, teachers should also recognize that high school English grammar teaching is not only in-class task, grammar teaching should expand to after-class work, for example, the teachers should give students more opportunities to engage in oral communication, improve the students' oral English and improve their English grammar competence as well.

D. To Pay More Attention to Male Students' English Grammar Learning

The research result indicates that there is great difference between female students and male students in English grammar strategy using and grammar score. Thus, in grammar teaching, teachers should pay attention to the differences between male and female students in grammar learning strategies, and make the best use of them. Teachers should pay special attention to male students in the process of training students to use grammar learning strategies and they should supply more help, encouragement and guidance to male students, and urge them to memorize, sum up, organize grammar knowledge, and constantly improve their learning methods. And the teacher can guide male students to communicate more with female students and learn from female students. Moreover, the teacher can ask male students more questions in the class, give them more opportunity to practice the use of grammar learning strategies, to strengthen their awareness and concept of actively practicing grammar learning strategy and give timely praise and encouragement for the progress they have made in the use of grammar learning strategies.

V. CONCLUSION

The research result shows that the students' grammar learning strategy using level is very low. And the grammar learning strategy is not correlated with English grammar achievement. Besides, there is significant difference between female and male students in English grammar strategy using and grammar score. The result is helpful for us to know better about high school students' condition of grammar learning strategy using, and offer some reference for enhancing the high school English teaching efficiency. In order to enhance the level of grammar learning strategy using level, English teachers should conduct grammar strategy training on students, try to enhance students' awareness and level of social /affective learning strategy using in particular, explore appropriate grammar teaching methods, and pay more attention to male students' English grammar learning. In this study, only English grammar score is taken into consideration and all the students investigated come from the same grade of the same school. So the research result may have some limitations. Thus, the follow-up study could be carried out on the basis of this study and the subjects can be students of different grades in the high school and also from different stages of study, and it will focus on analyzing the related factors that influence students' use of strategies as well in order to have a comparison of the dynamic choice and application of grammar learning strategies.

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Metadiscourse Features in English News Writing among English Native and Iranian Writers: A Comparative Corpus-based Inquiry

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Abstract—The aim of this study was to compare and contrast the distribution and application of metadiscourse features in news writings between English native writers and Iranian non-native writers. To this end, a comparable corpus of English news written by English native authors and Iranian authors were selected randomly. For the theoretical framework, Hyland's model (2005) was exploited. As the data represent, the English authors were more relied than the Persian ones on metadiscourse features. Also, the data revealed that in both corpora, the interactional metadiscourse features were preponderant as compared to the interactive metadiscourse features. In addition, in the interactional corpus, hedges were the most frequent as compared to transitions which were the most frequent type of metadiscourse in interactive category.

Index Terms—metadiscourse features, interactive, interactional, corpora, news writing, native writers vs. nonnative writers

I. INTRODUCTION

Written language (writing) plays a crucially important and significant role in different aspects of our lives including academic, social and professional (Salar & Ghonsooly, 2015). It is important due to the fact that writing is one of the four main skills of language learning (Salem, 2013) and can help the acquisition of complex grammatical structures and new vocabularies (Al-Saleem, 2008). As a matter of fact, the objective and the receiver(s) of the written message are the factors that have impacts on the writing production (Tadayyon & Vasheghani Farahani, 2017). By applying specific devices in writing, authors show their personality, subject matter, credibility and needs of the readers (Crismore, Markkanen & Steffenson, 1993).

Written language as “a major productive language skill that learners need to master” (Al samadan & Ibnian, 2015 p.227) is composed of various genres and rhetoric. Indeed, “different genres are best conceived as actualization of language choices to delineate particular purposes, assumptions about the audience and interpersonal relations with the reader, and thus, different genres approaches persuasion differently” (Khajavy & Asadpour, 2012, p.148).

From among the various genres, one very interesting and controversial is news genre. As “journalism is becoming increasingly important for the news industry” (Steensen, 2011, p.49), news writing genre has attained too much attention. Indeed, every day, a plethora number of news bulletins is being written about daily events; as a result, knowing how to shape the event within the boundaries of language can be a very key principle. News writing is important in that the writer puts forward a proposition and it must be shaped in such a way that it can persuade the readership of the message.

II. METADISOURSE

Coined at first by Zelling Harris in 1950s, metadiscourse is used as a tool way by which we can comprehend the language in real use. As a matter of fact, metadiscourse refers to the fact that communication is a phenomenon which is more than the information exchange and includes such other features as personalities and attitudes (Hyland, 2005). Based on this definition, “Metadiscourse is a new and interesting field of inquiry which is believed to play a vital role in organizing and producing persuasive writing, based on the norms and expectations of people involved” (Amiryousefi & Eslami Rasekh, 2010, p.159). Williams (1981, p. 212) defines metadiscourse simply as “writing about writing, whatever does not refer to the subject matter being addressed”. In another definition, Vande Kopple (1985) defines metadiscourse as text connectives by which “we can help readers recognize how our texts are organized and see exactly how different parts of them are connected to each other” (p, 83).

Metadiscourse is a term used in applied Linguistics in spoken and written modes; serving as the textual and interpersonal functions of language and can help the receivers of the message to not only organize and interpret; but

also to assess the content of the text. (Blagojevic, 2004; Kim & Limi, 2013). As the metadiscourse has an interactional role between the reader and writer, Hyland & Tse (2004) specifies three main principles of metadiscourse as:

- "Metadiscourse is distinct from propositional aspects of discourse.
- Metadiscourse refers to aspects of the text that embody writer reader interactions.
- Metadiscourse refers to relations only that are internal to the discourse" (p.159).

Accordingly, metadiscourse is a very significant phenomenon which has to be studied. Indeed, "the significance of Metadiscourse lies in its role in explicating a context for interpretation and indicating one way which acts of communication define and maintain social groups" (p.16). Vande Kopple (2012) also specifies the importance of studying metadiscourse features for three main reasons. One reason is that metadiscourse features can show how a complex structure is a language that we use and how critical one has to be in order to study this structure. A second reason is that some metadiscourse features may play more than one rhetorical and functional role in languages. The last reason for the important study of metadiscourse features is that while some linguistic forms have the function of metadiscourse features in one language, in other texts they have the function of conveying the ideational information.

III. CONTRASTIVE RHETORIC

Language as a means of communication in society, from one hand, and a source of power for human being, from the other hand, is regarded as a manifestation of culture and distinctiveness of its users (Vasheghani Farahani & Mokhtari, 2016). The notion of contrastive rhetoric (CR) began in 1966 in a paper written by Kaplan on the cultural thought patterns in intercultural education which he came to the conclusion that the writing style of American native speakers was different from that of the non-native speakers of English (Vaez Dalili & Vahid Dastjerdi, 2013). By definition, contrastive rhetoric is "the study of how rhetorical expectations and conventions differ among cultures" (Liebman, 1988, p.6).

As Kaplan, 1996, (as cited in Xing; Wang & Spencer, 2008) believes, in contrastive rhetoric every written language enjoys some specific means of organizational modes and native languages of any language are familiar with them; though there are some similarities in rhetorical modes of all the languages. In this sense, the contrastive rhetoric of one specific genre in different languages or within one language, but different writers can be a very interesting area of inquiry which needs more investigations.

IV. CORPUS-BASED STUDIES

By the advances in computer science and due to the increasing globalization, the corpus-based studies have become a major trend in language studies (Guo-rong, 2010). Since the 1960s, when the first corpus was created at Brown University, this area of research is going from strength to strength (Zanettin, 2005). By definition, corpus is stemmed from the Latin language which means literary body (Baker, Hardie and McEnery, 2006). Scientifically, corpus refers to a large collection of texts that are stored electronically and can be analyzed by software (Munday, 2012). Corpus Linguistics as the scientific field of inquiry is defined by Granger (2002) as "a methodology which is founded on the use of electronic collections of naturally occurring texts, vis. Corpora (p.4)".

Corpora have various implications and applications in language studies. Indeed, "corpus-based study methods have proven established in linguistic research and have expanded most of its methods and language analysis techniques to other disciplines such as lexicology, terminology, language teaching and translation" (Candel-Mora & Vargas-Sierra, 2013, p.318). based on the research objectives, various kinds of corpora are exploited such as parallel, specialized, learner, bidirectional and comparable corpora. The last one, comparable corpora, are one the most valuable tools for studying the differences between the two or more languages. Indeed, it is a corpus "contains texts in two or more languages, which have been gathered according to the same genre, field and sampling period criteria" (Delpech, 2014p.7).

V. REVIEW OF THE RELATED LITERATURE

As a matter of fact, metadiscourse features have been studied by different scholars in various genres. For this purpose, for gaining a clear account of the topic of the study and in order to be able to analyze the related works, it is plausible to have a review literature.

As far as the metadiscourse features in news writing are concerned, Deliery Moghadam (2017) did a research on the way native speakers of English and Iranian non-native speakers of English put the propositions by using metadiscourse features in news articles. Applying Hyland's model of metadiscourse features, he selected 60 newspapers from American and Iranian newspapers (30 from each language). By quantitative analysis of the corpora, she came to this conclusion that the American writers used more metadiscourse features (both interactive and interactional) in their writings.

Kuhia & Mojood (2014) conducted a research on the distribution of metadiscourse features in English and Persian editorials. For this purpose, they relied on Hyland's model of metadiscourse features and selected 60 news editorials (30 in each language) via internet. The results of the study showed that in both corpora the interactional metadiscourse

features were used more frequently as compared to interactive ones. Also, in interactive dimension, the transition markers were the most frequent one as compared to attitude markers in interactional one.

Yazdani, Sharifi, and Elyassi (2014) investigated metadiscourse features in news written about 9/11 accident in U.S.A. For this aim, they used Hyland's model of metadiscourse features and compiled a corpus of 60 news articles (30 for each language) written on this event. Being limited to only interactional metadiscourse features, the results of their research revealed that the American writers employed more interactional metadiscourse features than the Iranian ones and that the Iranian writers had less inclination to use self-mentions and engagement markers as compared to the American writers.

Sukma & Sari Sujatna (2014) embarked on a study on the interpersonal metadiscourse on opinion articles. For this study, they selected 11 articles written in Indonesian magazines on legal and political issues. For the metadiscourse classification, they employed Dafouz's (2008) classification. The findings could show that from among the attitude markers and commentaries were the most applicable metadiscourse features used in news writings.

In the same line, Tarrayo (2014) did a comparative research on the distribution of metadiscourse features on Philippian Journalism blogs. Relying on the Hyland's model of metadiscourse as the theoretical framework, he investigated 20 journalism blogs in Philippine as the corpus of the study. The findings of his research could show that the interactive metadiscourse features were the main metadiscourse features used by the bloggers. Also, from among the interactive metadiscourse features, the evidentials were the main one enjoyed by the bloggers.

Fu and Hyland (2014) did a research on the distribution of metadiscourse features in two journalistic genres. Being limited to interactional category of Hyland's metadiscourse features, they compiled a corpus of 200 popular science and 200 opinion texts for the objective of the study. The results revealed that opinion texts used more metadiscourse as compared to the science corpora.

Based on the above-mentioned issues and due to the fact that analyzing metadiscourse features in news writing by exploiting corpus software is a neglected area of inquiry which deserves more investigation, the following research questions were addressed in this study.

Q.1 What is the mode of the interactive metadiscourse features distribution in English native author news writing?

Q.2 What is the mode of the interactional metadiscourse features distribution in English native author news writing?

Q.3 What is the mode of the interactive metadiscourse features distribution in Iranian author news writing?

Q.4 What is the mode of the interactional metadiscourse features distribution in Iranian author news writing?

Q.5 Are there statistically significant difference between the mode of interactional metadiscourse features distribution in English native author and Iranian authors corpora?

Q.6 Are there statistically significant difference between the mode of interactive metadiscourse interactive metadiscourse features distribution in English native author and Iranian authors corpus?

VI. METHOD, DESIGN, AND INSTRUMENTATION

As far as the design of the study was concerned, the design of the study in hand was descriptive, quantitative, non-experimental and corpus-based study in nature to analyze metadiscourse features. As far as the metadiscourse discourse classification was concerned, it is worth noting that since its advent, there has been proposed several models of metadiscourse classifications (see for example Crismore, 1989; Vande Kopple, 1985, 2002; Hyland, 2005; Adel, 2006). However, for the purpose of the current study, the classification proposed by Hyland (2005) was exploited; due to the fact that it is not only the most up to date model, but also, the most well-defined, established and comprehensive model (Ghadyani & Tahririan, 2015). In his model, metadiscourse features are basically divided into main categories as interactive and interactional. As far as the interactional metadiscourse features are concerned, they are concerned "the way writers conduct interaction by intruding and commenting on their message. The writer's goal here is to make his or her views explicit and to involve readers by allowing them to respond to the unfolding message" (Hyland, 2005, p. 49). On the other hand, the interactive dimension concerns "the writer's awareness of participating audience and the ways he or she seeks to accommodate its probable knowledge, interests, rhetorical expectations and processing abilities" (Ibid.).

TABLE 1
AN INTERPERSONAL MODEL OF METADISOURSE FEATURE (HYLLAND, 2005).

Category	Function	Example
Interactive	Help to guide the reader through the text	Resources
Transitions	express relations between main clauses	In addition; but' thus, and
Frame markers	refer to discourse acts, sequence or stages	finally, to conclude, my purpose
Endophoric markers	refer to information in other parts of the text	Noted above; see fig
Evidentials	refer to information from other texts	According to X; Z states
Code glasses	elaborate propositional meanings	Namely; e.g.; such as; in other words,
Category	Function	Example
Interactional	Involve the reader in the text	Resources
Hedges	withhold commitments and open dialogue	might; perhaps; possible; about
Boosters	Emphasis certainty or close dialogue	in fact; definitely; it is clear that
Attitude markers	Express writer's attitude to proposition	Unfortunately; I agree; surprisingly
Self-mentions	Explicit reference to author(s)	I; we; my; me; our
Engagement markers	Explicitly build relationship with reader	consider; note; you can see that

For the corpus of the study, it is worth noting that since the current research was a corpus-based inquiry, two DO IT Yourself (DIY) corpora, also known as closed corpora, were compiled. As its name implies, DIY corpus, is a corpus which is compiled by the author for research purposes and usually, it is discarded once the research has been finished and does not expand in terms of quantity (Mahadi, Vaezian & Akbari, 2010).

For the purpose of the study, two corpora of news texts were selected. The total number of each corpus was ten thousand words; making together a corpus of twenty thousand words. The texts which were written by the native authors, were selected from journals, gazette and news editorials in U.S.A and U.K. As a result, both American and British English were selected. Also, by selecting the news from various sources, the idiosyncrasies of the writers were avoided. It is worth noting that only news is written in the current year (2017) were selected due to the fact that the old news was difficult in accessibility. For the Iranian non-native writers, news was selected from editorials, news agencies, and online news sources. Since they were selected from Iranian sources, the idiosyncrasies of the writers were not taken into consideration. The table below shows the sources from which English and Persian texts were extracted.

TABLE 2
THE SOURCES FROM WHICH NEWS WAS EXTRACTED

Foreign Sources	Iranian Sources
Antiwar	ISNA
BBC	ILNA
Euronews	IRNA
Daily Mail	FARS
Sunday Times	MEHR
Financial Times	Iran Daily News

TABLE 3
BASIC INFORMATION OF THE TEXT WRITTEN BY ENGLISH NATIVE AUTHORS

Number of Words	Number of Sentences	Number of Tokens
9883	388	11245

TABLE 4
BASIC INFORMATION OF THE TEXT WRITTEN BY IRANIAN NON-NATIVE AUTHORS

Number of Words	Number of Sentences	Number of Tokens
10091	415	11,701

Since the current research was a corpus-based inquiry it was quite necessary to make a use of corpus software for gleaning better and more tangible results. From among various software, the one which was used in this study was Sketch Engine software. Sketch Engine is a windows oriented and supported corpus software which is used in various activities including dictionary compiling, translation, phraseology, collocation studies, language teaching and learning and text analysis. This program was designed by Lexical Computing Ltd. (<https://www.sketchengine.co.uk/>). Being user-friendly, Sketch Engine gives the researchers the opportunity to have full access to a wide range of raw data from various corpora and languages like National British Corpus, Early English Books Online, English Web 2013 and ... It also gives the researchers the opportunity to compile DIY parallel and comparable corpora (McGillivray & Kilgarrif, 2013).

For knowing how the software functions and in order to decipher the content analysis, some example extracted from the corpora are presented. The examples were extracted from both the native and non-native texts.

Examples of Interactive Classification

individuals responsible will be held accountable."	However	' he said to date neither KPMG's review
That's another potentially big problem,	however	, as many recent US "show of force" actions
http://www.bbc.co.uk/news/world-latin-america-40704184	However	, at other times Mr. Maduro returned to more
to rewrite the constitution. His critics,	however	, see it as a way for the president to expand
slightly declined" over the past 10 years.	However	, scientists working in the field said the
U.S.S. Gerald R. Ford. Since World War II,	however	, neither preventing nor winning wars have

Figure 1. Examples of Interactive Classifications

have been made and painful lessons learnt.	We	commit to take every action necessary to
apply these learnings to strengthen the way	we	work' and help restore the public trust
work' and help restore the public trust	we	have earned over more than a century of
exchange would have disastrous consequences. As	we	look at the possible consequences, former
themselves into compliance, though naturally	we	have no idea what that action would be,
aimed at Boris Johnson: "Let's be honest, if	we	had an effective electoral law leading
imperialists" of plotting against his government. "	We	will never cede to foreign powers," he

Figure 2. Examples of Interactional Classification

Facebook, Instagram and Twitter. Search engines	like	Google are blocked, and access to many
despite a number of adverse external factors	like	increasingly congested airspace, particularly
checked was checking the tickets by hand.	Like	in so many others places, the visits of
metres takes just few seconds but you feel	like	being in a movie as the revolutionary music
future of U.S.-North Korean relations look	like	? To answer that question, consider the
South Korea and Japan become nuclear powers	like	Britain and France. Given the rising risk
today. It's a study of what "success" looks	like	when you fund the U.S. military fulsomely

Figure 3. Examples of Interactional Classifications

Interactive Metadiscourse Features Transitions

narrowly defeated vote of no confidence **but** his hell ride is far from over

Frame markers

advantage preserves maximum freedom of action...**Finally**, it allows U.S. decision-makers the opportunity

Endophoric Markers

And heavily congested airspace above parts of Europe and London

Evidentials

Accordingly, the review team is now being led by

Code Glosses

change caused by the burning of fossil fuels **such** as coal and oil. On the programme

Interactional Metadiscourse Features

Hedges

In Switzerland, whose spy agency warned about the threat in May

Boosters

Delays of over three hours this year. In fact, despite a number of adverse external factors

Attitude Markers

the future couldn't be more perilous. **Unfortunately**, to grasp their assessment of the global

Self-mentions

Whatsoever by an Azerbaijani composer before I start working with Femusa and it's been

Engagement Markers

worked out for them. Or you might want to **consider** the findings of another study altogether

VII. DATA ANALYSIS

In order to be able to answer the research questions and for gaining a better understanding of the research findings, it was necessary to run some statistical analysis by SPSS software. In this regard, first the frequency of each metadiscourse features (interactive and interactional) were calculated separately in both corpora. Then they were tabulated by bar charts and graphs. In addition, for calculating the significant differences on the distribution of metadiscourse features, a chi-square test was conducted.

TABLE 5
INTERACTIVE TEXT CROSS TABULATION RESULTS

		Text		Total
		Persian	Foreign	
Transitions	Count	456	374	830
	% within text	71.8%	60.5%	66.2%
Frame markers	Count	98	139	237
	% within text	15.4%	22.5%	18.9%
Endophoric Markers	Count	11	6	17
	% within text	1.7%	1.0%	1.4%
Evidentials	Count	15	24	39
	% within text	2.4%	3.9%	3.1%
Code Glosses	Count	55	75	130
	% within text	8.7%	12.1%	10.4%
Total	Count	635	618	1253
	% within text	100.0%	100.0%	100.0%

Table 5 demonstrates the way metadiscourse features were distributed and used in texts written by English native writers and Iranian writers. As can be seen, as far as the Persian texts were concerned, transitions with 456 counts (71%) were the most frequent type of interactive metadiscourse features in corpus, followed by frame markers and code glosses as the second and third most enjoyed interactive metadiscourse features with 98 counts (15%) and 55 counts (8.7%), respectively. In the fourth rank came evidentials with only 15 counts (2.4%) which followed by endophoric markers as the least applicable metadiscourse features with 11 counts only (1.7%).

Regarding the foreign texts, as the data show, transitions with 374 counts (60%) were the most applicable interactive metadiscourse features. After transitions, frame markers with 139 counts (22.5%) were the second most used interactive metadiscourse features in foreign texts followed by code glosses as the third interactive metadiscourse features used by foreign writers (75 counts). In the fourth rank, stood evidentials with 24 counts (3.9%) as the most used interactive metadiscourse features. The least used interactive metadiscourse feature by native writers was endophoric markers with only 6 counts (1%).

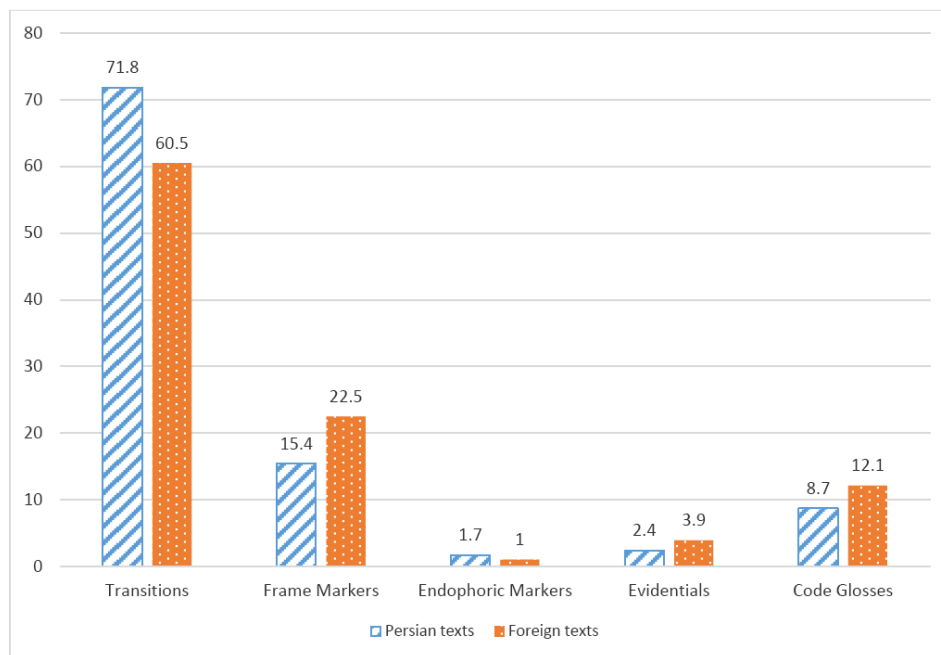


Figure 6. Bar Chart of Interactive Metadiscourse Features in Both Corpora

Figure 6 represents the way interactive metadiscourse features were distributed in both corpora by English native and Iranian writers. As can be seen, in both corpora, transitions were the most applicable interactive metadiscourse features used by English and Iranian writers. However, Persian writers used more transitions than the foreign ones. In addition, in frame markers foreign writers relied more on these metadiscourse features as compared to Iranian writers. As far as the code glosses are concerned, again foreign writers out used the Iranian authors. However, in terms of evidentials, too, the foreign writers used more than the Iranian ones. The last one, that is to say, endophoric markers, it is understood that the Iranian writers used more than the foreign ones.

TABLE 6
INTERACTIONAL CROSS TABULATION RESULTS

		Text		Total
		Persian	Foreign	
Hedges	Count	172	172	344
	% within text	43.9%	36.5%	39.9%
Boosters	Count	36	40	76
	% within text	9.2%	8.5%	8.8%
Attitude Markers	Count	12	6	18
	% within text	3.1%	1.3%	2.1%
Self-mentions	Count	112	165	277
	% within text	28.6%	35.0%	32.1%
Engagement Markers	Count	60	88	148
	% within text	15.3%	18.7%	17.1%
Total	Count	392	471	863
	% within text	100.0%	100.0%	100.0%

Table 6 demonstrates the normative behavior of the interactional metadiscourse features distribution in both corpora. As far as the Persian corpus was concerned, hedges with 172 counts (43%) of the total occurrences was the most applicable interactional metadiscourse features followed by self-mentions with 112 counts (28%). It is conspicuous from the data that the third and fourth most applicable metadiscourse features were engagement markers and boosters with 60 and 36 items; respectively. The least used metadiscourse feature in the category of interactional was attitude markers with 12 items only (3.1%).

Regarding the foreign texts, it is seen that in line with the Persian corpus, hedges with 172 counts (36.5) were the most applicable interactional metadiscourse features. After that, self-mentions with 165 items (35%) were the second most applicable interactional metadiscourse features. However, in the third stage, stood, engagement markers with 88 items (18.7%) of the total occurrences. As can be seen, the fourth most applicable interactional metadiscourse feature were boosters with 40 items (8.5%). However, the least used interactional metadiscourse features used by foreign writers were attitude markers with only 6 items (1.3%).



Figure 7. Bar chart of Interactional Metadiscourse Feature in Both Corpora

Figure 7 reveals the distributive behavior of the metadiscourse features in both corpora by English native and Iranian Writers. As can be seen, in terms of hedges, Iranian writers outperformed their native counterparts. However, for the self-mentions as the second most applicable interactional metadiscourse features, it is conspicuous that English (foreign) writers used more items as compared to the Iranian ones. In the third most applicable interactional metadiscourse features; that is to say, the engagement markers, the English writers, like self-mentions, used for items as opposed to the Iranian ones. However, when it comes to the boosters, it can be inferred from the data that the Iranian writers relied more than the English ones on the boosters. Also, Persian writers used more attitude markers in comparison with the English writers.

TABLE 7
COMPARISON DATA FOR INTERACTIVE METADISOURSE FEATURES BETWEEN PERSIAN AND FOREIGN WRITERS

	Persian texts N (%)	Foreign texts N (%)	P-value
Transitions	456 (71.8)	374 (60.5)	<0.001
Frame Markers	98 (15.4)	139 (22.5)	
Endophoric Markers	11 (1.7)	6 (1)	
Evidentials	15 (2.4)	24 (3.9)	
Code Glosses	55 (8.7)	75 (12.1)	
total	635 (100)	618 (100)	

Table 7 represents a set of comparative data on the distribution of interactive metadiscourse features within Persian and foreign corpora. Generally, it can be inferred from the data that the total number of interactive metadiscourse features used by the Iranian writers was 635 items; whereas the foreign writers used only 618 items. As far as the transitions are concerned, while Persian writers used 456 counts (71%), the English writers used only 374 counts which mean that the Iranian writers used more than the foreign ones. As far as the frame makers are concerned, however, it is seen that while the Iranian writers used 98 items their English counterparts applied 139 items. When it comes to endophoric markers, the Iranian writers used 1 items only and the English writers 6 times which are the least in both corpora. For the evidentials, the Iranian writers used 15 items; while the English writers applied 24 items. Like evidentials, English writers relied more on the code glosses (75 items) than the Iranian ones with only 55 items.

TABLE 8
RESULTS OF THE CHI-SQUARE TESTS OF THE INTERACTIVE METADISOURSE FEATURES

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	21.592 ^a	4	.000
Likelihood Ratio	21.690	4	.000
Linear-by-Linear Association	10.867	1	.001
N of Valid Cases	1253		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 8.38.

Table 8 demonstrates results yielded from chi-square tests of the distribution of interactive metadiscourse features in both corpora. As can be seen, the Pearson chi-square test is 21.592^a which is less than 5% and the P-value is <0.001; therefore, the interactive metadiscourse features were not normally distributed in both corpora.

TABLE 9
COMPARISON DATA FOR INTERACTIONAL METADISOURSE FEATURES BETWEEN PERSIAN AND FOREIGN WRITERS

	Persian texts N (%)	Foreign texts N (%)	P-value
Hedges	172 (43.9)	172 (36.5)	0.03
Boosters	36 (9.1)	40 (8.5)	
Attitude Markers	12 (3.1)	6 (1.3)	
Self-mentions	112 (28.6)	165 (35)	
Engagement Markers	60 (15.3)	88 (18.7)	
total	392 (100)	471 (100)	

Table 9 gives comparative information on the way interactional metadiscourse features were distributed and used in both corpora. On the whole, it can be understood from the data that writers of the foreign texts applied more interactional metadiscourse features (471) than the Iranian ones (392) items. For the hedges, the data show that both writers applied equal number which is 172 for both. In terms of boosters, however, foreign writers used more in comparison with the Iranian writers with 40 and 36 items; respectively. When it comes to the attitude markers, the data show that the Iranian writers used two times more than the foreign writers with 12 and 6 items; respectively. Self-mentions category shows that the foreign writers used more than the Iranian ones with 88 and 60 items. This trend can be seen in engagement markers as well. In other words, whereas the foreign writers applied 88 times engagement markers, the Iranian ones used only 60 times.

TABLE 10
RESULTS OF THE CHI-SQUARE TESTS OF THE INTERACTIONAL METADISOURSE FEATURES

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	10.505 ^a	4	.033
Likelihood Ratio	10.540	4	.032
Linear-by-Linear Association	6.632	1	.010
N of Valid Cases	863		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 8.18.

Table 10 shows the results of the Chi-square tests on the distribution of the interactional metadiscourse features in both corpora. As can be seen, the frequency distribution of the interactive metadiscourse features is 10.505 and the P-value is 0.03, therefore the interactional metadiscourse features were not normally distributed within both corpora.

VIII. RESPONSE TO THE FIRST RESEARCH QUESTION

The first research question of this study was to detect the mode of interactive metadiscourse features distribution in English native authors news writing corpus. For this purpose, the frequency and normal distribution of the interactive metadiscourse features were calculated. As the data in table 7 show, from among the 5 items, transitions with 60% and frame markers with 22% were the most frequent types of interactive metadiscourse features. Also, the least frequent interactive metadiscourse feature features in foreign texts were evidential with 3.9% and endophoric markers with 1%; respectively.

IX. RESPONSE TO THE SECOND RESEARCH QUESTION

In line with the first research question, the second research question of this study dealt with the distribution of interactional metadiscourse features in English native authors news writing corpus. In this regard, the frequency of interactional metadiscourse features were calculated for each item separately. As the statistics in table 9 demonstrate, from among the 5 subcategories of interactional metadiscourse features, hedges and self-mentions with 172 and 165 items were the most frequent interactional metadiscourse features; respectively. However, with only 40 and 6 items, boosters and attitude markers were the least used interactional metadiscourse in the corpus; respectively.

X. RESPONSE TO THE THIRD RESEARCH QUESTION

The third research question of the study at hand was to analyses interactive metadiscourse features distribution in Iranian author news writing. Like the previous research questions, the frequency of each occurrence of interactive metadiscourse features were checked and analyzed in each subcategory separately. As the data in table 7 reveals, from among the interactive metadiscourse features, transitions with 456 items and frame markers with 98 items were the most applicable interactive metadiscourse features in Persian corpus; respectively. However, code glosses and endophoric markers were the least enjoyed interactive metadiscourse markers with 15 and 11 items; respectively.

XI. RESPONSE TO THE FOURTH RESEARCH QUESTION

Like the previous research questions, the fourth research question of this study was to analyze the mode of the interactional metadiscourse features distribution in Iranian author news writing. For this aim, the subcategories of interactional metadiscourse features were checked within the corpus separately. As the data in table 9 indicates, from among all the subcategories of interactional metadiscourse features, hedges and self-mentions were the most frequent types of 172 and 112 occurrences; respectively. Also, the least used and applicable interactional metadiscourse features in Persian corpus were boosters and attitude markers with 36 and 12 items; respectively.

XII. RESPONSE TO THE FIFTH RESEARCH QUESTION

The fifth research question of this research was to analyze the statistically significant difference between the mode of interactional metadiscourse features distribution in English native author and Iranian authors corpora. For this purpose, the P-Value and Chi-Square tests were analyzed. As the data in table 6 represents, the total number of interactional metadiscourse features used in Persian corpus was 392 items; whereas, in the English corpus, 471 items were detected. Also, as the results of the Chi-Square test in table 10 can show, the P-Value was 21.592; there for there was a significant difference between the way interactional metadiscourse features were distributed and used in English and Persian corpora.

XIII. RESPONSE TO THE FIFTH RESEARCH QUESTION

The last research question was to analyze statistically significant difference between the mode of interactive metadiscourse interactive metadiscourse features distribution in English native author and Iranian authors corpus. Like the previous research question, the P-Value and Chi-Square tests were analyzed. As the data can reveal in table 5 indicates, the total number of interactive metadiscourse features in the Persian corpus was 635 items as opposed to 618 ones in the English corpus. Also, the results of the Pearson Chi-square test and P-Value in table 10 can show, the P-Value was 10.505; therefor, the interactive metadiscourse features were significantly different within both corpora.

XIV. CONCLUDING MARKS

Metadiscourse features are open-ended category which has received too much attention of the academia within recent years and are the key features in text construction. Indeed, metadiscourse features are the tools for mediating the relationship between the writer' proposition and the discourse community (Faghih & Rahimpour, 2009). For this reason, this study aimed at analyzing the way metadiscourse features were distributed and used in two disposable corpora; that is to say, English native and Iranian writers. This study enjoyed Hyland's metadiscourse classification, which is divided into interactive and interactional and interactive sub-divisions. Interactive metadiscourse features are usually used to respond to the needs and expectations of the receiver of the message; whereas, the interactional metadiscourse features

are used to make the ideas and propositions of the author(s) more explicit and coherent. For the purpose of this research two disposable corpora were created from online media in Iran and the English speaking world.

As the data show, the English corpus consisted of 1089 interactive and interactional metadiscourse features as opposed to 1027 interactive and interactional metadiscourse features in Persian corpus. This significantly different number of interactive and interactional metadiscourse features may indicate that the native authors were more aware of the usage of these features in guiding the readers, persuading them and making their texts more coherent and explicit as these are the functions of metadiscourse features. This can be due to the fact that since they are native speakers of English, their command of their mother tongue is better than the Iranian writers; causing the English speakers to have a better knowledge of the usage and exploitation of these features.

The results also showed that in both corpora (English and Persian) the interactive metadiscourse features were the pre-dominant features enjoyed by authors (618 and 635; respectively). This result can show that writers in both corpora were more concerned with the expectations and persuasion of the readers and also were aware of the ways and news writing methods to shape the interpretations of the receivers decipher of the message as these are met by interactive metadiscourse feature.

In addition, the results revealed that while in the Persian corpus consisted of 635 interactive metadiscourse features, the English corpus consisted of 618 ones; which is against the general trend of the results; (English corpus had more metadiscourse as opposed to the Persian one). This trend can support the idea that the Iranian authors were more concerned with the message receivers and their expectation as well as making more efforts to construct the message with the expectations of the readers in mind. However, for the interactional, the data could prove the fact that the English corpus contained more metadiscourse features (471) as compared to the Persian corpus (392) ones which can add support to the view that the English authors were more concerned with the ways to construct and make interaction with the readers as well as making their views more explicit in the eyes of the readers.

Furthermore, in the category of interactive metadiscourse features, although the English corpus contained more metadiscourse features, the Persian corpus contained more transition (456 vs. 374). This can show that the Persian authors were more occupied in making their texts more coherent so that the readers could follow the course of reading in a smoother way. The Persian authors also used more endophoric markers than the English ones which can show that they made more efforts to refer to information in other parts and sections of the text to remind the readers of the previously mentioned discourse. Nevertheless, the English corpus contained more frame markers which can show that the English writers were more aware of the fact that their texts need to be shaped in such a way that they would seem to follow sequential and discourse acts. The outperform of the English authors in exploiting evidentials can also reveal that their texts had relied more on the references and intertextualities than the Iranian authors. By using more code glosses, the English authors demonstrated that they were more interested in elaborating the propositional content than the Iranian Ones.

In the category of interactional metadiscourse features, although the English corpus contained more metadiscourse features than the Persian one (471 vs. 392), the Persian corpus contained more instances of hedges, boosters and attitude markers. That the Persian corpus contained more hedges than the English corpus may be due to the fact that the Persian writers were not confident and assured enough to open up new dialogues; withholding the commitment as this is the main function of the hedges. Boosters which were enjoyed more by the Persian authors showed the English authors had less certainty in their propositions as this is the main function of the boosters. Attitude markers were also enjoyed more by Persian writers which can add support to the idea that the Persian authors were more interested in expressing their ideas and attitudes and perspectives towards the propositions and the content. However, the extra usage of self-mentions in English corpus as compared to the Persian corpus (165 vs. 112) can be a sign that the English authors were more encouraged to use self- expressions and self-references in the texts which can be due to the fact that they were more interested in posting their own ideas within the propositional meaning. Engagement markers were also used by the English authors more frequently as when compared to the Iranian ones. This can reveal the fact that the English authors were more interested in making a logical relation with the reader and also establishing such relationship as this can be assured by the use of engagement markers.

XV. IMPLICATIONS, LIMITATIONS AND SUGGESTIONS FOR FURTHER STUDIES

The results of this study can have some useful pedagogical implications. One implication is for students of English as a foreign language. They can understand how to use metadiscourse features in an effective way to improve their writing abilities. Also, the results are useful in a sense that the newly researchers can learn how to conduct comparative studies in this area of inquiry. The last; but not the least implication is that the results provide useful hints about doing corpus-based studies.

Like any other research, the current study had some limitations which could affect the results and findings. One limitation was that the authors had no access to the background of the writers. Their educational background and experiences were not clear to the authors. Another limitation of the study was that the corpus of this study was relatively small and the results cannot be overgeneralized. Also, since the corpus was very small in size, its representativeness was, to some extent, limited. Furthermore, since metadiscourse features are in nature an open-ended category, it is likely that some metadiscourse features were neglected in the analysis process.

This study can prepare the ground for doing further studies. One suggestion is that the same kind of study is conducted by applying other categories of metadiscourse features. Also, another study can be done by compiling larger corpora to detect the routine trend in news writing between English and Iranian authors. In addition, some experimental research can be done in this field of inquiry; meaning that the impacts of teaching metadiscourse features on English news writing can be investigated.

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A Multimodal Discourse Analysis of a Propaganda Image—Taking the Official Homepage of One Belt and One Road Economic and Cultural Development Center as an Example

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Abstract—Nowadays, China is overwhelmed by the thoughts of “One Belt and One Road Economic and Cultural Development”, which was proposed by President Xi Jinping in 2013. That is the main reason why we choose the propaganda image of One Belt and One Road Economic and Cultural Development Center, an official homepage (<http://www.oborecdc.org>), as research target. And we call it “One Belt and One Road Multimodal Discourse” for convenience in this paper. This paper, applying Kress & van Leeuwen’s Visual Grammar theoretical framework, is studied with qualitative analysis from three aspects, which are representational function, interactive function and compositional function. Besides, based on the specific social and cultural context, the paper gives a specific analysis of how different semiotic resources work together to produce a integrated meaning system. It is founded that: 1) For representational function, “One Belt and One Road Multimodal Discourse” belongs to a conceptual image, which includes the classification process and symbolism process; 2) As for interactive function, the designer builds the interactive relationship with viewers by using frontal-horizontal angle of view; 3) In composing the whole image, due to the different value of information, the designer composes the image by using different location, size and color. Specifically speaking, the central writing system belongs to the main mode, while the other visual modes mainly complement or highlight it in order to effectively realize the total meaning of the whole image; 4) Based on specific social and cultural context, the designer combines the historical symbol-Silk Road and cultural symbol-Chinese Red with realistic Symbol-globalization, to realize the complete meaning of “One Belt and One Road Multimodal Discourse”. It is theoretically and practically significant to do this research. Theoretically speaking, it enriches the relative research on static multimodal discourse analysis. In practice, it helps viewers to understand the implied meaning of “One Belt and One Road Multimodal Discourse” better.

Index Terms—“One Belt and One Road Multimodal Discourse”, representational function, interactive function, compositional function, social and cultural context

I. INTRODUCTION

The rapid development of digital and web technology has enriched our human expression means a lot, which possesses the characteristic of multimodality. Multimodality means the combination of different semiotic modes.

The multimodal research officially begins from the end of last century in the west. There mainly have three approaches to do multimodal discourse analysis in west, which are social-semiotic approach, discourse analysis approach and interactional analysis approach. The social-semiotic approach puts emphasis on social-context. That is, social actors’ situated use of semiotic resources as well as their potential meaning. Some notable researchers include Kress, Leeuwen, Lemke and so on. The aim of discourse analysis approach is to create a meta-theory capable of theorizing semiotic resource, its meaning potential, and its integration in multimodal phenomena that are interpreted in the context of situation and culture, which was represented by O’Toole and O’Halloran. As for multimodal interactive analysis, it focuses on the rules and regularities that restrict the social actors using semiotic resources. Representative figures are Scollon, Norris, Jewitt, etc.

The research on multimodal discourse analysis in China derived from 2003. Li Zhanzi (2003) published an article *Social Semiotics Analysis on Multimodal Discourse*. She introduced the core concept of “Visual Grammar”, which was proposed by Kress & van Leeuwen in 2006. Since then, many scholars have started to pay attention to the field of multimodal discourse analysis. Although the history of multimodal discourse analysis development is short in China, yet it has made considerable achievements. The scope of its research mainly include three aspects: 1) theoretical exploration (Li Zhanzi 2003, Zhu Yongsheng 2007, Zhang Delu 2009/2012/2017 etc.); 2) static multimodal discourse analysis (Hu Zhuangling 2007, Zhang Delu&Wang Qun 2011); 3) dynamic multimodal discourse analysis (Hong Gang

& Zhang Zheng 2010, Geng Jingbei&Cheng Zijuan 2014, Wu Ting 2017 etc.)

Since China is enjoying a boom in “One Belt and One Road”, this paper takes the propaganda image of One Belt and One Road Economic and Cultural Development Center as research target, which we call it “One Belt and One Road Multimodal Discourse” for convenience in this paper. It is theoretically and practically significant to do this research. Theoretically speaking, it enriches the relative research on static multimodal discourse analysis. In practice, it helps viewers to understand the implied meaning of “One Belt and One Road Multimodal Discourse” better.

II. THEORETICAL BASIS

According to the Kress and Leeuwen’s view inspired by Halliday’s Systemic-Functional Linguistic, the meta-function of language system is also applicable to visual symbol system. Thus, Kress and Leeuwen (2006) proposed the term “Visual Grammar” in their works, *Reading Image*, and claimed that “Visual Grammar” covers corresponding three aspects, representational function, interactive function and compositional function. Besides, it also involves two key conceptions, which are represented participants and interactive participants. The former one refers to the components in an image, such as the color, size of words, etc. The latter one refers to the designer and viewer of an image.

Based on the criteria, whether an image involves “vector” or not, the image can be classified into two types, a narrative image and a conceptual image. Here, the term “vector” refers to the eye contact, body movement and such things like that. If there has “vector” in an image, that image is a narrative one. Otherwise, it is a conceptual image, which involves two kinds of process, classification process and symbolism process.

Three aspects need to be noted for interactive function, which are contact, distance and angle of view. Firstly, contact is dominated by system of gaze. For example, if the person in an image stares at you, which means his or her wants to build a intimate relationship with you. We call such a image is a “claimable image”. On the contrary, the image belongs to a “supplied image”. And then, distance means the size of represented participants’ framework. Generally, clear appearance of represented participate alludes that the designer tries to close the “psychical distance” with viewers. As for the last one, horizontal-frontal angle of view and vertical-lateral angle of view are included.

Compositional function can be considered form value of information, value of significance and framework. The represented participants’ location, including above and below, left and right, center and edge, is decided by the value of different information. Usually, the central position possesses considerable importance. And, the different visual complexity causes the the viewers’ different degree of attention, that is value of significance. The term “framework” means space segment in the image.

Baldry and Thibault (2006) suggests that the attention of multimodal discourse analysis focuses on how various semiotic resources combined together in a certain social context for a specific communicative purpose. In other words, the rules of choosing, designing and mixing different semiotic resources all restricted by specific social context. From this point of view, based on the specific China social and cultural context, this paper focuses on analyzing how designer mixes different semiotic resources together to achieve meta-function of Propaganda Image, the Official Homepage of One Belt and One Road Economic and Cultural Development Center.

III. MULTIMODAL DISCOURSE ANALYSIS

The research target of this paper is the the Official Homepage of One Belt and One Road Economic and Cultural Development Center (see following picture 1), which is a multimodal discourse mixed with different modes, such as color, size of words and etc. And, we call it “One Belt and One Road multimodal Discourse” for convenience in this paper.



Picture 1: One Belt and One Road Multimodal Discourse

A. Representational Function

Based on the above theoretical basis, Picture 1 is a “conceptual image”, because of the absence of vector. A conceptual image refers to a congregation of implied meaning of an image, which is general (Wei Qinghong, 2008). And, One Belt and One Road multimodal Discourse involves classification process and symbolization process.

Based on the specific information and communicative purposes, the classification process can be divided into three parts, which are historical information, selective activity information and meta-information. Here, historical information

refers to the ancient Silk Road. As we can see in Picture 1, it covers the yellow and blue part of China map located on the left, the road route pictured with slight blue on the above and the pictures of stocks of camels below. And, selective activity information, One Belt and One Road, reflects on the writing system both in the China map on the left and at the very center of whole image. Besides, the meta-information is designed to highlight the significance of selective activity information. The designer here uses the pictures, representing three modes of modern transportation-land, sea and air, to implicate the increasingly convenient communication and close cooperation among the countries nowadays. Therefore, we should follow the tendency of globalization, learn lessons from history-Ancient Silk Road, and promote the cooperation with other countries. As for symbolism process, it includes historical information and meta-information. From the above analysis, the historical information refers to the Silk Road, embodied with a profound historical meaning, which stands for the main communicative channel between east and west in aspects of policy, economy and culture, in ancient times. In addition, The meta-information here symbolizes the inevitable trend of globalization.

In a word, restricted by the limited space of homepage, the designer resorts to the pictures, to achieve the representational function of whole image. And that sparks the viewers contemplate, and brings about a fantastic effect – “no words but win words”.

B. *Interactive Function*

With the above, since it is nothing to do with “vector”, the image is an “supplied image”, which just gives some objective information to viewers, including the above historical information, selective activity information and meta-information.

The degree of intimate decided by the different ways of viewing (Li Dengzhi, 2013). Generally speaking, a remote angle of view indicates a unfamiliar psychological distance, while a close one always can create a intimate psychological distance. To be more specifically, in picture 1, the left picture system and writing system, the right writing system, and the picture system just above all apply a close angle of view. While, the picture system below uses a remote angle of view. Generally speaking, the whole image, that is picture 1, adopts a close angle of view, which is convenient for viewers to look through the information clearly. It is also benefit to realize the communicative purpose and broadcast the core concept of One Belt and One Road Economic and Cultural Development.

Furthermore, this image tries to build a close social-relationship with viewers by adopting a frontal-horizontal view. A horizontal view allows the viewers to keep the same height as the representational participants in the image. And a frontal view enables viewers to feel that they are also the parts of the image, to produce the effect of “empathy”. The artistic combination of these two angles of view seems that it appeals to the viewers – let us pay great attention to One Belt and One Road Economic and Cultural Development.

C. *Compositional Function*

Different location in an image indicates different vale of information. Generally speaking, above location means “authoritative”, below location means “true”, center location means “emphasized”, edge location means “unremarkable”, left location means “known information” and right location means “unknown information”. Based on the above analysis, the general ancient silk road route is located on above of the image, which belongs to the authoritative information. The central writing system, including the slogan - One Belt and One Road Economic and Cultural Development Center, and inscription proposed by Xi Jinping- One Belt and One Road is a mutual-benefit way of cooperation, which highlights the importance of One Belt and One Road. And the left picture system and writing system all belong to known information among Chinese community. While the picture system on the right is unknown, representing there are still many unknowns in the future development. Finally, the pictures of mountains, camels etc., are all belong to some unremarkable information.

As for the size, we can see form picture 1, the central writing system and above picture system nearly cover half of whole image. While left picture and writing system and right picture system cover about a quarter of each. And, the color of whole image combines the cool tone with warm tone. The abundant color leaves a rich visual impression on viewers. Especially, the central writing system mixes the black with red, high modality, which is impressive. Besides, the whole image tries to create a complete multimodal discourse in the shape, avoiding use obvious space segmentation.

Combined the above three aspects of analysis, representational function, interactive function and compositional function. It is found that the designer of the image tends to combine the historical information - Silk Road and social reality- globalization, to emphasize the great social and practical significance of One Belt and One Road. Besides, based on natural quality of information and communicative purpose, the designer adopts a reasonable way of composition. In composing, central location, big size framework, a high modality of combing black and red etc., are all underscore the importance of One Belt and One Road.

IV. SOCIAL-CULTURAL CONTEXT

Social-cultural context refers to the certain customs, thinking models, mortal criteria, concept system of value etc., which is formed during the history of a certain social community. Therefore, in constructing a multimodal discourse, the designer always identifies the different implied meaning of different semiotic resources, and then combines them together based on certain rules. After above analysis, we find that the “One Belt and One Road Multimodal Discourse”

involves historical information, thus, so it is necessary to analyze its implied meaning from the view of social-cultural context.

(1) Historicity

When cut multimodal discourse analysis off from the history, it can not get the original roots of discourse. We already know that “One Belt and One Road Multimodal Discourse” includes rich historical information, Silk Road. Therefore, knowing the related-history is necessary for us. In ancient, there are two types of silk road in terms of ways of transportation, one is land silk road, the other is sea one. And the route of land silk road begins with Changan (nowadays we call Xian), going with Gansu, Xinjiang, Zhongya, Xiya etc. While the sea one includes three ship routes: 1) the eastern route, from China’s coastal port to North Korea and Japan; 2) the southern route, from China’s coastal port to some southeast Asian countries; 3) the western route, from China’s coastal to south Asia, Arabia and East Africa. Therefore, the combination of these two silk roads facilitates the cooperation between China and most other countries in the world. It can be concluded that the Silk Road plays a significant role in promoting the global development in history. And President Xi Jinping appropriately exploits the lessons from history, to develop partnerships with countries actively.

Besides, the size of character “Dunhuang” is bigger, that is worth paying attention. Dunhuang outbounds traffic of the throat of the Silk Road, and it is inevitable pass. Highlight this important geographical position is to remind people to put emphasis on the principle contradictions to solve the urgent problems. In a word, the design of “One Belt and One Road Multimodal Discourse” runs through pivot axis- ancient Silk Road, which is time honoured and enduring history.

(2) Chinese Red

With above, the central writing system is in red, a high modal color. As we all know, there have many other high modal colors. But, the reason why the designer choose to use red to highlight the dominant role of writing system is that the red has a rich and traditional color cultural meaning in Chinese community.

Different choices of color reflect different character of nationals. For example, Japanese prefer to red and blue, Thai give their predilection for red and yellow. In china, as we all know that Chinese-red possesses a rich cultural meaning, which is the most convincing way of representing Chinese’ character. The heat and widely use of Chinese-red reflects profound color culture and abundant psychology in Chinese community. Chinese Red is endowed with the positive implied meaning, such as happiness, justice, victory and so on. Besides, it also represents the banner of communism and socialism, which reflects on the design of Chinese national flag and party flag. To some extent, “Chinese Red” is authoritative. As we can see, in picture 1, the central writing system in red has two aspects of implication. The one is to give best wishes to the One Belt and One Road economic and cultural development. The other is to praise for the great strategic thoughts proposed by, leader of modern communist in China, Xi Jinping, which gives a hopeful direction for China development.

(3) Social Reality

To fully grasp the implied meaning of a certain discourse, it is need to put it into a specific social reality, to insight into its counter-productive to social reality. Nowadays, peace, development, cooperation and mutual-benefit is the theme of the times. Therefore, China will continue to uphold the banner of peace, development, cooperation and mutual-benefit, and pursue a win-win strategy of opening up.

In terms of mutual-benefit, the core concept of “One Belt and One Road” is sharing-together, with the aim to promote efficient allocation of market resource and the further fusion of market cooperation. From the above analysis, we know that the route of silk road covers a large number of countries all over the world, which is benefit to create a regional cooperation team with greater scope and higher level. Therefore, the thoughts of “One Belt and One Road” conforms to the fundamental interests of people all over the world, which is the result of active efforts on international cooperation. Besides, it is also can be regarded as a milestone in the development of world peace history. In a word, the thoughts of “One Belt and One Road” sparked by the social reality-globalization, and it also causes a positive reaction to the social reality.

V. CONCLUSION

Based on all above analysis, this paper gives the conclusion from the following four aspects.

(1) In terms of representative function, “One Belt and One Road Multimodal Discourse” belongs to a “conceptual image”, including the process of classification and symbolism. And the aspect of classification reflects on three kinds of information, which are historical information-Silk Road, selective activity information-One Belt and One Road Economic and Cultural Development, and meta-information-the transportation of land, sea and air. Among which, the historical information and meta-information also contain the process of symbolization. The historical information symbolizes the communicative channel between east and west. And the meta-information symbolizes the further and inevitable tendency of globalization. Besides, the writing system in red represents the best wishes to China development and the praise for Chinese Communist.

(2) As for interactive function, the “One Belt and One Road Multimodal Discourse” is a “supplied” one. In terms of this aspect, it lacks the interaction with viewers. However, the designer adopts an effective way of viewing, that is frontal-horizontal angle of view. As we stated above, a frontal view enables viewers to feel that they are also the parts of

the image, to produce the effect of “empathy”. The artistic combination of these two angles of view, it seems that it appeals to the viewers- let us pay great attention to One Belt and One Road Economic and Cultural Development.

(3) In composing this whole image, there is no obvious space segmentation. Besides, the different location, size, color of representative participants, all contribute to the different value of significance. Specifically speaking, the central writing system belongs to the main mode, while the other visual modes mainly complement or highlight it, in order to effectively realize the total meaning of the whole image.

(4) Based on the specific social-cultural background, the paper finds that the general idea of “One Belt and One Road Multimodal Discourse” is to mix the historical symbol-ancient Silk Road, color cultural symbol-Chinese Red and the realistic symbol-further globalization together, to emphasize the social-practical significance of One Belt and One Road Economic and Cultural Development. In other words, under the inevitable tendency of globalization, cooperate with other countries all over the world is a wise choice for China. And President Xi Jinping, learning lessons from the history, proposes a great strategic thought- One Belt and One Road.

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An Exploration into Research on Critical Thinking and Its Cultivation: An Overview

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Abstract—The intellectual root of critical thinking can trace back to Socratics in ancient Greece. Since then, a variety of conceptions and models have been proposed, which constitute the theoretic core of critical thinking. They place different weights on different aspects of critical thinking. In the meantime, the cultivation of critical thinking commenced when Socrates attempted to apply theories of critical thinking into the instruction. Consequently, a variety of instruction approaches and strategies and assessment of critical thinking have been developed. However, there is still a dispute on whether critical thinking can be developed independently of subject content. The paper attempts to review research on critical thinking with the aim to discover commonalities and clarify the subtle differences among diversities of conceptions, models, instruction approaches and strategies, and assessment. The discovery and clarification could be significant for the instruction of critical thinking, especially, conducted in non-western countries.

Index Terms—critical thinking, theoretic core, critical thinking instruction, critical thinking assessment

The research on critical thinking can date back to Socratic time in ancient Greece. Since then, a variety of definitions, models and theories on critical thinking have been developed. The intellectual development of critical thinking is in parallel with its instruction which commenced when Socrates attempted to instruct people how to justify their confident claims to knowledge. The variation of definitions, models and theories which leads to a variety of the instruction approaches and strategies, and assessment of critical thinking requires the discovery of the threads among them. The paper aims to explore the commonalities and clarify differences among the various conceptions, models, instruction approaches and strategies for the purpose to facilitate the development of critical thinking in non-western culture. The discovery and clarification would be significant for the instruction of critical thinking conducted in non-western countries, in particular, Confucian culture. It includes two general topics: theoretical background of critical thinking and critical thinking instruction.

I. THEORETICAL BACKGROUND: CRITICAL THINKING

It is essential for the instruction of critical thinking to find out the thread among various conceptions and models which have been produced since critical thinking was initially drawn attention in pedagogical practice. This section attempts to clarify critical thinking definitions and models. It includes the discussion on the alternatives to the concept of critical thinking, the conceptions of critical thinking and critical thinking models.

A. *Alternative Labels for Critical Thinking*

In the discourse on critical thinking, three professional terms--higher order thinking, creative thinking, and problem solving are found to be often interchangeable with critical thinking (Lewis & Smith, 1993). However, there are some subtle differences among these labels. Clarification of similarities and differences among them can contribute to the deep understandings of critical thinking.

First, higher order thinking, as an umbrella concept, includes critical thinking and creative thinking, as well as problem solving (Lewis & Smith, 1993). Newmann (1991) explained that higher order thinking is a broad conception rather than a specific conception as critical thinking. It can be easily recognized when it manifests itself in solving a problem in practice (Lewis & Smith, 1993; Resnick, 1987). To solve a complicated problem, Resnick (1987) argued, higher order thinking is required in considering the cost and benefit of multiple solutions, and developing a novel one. Newmann, Voss, Perkins, and Segal (1991) stated that higher order thinking involves such skills as scrutinizing arguments for logical consistency, distinguishing between relevant and irrelevant information, using metaphor and analogy in solving problems and developing solutions, asking for clarification in a conversation, pressing people to stay with an issue, and summarizing the progress. These skills overlap those concerning critical and creative thinking. Problem solving can be seen as “arenas where critical and creative thinking take place” (Bailin, Case, Coombs, & Daniels, 1999b, p.288).

Second, there are some differences between critical and creative thinking. Paul and Elder (2008b) claimed that critical thinking is a process of evaluating, while creative thinking is a process of creating. Scholars tend to discuss creative thinking in comparison with critical thinking. They view critical and creative thinking as two distinctive concepts. Critical thinking is analytic and evaluative within a given framework, while creative thinking is imaginative

and inventive, and involves generating and inventing new ideas or solutions by transcending framework (De Bono, 1976; Glaser, 1985).

Although there are some differences between critical thinking and creative thinking, they are closely connected. Harris (1998) pointed out that in problem-solving, two kinds of thinking work together and are not really independent of each other. In solving a problem, “first, we must analyze the problem; then we must generate possible solutions; next we must choose and implement the best solution; and finally, we must evaluate the effectiveness of the solution” (Harris, 1998, p.2). It is a cyclical process from critical thinking to creative thinking, and then from creative thinking to critical thinking. As Paul and Elder (2008b) stated, although critical thinking and creative thinking can be separated artificially, in practical context, they are interwoven and connected into one. The relationship among the labels is illustrated in Figure 1.

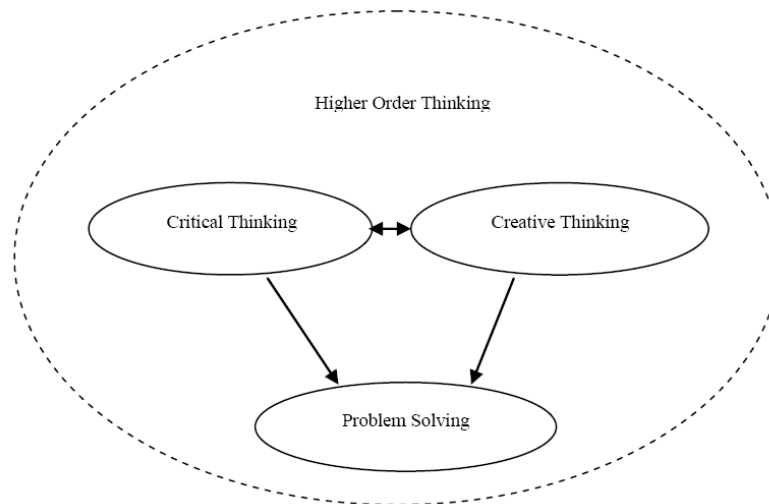


Figure 1. Relationship among Labels

B. Conceptualization of Critical Thinking

Due to a long history of research on critical thinking, it is a hardship for researchers and theorists to reach a consensus on its conception. There are as many definitions of critical thinking as contemporary scholars who attempt to seek the clarification of definitions. However, continuous endeavor to explicate the concept of critical thinking is undertaken under the assumption that it is conducive to the effective instruction of critical thinking in educational settings. There is agreement among scholars on three approaches to conceptions of critical thinking: philosophy, psychology and education (Bailin, 1998; Cohen, Salas, & Riedel, 2002; Lewis & Smith, 1993; Sternberg, 1986). The next sub-sections mainly discuss them.

Philosophical tradition: Philosophical inquiry into critical thinking extends from the ancient time of Socrates, Plato and Aristotle to the contemporary of Dewey, Ennis and Paul. These scholars have turned their attention to the nature of critical thinking and devoted much attention to the requirements of formal logical systems rather than the requirements of critical thinking within the educational conditions (Sternberg, 1986). Dewey, an American philosopher, psychologist and educator, is widely considered as the founder of the modern critical thinking movement (Fisher, 2001). He viewed critical thinking as reflective thinking and defined it as "active, persistent and careful consideration of a belief or supposed form of knowledge in light of the grounds that support it, and the further conclusions to which it tends" (Dewey, 1961, p.4). Dewey stressed that belief is established upon a firm basis of reasons. He explained that what is believed or disbelieved depends on something which stands as reasons of belief. If suggested knowledge that occurs is at once accepted, there is no or minimum of reflection. Reflective thinking involves consistent doubt and systematic and perpetuated inquiry in overcoming the inertia that inclines people to accept the suggested form of knowledge at its face value.

Ennis (1962), whose definition is widely accepted in the field, defined critical thinking as “reasonable reflective thinking that is focused on deciding what to believe or do” (Ennis, 1991, p.6). The definition emphasizes the reasonable and reflective nature of critical thinking. Goal of thinking critically is to decide what to believe or do. Ennis’ definition stresses application of reasonable and reflective thinking in decisions. The thrust of critical thinking is propelled from the dimension of thought into that of action (Whitaker, 2002). Scriven and Paul (2008) elaborated critical thinking as:

“Critical thinking is the intellectually disciplined process of actively and skillfully conceptualizing, applying, analyzing, synthesizing, and/or evaluating information gathered from, or generated by, observation, experience, reflection, reasoning, or communication, as a guide to belief and action” (Scriven & Paul, 2008, p. 1).

The definition regards critical thinking as a process which consists of five skills from “conceptualizing” to “evaluating”. The content which is processed within critical thinking is information obtained by observation, experience,

or communication. Similar to Ennis' definition, Scriven and Paul's definition emphasizes the purpose of critical thinking as a guide to belief and action.

The philosophical approach to the concept of critical thinking features in enumerating the characteristics of a critical thinker, attaching importance to reasoning skills and processes, and highlighting purposes of critical thinking. In the emphasis of reasoning and logical system, the philosophical definitions imply the qualities of the ideal critical thinker under ideal circumstances in which the limitations on human thought are not in place (Sternberg, 1986).

Psychological tradition: In contrast with the philosophical approach, psychological approach is mainly concerned with the processes and skills of critical thinking in practical context (Moon, 2008). The emphasis of processes and skills of critical thinking aims to make the idea more comprehensible, more usable and more relevant to practice. Moreover, psychological tradition pays attention to the behaviors and actions of critical thinkers within personal and contextual constraints, because behaviors and actions are overt indicators of a person's covert internal unobservable processes.

Psychologist Robert Sternberg (1986) thought that critical thinking consists of "mental processes and strategies" which are utilized to "solve problems, make decisions and learn new concepts" (p.3). He considered the processes and skills as the integral elements of critical thinking, and stressed the importance of problem-solving practice rather than an ideal context. The similar accentuation can be found in Halpern's definition of critical thinking as "the use of cognitive skills or strategies that increase the probability of a desirable outcome" (Halpern, 1999, p.70). Halpern accorded emphasis to desirable outcomes when using skills or strategies to solve problems. In conceptualizing critical thinking, psychological researchers highlight the importance of context and the limitation it can impose on performance of component processes and skills. The practical discipline or professional contexts determine appropriate application of particular component skills of critical thinking.

Educational tradition: Educational tradition to critical thinking is a combination of philosophic and psychological approaches (Sternberg, 1986). Educators are primarily concerned with how to develop students into critical thinkers rather than the process or skill itself (Moon, 2008). Therefore, educational conceptions of critical thinking mainly emerge from the way in which students are guided into critical thinkers. Processes and skills, which are necessary in the classroom for problem-solving, decision-making, and concept learning, can be taken as components of guidance in nurturing critical thinkers.

Pascarella and Terenzini (1991, cited in Rudd & Baker, 2000) argued that critical thinking can be defined in a number of ways,

"but typically involves the individual's ability to do some or all of the following: identify central issues and assumptions in an argument, recognize important relationships, make correct inferences from data, deduce conclusions from the information or data provided, interpret whether conclusions are warranted on the basis of the data given, and evaluate evidence or authority" (p.118).

The definition indicates that critical thinking, as reasoning ability, is composed of a variety of skills. It centers on the individual development of reasoning ability, instantiated in specific skills. Pascarella and Terenini (1991, cited in Rudd & Baker, 2000) also stressed that postsecondary education should foster these skills. Tsui (2002) corroborated the reasoning ability in her definition. She defined critical thinking as "students' abilities to identify issues and assumptions, recognize important relationships, make correct inferences, evaluate evidence or authority, and deduce conclusions" (p.743). The preference for individual development of critical thinking is ascertained in Papastephanou and Angeli's (2007) definition which interpreted critical thinking as individual's reflective thinking when involved in problematic situations in any discipline. Reflective thinking that characterizes the individual critical thinker is conceived of as a necessary capability in solving problems.

Educational theories of critical thinking are developed from class observation and experience (Sternberg, 1986). Educational conceptions of critical thinking are generalized from instructional experiences of cultivating critical thinkers. Critical thinking is primarily conceptualized as an individual's logical and reasoning ability which can be developed with undergraduates and graduates in academic institutions. Educators stress the importance of reasoning ability as a component of critical thinking in the case that students need to be cultivated into critical thinkers in higher education.

The relationship among three approaches to conceptualization of critical thinking is illustrated in Figure 2 below. Philosophical researchers tend to conceptualize critical thinking in an abstract way and emphasize the characteristics and processes of critical thinking which are concerned with ideal critical thinkers under ideal contexts (Sternberg, 1986). In contrast, educational conceptualization of critical thinking focuses on how to effectively develop students into critical thinkers in the class, which is crystallized into the development of specific critical thinking skills. Psychological conceptualization of critical thinking emphasizes the importance of skills and their utilization in problem-solving in practice. It stresses the limits imposed by practical constraints. Therefore, to a certain degree, the educational conception of critical thinking is an instructional substantiation of the abstract philosophical conception, and the psychological conception is its practical substantiation.

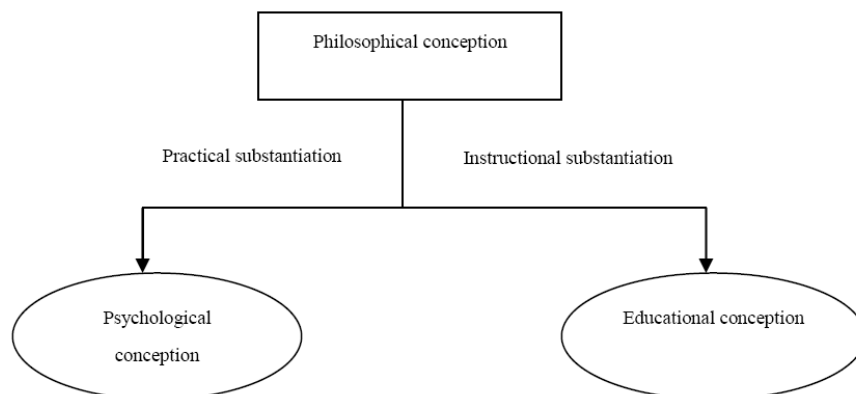


Figure 2. Relationship among different conceptions of critical thinking

The philosophical conception has a preferred weight on the theoretic aspect of critical thinking; the psychological conception on the practical aspect; the educational concept on the instructional aspect. From three different aspects, they attempt to elaborate the concept of critical thinking. Perfect critical thinking by an ideal critical thinker under the ideal context emphasized in philosophical conceptualization can be not easily obtained in an actual educational setting, and therefore, the teaching and learning of such perfect critical thinking might not be implemented successfully. Development of critical thinking for undergraduates in educational institutions has to consider the limitations imposed by personal traits and environmental contexts with the ultimate objective of cultivating critical thinkers who can apply critical thinking skills into solving a problem in reality.

Convergence of conceptions of critical thinking: The variations in definitions of critical thinking constitute a barrier to critical thinking instruction and assessment. Efforts to explore core commonalities of critical thinking conceptions intensified in a Delphi study in which a cross-disciplinary panel of 46 experts completed a multi-round, method-strict research project under the sponsorship of the American Philosophical Association (Facione, 1990b). The Delphi study articulated the conception of critical thinking as follows:

“We understand critical thinking to be purposeful, self-regulatory judgment which results in interpretation, analysis, evaluation, and inference, as well as explanation of the evidential, conceptual, methodological, criteriological, or contextual considerations upon which that judgment is based” (Facione, 1990b, p. 2).

The agreed definition conceives the outcome of critical thinking as judgment, rather than solutions and decisions. Lipman (1988) held that outcomes of critical thinking such as solutions and decisions are too narrow, and that judgment includes solving problems, making decisions and learning new concepts. “All aspects of critical thinking centrally involve judgment” (Bailin, Case, Coombs, & Daniels, 1999a, p.280). The experts in the Delphi study agreed that critical thinking includes five core skills: interpretation, analysis, evaluation, inference and explanation.

Differences between critical thinking ability and skill: It is often found that two terms, ‘critical thinking ability and critical thinking skill’, are often used interchangeably in the literature of critical thinking research. Such interchangeable use of two terms is due to double connotations of ‘skill’. As Smith (2002b) argued, ‘skill’, on the one hand, refers to “skilled performance of tasks”, and on the other hand, refers to “acquired ability or capacity” (p.661). The double connotations of ‘skill’, more or less, mask the differences between ability and skill. There are some subtle differences between the two concepts that need to be clarified. If elucidation of differences between ability and skill is achieved, consequently, differences between critical thinking ability and skill can become clear.

Skill is often defined as a capacity or ability to do something well, to perform competently a task (Bailin, 1998; Bailin et al., 1999a; Smith, 2002a, 2002b). The definition emphasizes something inner in individuals’ mind, inner ability, and at the same time, it also focuses on the external manifestation of skill by the competent performance of tasks. Two main points of the definition are confusing and problematic for skill teaching. It is necessary to make a choice among two focuses of the definition: whether skill refers to only inner ability or only performance of tasks. If the choice is made for inner ability, that is, skill and ability can be interchangeable. However, some researchers claim that skill is not equated with ability. Barrow (1984, cited in Griffiths, 1987) disagreed with such a broad sense of skill, and believed that skill is not synonymous with ability but is a sub-class of ability. It is ability that underlies skill and brings out or makes up the skill of an individual.

Therefore, critical thinking skill refers to task-related competent performance, while critical thinking ability focuses on the ideal competence or capability of the ideal thinker. Critical thinking ability is macro while elemental skill of critical thinking is micro (Paul, 1993). Micro-skill can be orchestrated into macro-ability of critical thinking. Critical thinking is a stable and enduring ability developed from the integration of a variety of elemental skills. If learners acquire a mastery of critical thinking skills, they consequently acquire an enduring critical thinking ability.

Proposed concept of critical thinking in non-western culture: For facilitation of critical thinking development in non-western culture, the concept of critical thinking possibly includes defining characteristics, such as “reflective, reasonable and intellectually disciplined”, and the process of interpreting, analyzing, synthesizing, and evaluating arguments and the purpose “as a guide to making judgments”. The defining characteristics can be employed to

distinguish critical thinking from any other kind of thinking. Critical thinking is reflective in that “it involves thinking about a problem at several different levels or from several different angles all at once” (Hunter, 2009, p.5). By being reasonable, critical thinkers would not hurry to draw a conclusion that cannot be supported by evidence and rationality or make a decision to accept a belief without the support of good reasons. Critical thinking is intellectually disciplined in the sense that it involves systematically analyzing questions and problems, carefully assessing needed evidence, and holding to critical thinking standards (Paul & Elder, 2002).

Critical thinking is regarded as a process that “helps us to arrive at the most likely destinations when evaluating claims” (Braithwaite, 2006, p.1). Process is a journey to the accomplishment of purpose. The purpose of critical thinking is to make judgments (Lipman, 1988).

Operationally, critical thinking, as the ability, consists of skills of interpreting, analyzing, synthesizing and evaluating. Each skill subsumes sub-skills. These skills are used to achieve ultimate end, i.e., judgment on belief or action. The following is a detailed discussion of these skills (see TABLE 1).

TABLE 1
SPECIFIC CRITICAL THINKING SKILLS AND SUB-SKILLS

Skill	Sub-skills
Interpretation	<ul style="list-style-type: none"> • Identifying arguments and recognizing explicit premises, reasons and conclusions • Distinguishing argument from description, explanation, and summary • Paraphrasing arguments to others, distinguishing deductive argument from inductive argument
Analysis	<ul style="list-style-type: none"> • Making inferences about implicit premises, assumptions and conclusions • Detecting flaws in the argument
Synthesis	<ul style="list-style-type: none"> • Discovering hierarchical interrelations among arguments in support of the main position or view • Diagramming arguments
Evaluation	<ul style="list-style-type: none"> • Evaluating global structure of thought by using elements of reasoning and criteria of thought • Evaluating local arguments and their relationships by using criteria of thought

Interpretation, as one of critical thinking skills, refers to understanding and interpreting arguments. It encompasses such sub-skills as: identification, categorization and expression. Identification refers to the skill to identify argument and its components: premise and conclusion, and distinguish argument from non-argument such as description, explanation, and summary. Categorization requires learners to understand and appropriately formulate different types of arguments, and describe and characterize these arguments such as deductive argument and inductive argument. Expression refers to the skill to paraphrase arguments explicitly or implicitly presented.

Analysis focuses on breaking down arguments into constituents and recognizing the constituents. It includes inference and detection. Although some arguments have explicitly stated premises and conclusions, some still use implicit assumptions as reasons. Some just jump to conclusions and leave premises implicitly unstated or explicitly state premises and leave conclusions unstated. Inference refers to the skill to make inferences about implicit premises, assumptions and conclusions. Detection refers to the skill to detect flaws in an argument. Flaws include false premises and the flawed reasoning that takes coincidence as causal argument and confuse necessary conditions with sufficient conditions, etc.

In contrast to the skill of analysis, synthesis functions in recombining the analyzed constituents into the whole. However, such recombination is not a simple process of adding parts together into a whole. It emphasizes the uniqueness and originality of the whole. Its first sub-skill is to detect the main position or point of view. It subsumes discovering hierarchical interrelations among the arguments, and how the different types of argument are combined to support the main position or point of view. The second sub-skill is to diagram arguments based on detailed analysis, which makes clear the process of the author’s reasoning.

Evaluation refers to the assessment of arguments. The assessment of arguments involves judgment on acceptability and strength of premises and conclusions of a given argument, on whether a given argument is based on doubtful assumptions or presuppositions, and on confirmable strength of a given argument’s consequences. It also includes judgment on the globe structure of the whole thought. The assessment and judgment requires criteria, which could be adapted from Paul’s model, including elements and standards of thought. Elements of reasoning is only used to evaluate the completion of structure of the whole global thought, while the standards functions in evaluation of both local arguments and global thought.

C. Critical Thinking Model

Generally, there are three traditional approaches to critical thinking models, which are in consistence with three approaches to conceptions of critical thinking. These academic traditions have developed their own specific models with variant concerns and purposes. The philosophical approach to the critical thinking model articulates reasoning elements and thought standards used to evaluate the elements. The psychological model of critical thinking is concerned with the skills or components in problem-solving. The educational model evaluates thought in educational settings (Irish, 1999). Richard Paul’s model, Robert Sternberg’s componential model and Bloom taxonomy are among the typical models of three traditions.

Richard Paul’s model: Richard Paul’s model has been evolved and improved since it was proposed in 1993. The purpose of Paul’s model has always been to develop a flexible theory of critical thinking that can be contextualized

across various disciplines. As depicted in Figure 3, it consists of three parts: elements of reasoning, standards of thought, and intellectual traits (Paul & Elder, 2008a). Critical thinkers habitually employ the standards to assess the elements of reasoning in order to develop intellectual traits.

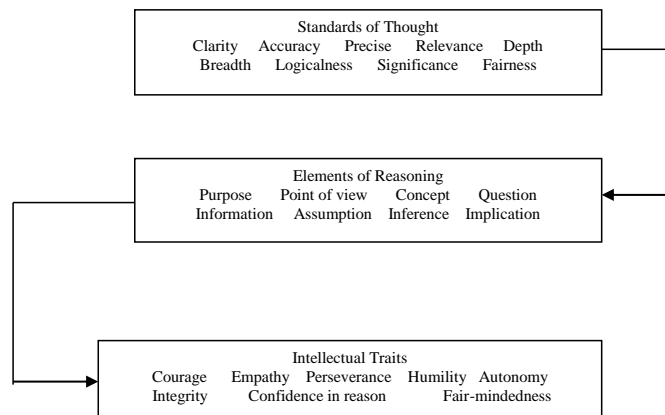


Figure 3. Paul's model (Paul & Elder, 2008a, p.19)

There are eight elements of reasoning: purpose, point of view, concept, question, information, assumption, inference, and implication. The elements are referred to as the fundamental structure of human thought and are always present in human thought consciously and subconsciously whenever and wherever reasoning is taking place. The ability to identify the elements of reasoning is essential to critical thinking. A person, who is adept at the identification of the elements, can be in a better position to recognize the flaw in this or that part, and thus, can be in a better position to analyze the mistakes in their thinking or in the thinking of others (Paul & Elder, 2002).

Paul and Elder summarized the interrelations among the eight elements of reasoning in the following statements:

“Whenever you are reasoning, you are trying to accomplish some purpose, within a point of view, using concepts or ideas. You are focused on some question, issue or problem, using information to come to conclusions, based on assumptions, all of which have implications” (Paul & Elder, 2002, p. 53).

The elements of reasoning function in interdependent fashion, and the way one element functions can influence the manner in which the other element functions. These elements constitute an interrelated system which can be used to analyze the completion of thought whenever and wherever it occurs in any context.

There are a range of intellectual standards from which we can choose to evaluate the quality of statements. However, the most fundamental are nine standards as the inclusion of Paul's model, which we routinely use in assessing statements—clarity, accuracy, precision, relevance, depth, breadth, logicalness, significance, and fairness. Good critical thinking necessitates a command of standards of thought. Paul stressed that these fundamental standards require being infused in all thinking as the guide to better reasoning (Paul & Elder, 2008a).

Critical thinking can be employed to serve two incompatible objectives: selfishness and fair-mindedness. Critical thinking in fair-minded fashion requires intellectual virtues which constitute the third dimension of Paul's model. As required, fair-minded critical thinkers strive to develop eight essential intellectual habits that lead to a disciplined mind: intellectual courage, intellectual empathy, intellectual perseverance, intellectual humility, intellectual automaticity, intellectual integrity, confidence in reason, and fair-mindedness. These eight traits of mind are interdependent. The interrelations among the virtues of strong-sense thinking are explicated as follows:

“To become aware of the limits of our knowledge, we need the intellectual courage to face our own prejudices and ignorance. To discover our own prejudices, in turn, we often must intellectually empathize with and reason within points of view with which we fundamentally disagree. To achieve this end, we typically must engage in intellectual perseverance, as learning to empathically enter a point of view against which we are biased takes time and significant effort. That effort will not seem justified unless we have the necessary confidence in reason to believe we will not be tainted or "taken in" by whatever is false or misleading in the opposing viewpoint” (Paul & Elder, 2002, p. 56).

To actualize fair-mindedness in critical thinking, it demands critical thinkers to be intellectually modest, intellectually courageous, intellectually honest, intellectually determined, intellectually empathetic, and have strong confidence in reason, and intellectually automatic, even though it is challenging and cannot be overtly taught (Paul & Elder, 2002).

Paul's model of critical thinking exemplifies perfections of strong and fair-minded thinking. Elements of reasoning and standards of thought constitute what is essential to critical thinking, while intellectual traits emphasizes what a critical thinker is disposed to be. It is concept-based, not composed of rules, procedures, and steps to follow. As a result, it is extremely flexible and applicable to any discipline and any level of thinking (Moseley et al., 2005).

Robert Sternberg's componential model: Robert Sternberg, a distinguished psychological and educational theorist, developed a well-known triarchic theory of intelligence of which componential model is one of three subtheories. Componential model consists of three kinds of components: metacomponents, performance components, and knowledge-acquisition components, which are considered as academic problem-solving skills (Sternberg, 1986). Analytic intelligence is the joint operations of three kinds of components.

Metacomponents are higher order processes executed in solving problems. They are used to recognize an existing problem, analyze the problem, and make a decision about which strategy is picked up. Metacomponents includes planning what steps are used, how to organize these steps into coherent strategies, and what resources are used; monitoring what has been done, what is currently doing, and what needs to be done in problem-solving; evaluating the results by using feedback when a problem is solved completely. They decide what performance components actually do.

Performance components, lower-order cognitive processes, play a role in the execution of instructions of metacomponents. Actually, strategies and steps decided by metacomponents need to be put into practice in solving problems by performance components. They are applicable in task solution and organize themselves into three stages: encoding stimuli, comparing and integrating stimuli, and response (Kaufman & Grigorenko, 2009).

In contrast to the first two sets of component which attach importance to problem-solving, the third set, knowledge-acquisition components, is thought as a mental processes involved in gaining knowledge. It includes three subprocesses: selective decoding, which refers to the task to sift out relevant information from irrelevant information; selective combination, which refers to the task to combine selectively encoded information into a plausible whole; and selective comparison, which refers to the task to compare and relate new acquired information to the previously gained information.

The componential subtheory, as one important part of Sternberg's triarchic theory of intelligence, highlights mental processes and a mechanism that underlies intelligent behaviors, i.e. how intelligent behaviors are generated, regardless of specific behavior contents. Three kinds of component are actually skills included in problem solving ability (Sternberg, 1986).

Benjamin Bloom's model: Benjamin Bloom's model--the Taxonomy of Educational Objectives aims to classify goals in the educational system, promoting research on problems and issues related to assessment of learning and on the relationship between assessment and education (Moseley et al., 2005). It intended to be helpful for teachers, administrators, and specialists who cope with curriculum and evaluation problems, not to provide insights into educational philosophy and teaching methods. Although it is not originally designed to enhance critical thinking instruction, its sections on analysis, synthesis and evaluation, contains a wealth of useful information about the instruction (Paul, 1985a).

Bloom's taxonomy consists of six hierarchical levels: knowledge, comprehension, application, analysis, synthesis, and evaluation, from the simple to the complex as the representation of thought. Six categories in the Taxonomy are interconnected in a stepwise manner from lower level 'knowledge' to the higher level 'evaluation'. As the foundation for higher levels, knowledge involves the recall of specific and isolable information and facts, of ways of organizing, judging, and criticizing facts and information, and of patterns, schemes, and structures by which information and facts are systemized (Bloom, 1956). As a precondition, knowledge requires one to comprehend what they remember about facts and information. After one knows and understands something, the next level is to apply them in particular and concrete situations.

The next higher level is to analyze material we understand and apply, breaking down the material into its componential parts and discerning the relationships among the parts and the way they are organized (Bloom, 1956). Still higher up is to synthesize the analyzed constitutes so as to form a whole and discover the patterns or structures not clear before. The highest level is evaluation, which is defined as making judgments about the quality of ideas, works, material, knowledge, and so forth (Bloom, 1956). It involves the utilization of internal criteria such as logic accuracy or consistency, and external standards for appraising the judgments. Bloom's taxonomy is a cumulative hierarchy in which six levels are ordered on a single dimension from simple to complex and from concrete to abstract. There is no overlap among these levels and mastery of lower levels is a prerequisite for mastery of higher ones (Krathwohl, 2002).

Bloom's taxonomy is a well-known framework for classifying a number of educational objectives into clear structures and a coherent framework for classifying thinking according to levels of complexity. Bloom (1956) intended the Taxonomy to "be a classification of the student behaviors which represent the intended outcomes of the educational processes" (p.12). By depicting differences between the intended behaviors specified by instructional objectives and the actual behaviors as the result of students' participation in the unit of classroom instruction, one can verify whether instructional objectives have been achieved, and whether a particular intended skill has been learned. Therefore, Bloom's taxonomy is significantly valuable in education and can be applicable to all the subject-matter content at different levels of education in different schools (Bloom, 1956). Nevertheless, it notes that the Taxonomy is one-sided hierarchy that limits our understanding of nature of critical thinking (Paul, 1985a). Paul pointed out that gaining knowledge simultaneously entails comprehension, analysis, synthesis, and evaluation.

Implication for the model utilized in non-western culture: Three types of models as represented in three traditions to critical thinking have their significance in building the model used for the instruction of critical thinking in non-western

learners. The proposed model would include the elements of reasoning and standards used for evaluating these elements in Paul's model to evaluate the whole thought and specific arguments and the higher levels of the Taxonomy which correspond to the levels of critical thinking skills. However, the model would not include components, employed in Sternberg's componential model, because, according to the definition of component as "an elementary information process that operates on internal representations of objects or symbols" (Kaufman & Grigorenko, 2009, p. 6), metacomponents can be regarded as equivalent to metacognition. It has two aspects: ability to reflect on cognition, which involves understanding of cognitive resources and operational processes in the facilitation of comprehension; and ability to control cognition, which involves mental mechanism in monitoring comprehension and regulating efforts to improve comprehension (Koda, 2005). Performance components also bear similarities to cognitive processes. Therefore, Sternberg's componential model is not so much a critical thinking model as a psychological model.

II. CRITICAL THINKING INSTRUCTION

Long history of critical thinking instruction has prompted a variety of arguments, and approaches and strategies, and assessment concerned with critical thinking instruction. This section mainly discusses the following topics: disputes on instruction of critical thinking, instructional approaches to critical thinking, and specific instructional strategies for critical thinking and assessment of critical thinking.

A. *Controversy in Critical Thinking Education*

Since Socrates practiced teaching critical thinking, a variety of principles and concepts have been proposed about instruction of critical thinking. However, no agreement has been achieved on how to teach critical thinking, though all agree that teaching students to be critical in their studies and their future life and work should be the goal of higher education (Moore, 2011). The conflicting debate has been continuing on whether critical thinking can be taught independently of subject-matter or not, which is closely related to the disputable assumption: whether there are general critical thinking skills, and whether general critical thinking skills can be transferred if there are. The assumption of general critical thinking skills hinges on the assumption of the transferability.

The controversy in critical thinking instruction is referred to as the generic vs. discipline-specific debate between the generalists and the specificists. Ennis (1989, 1990, 1997) is considered as the leading defender of the generalist movement, while McPeck (1984a, 1984b, 1985, 1990) is regarded as the leading defender of the specificist movement. McPeck criticized the trend of teaching critical thinking as a subject of study in itself and claimed that critical thinking is always about something in particular, and therefore critical thinking must be taught by embedding it into something particular in a curriculum subject. McPeck reiterated that there are no general and transferable critical thinking skills, but subject-specific skills. In contrast, Ennis and other generalists (Higgins & Baumfield, 1998; Johnson, Siegel, & Winch, 2010; Paul, 1985b; Quinn, 1994) assert that there exist indeed general and transferable critical thinking skills which can apply across disciplines and fields. These skills must be taught in a general course where they are not overshadowed by subject content.

Although the importance of subject-specific knowledge is not ignored, it is contended that there are some general critical thinking skills unrelated to subject-content. Subject-specific knowledge is not a sufficient condition for thinking critically (Ennis, 1989). Even if we accept the important role of subject-specific knowledge in thinking critically, there are still some areas within different subjects that are "sufficiently similar or overlapping as to make general thinking skills possible, especially during the process of schooling" (Higgins & Baumfield, 1998, p.396).

In essence, the debate between the generalists and the specificists is like two sides of one coin: the generalist movement focuses on the mental aspect of critical thinking, i.e. logical principles of reasoning independent of subject matter; the specificist movement emphasizes the practical aspect of critical thinking, i.e. application of reasoning principles in subject matter (Bailin, 1998; Bailin et al., 1999b). The difference between the generalist and the specificist is actually the range of application of intellectual resources rather than general and transferable critical thinking skills themselves. Intellectual resources include background knowledge and reasoning principles, concepts and procedures (Bailin, 1998). The researcher believes that emphasis on one end of reasoning principles, concepts and procedures does not imply the ignorance of the other end of the application along the continuum. It is different focuses that matter. The instruction of critical thinking in non-western culture should place emphasis on both of reasoning principles, concepts and procedures and their application to professional and daily lives. The competent application of reasoning principles, concepts and procedures is an attribute of critical thinking skill. Therefore, the development of general critical thinking skills is actually to develop students' competent application of reasoning resources in various practical contexts.

B. *Approaches to Critical Thinking Education*

The debate on whether critical thinking can be cultivated independently or not leads to different instructional interventions in critical thinking development. In particular, dispute on whether critical thinking is subject-specific or not brings about four main types of instructional approach: general critical thinking course, infusion, immersion and mixed approach of general approach with infusion or immersion (Ennis, 1989). In addition to the instructional approaches, there is another type of instructional intervention: the whole academic degree program where effects of entire degree programs on the development of critical thinking skills are investigated (Behar-Horenstein & Niu, 2011;

Niu, Behar-Horenstein, & Garvan, 2013). Niu et al. (2013) considered whole academic degree program as “holistic approach”. Due to its long duration of non-obvious and indirect instruction, holistic approach is discussed independently of the other instructional approaches.

Holistic approach: Holistic approach normally lasts for at least one year, even more than two or three years. The approach mostly uses pretest and posttest to measure the utility or efficiency of an academic program in the development of critical thinking. In a study conducted by McMullen and McMullen (2009), participants from three successive classes were drawn to explore the effect of a two-year nursing program on the improvement of participants’ critical thinking skills. No direct instruction of critical thinking took place. California Critical Thinking Skills Test (CCTST) was employed to assess participants’ critical thinking at program entry and three times during the program. The result indicated that the growth on participants’ critical thinking skills was not linear, but quadratic, and that students at higher and median skill levels at the program entry showed a modest increase in evaluation skills, a sharp decrease in analytic skills and unchanged inference skills, while those at lower skill levels showed substantial increase in all three critical thinking skills. However, as McMullen and McMullen themselves pointed out, one independent sample without a control group restricts us to claim a causal relationship between the growth in participants’ critical thinking and their participation in the two-year program.

Researchers admit that length of programmatic approach, another threat to validity, is an intervening factor which poses some confounding effects on the consequence of the program. Behar-Horenstein and Niu (2011) pointed out that, among these studies, few have made efforts to address these threats in programmatic intervention. In spite of these defects inherent in instructional program, it is undeniable that, to a certain extent, these studies suggest a positive effect of programmatic intervention in critical thinking development.

Alternative instructional approach: There are two camps of instructional approaches to critical thinking. One camp, defended by Ennis and then by Davies, advocates for explicit instruction of critical thinking under the assumption that critical thinking can be defined as a set of skills and these skills are specific, teachable through description and practicing, and that, once learned, they can be used for a variety of issues (Davies, 2006, 2011; Ennis, 1991). In compliance with this view, critical thinking can be taught explicitly as a subject of study itself (general approach), or by being infused into a subject (infusion), or combination of general approach with infusion or immersion (mixed approach). The other camp with proponents—McPeck and Moore, upholds that critical thinking can be regarded as a subject-specific skill which can be learned and practiced only in particular subject matter (McPeck, 1985; Moore, 2011). Therefore, leading figures in this camp advocate for the immersion approach to critical thinking instruction. Moore advocates that critical thinking can be developed only through prolonged immersion in the content of discipline, and that exposure to and participation in a variety of subject matter instructions can result in an automatic critical thinker.

Ennis (1989) elaborated four instructional approaches to critical thinking. General approach is that critical thinking can be taught in separation from the presentation of content of existing subject matter; infusion refers to an approach that instruction of critical thinking abilities is embedded into existing subject matter in which general principles of critical thinking are made explicit; immersion is similar to infusion except that general principles are not made explicit; for the mixed approach, general principles of critical thinking are taught in a separate course in parallel with subject-specific critical thinking instruction. Ennis claimed that views on general and transferable critical thinking skills determine what approach is chosen by researchers and the approach chosen implies the support with the generalist or the specificist. Therefore, the author has to make it clear that a certain instructional approach chosen to be employed in this study does not imply the author’s alignment with either side of the debate.

Among studies on effectiveness of instructional interventions in the improvement of critical thinking skills, the author believes that no evidence has sufficiently persuasive power than what is drawn from meta-analysis studies. Behar-Horenstein and Niu (2011) reviewed 61 empirical studies published from 1994 to 2009, which focused on the improvement of college students’ critical thinking skills through instructional interventions, and found that the first frequently used approach (52% of the studies reviewed) is immersion; the second one is holistic approach (19%), and the other three approaches have an equal rank as the third (each 9.5%). Immersion is reported to yield lowest growth of students’ critical thinking out of all the approaches. Abrami et al. (2008) conducted a meta-analysis of instructional interventions affecting critical thinking skills with 117 empirical studies published from 1960s through 2005 and found that the mixed approach outperforms and the immersion underperforms the other three instructional approaches significantly. General approach and infusion are found to have moderate effects. Infusion and immersion are employed more frequently than the other two approaches. In another meta-analysis of effects of instructional interventions on college students’ critical thinking skills, in which immersion is the first frequently used approach and holistic approach is second, Niu et al. (2013) found that a single intervention longer than 12 weeks is more effective than single interventions shorter than 12 weeks or the holistic approach. It can be inferred from such findings that the effect of a single intervention is confounded with length of exposure to that intervention. The longer exposure to a single intervention, the more effective such single intervention is.

The aforementioned research reviews indicate that, among five instructional approaches to critical thinking, immersion which is used most frequently has the smallest effect. Holistic approach also has a small effect, though better than immersion. Mixed approach is reported to be most effective in improving students’ critical thinking ability. General approach and infusion both have a moderate effect. Another finding is that effect of a particular approach is

influenced by length of exposure to the approach. The longer the exposure is to one single approach, the more effective the approach is found to be. Although, the duration of 12 weeks was found to be a determinant of effects of a single approach, it is not reasonable to make a conclusion that the length of exposure of at least 12 weeks is a threshold for effects of a single approach.

C. *Teaching Strategies for Critical Thinking*

In addition to teaching approaches, educators and researchers attempt to deploy a variety of specific teaching strategies to develop critical thinking. Among the most frequently used strategies are group discussion, concept mapping, and questioning (Lee et al., 2012; Qatipi, 2011; Savage, 1998; Walker, 2003). These three teaching strategies were used in the development of critical thinking skills in this study. This section mainly discusses them.

Group discussion: Many studies have been conducted to examine the effects of group discussion on critical thinking development. It has been found to be an effective teaching strategy for the development of critical thinking. Some studies discussed and elaborated group discussion used in their courses (Bucy, 2006; Sionti, Ai, Ros  & Resnick, 2011); some conducted empirical studies to investigate effects of group discussion (Chiu, 2009; Pena & Almaguer, 2012; Yang, 2008), which could provide more persuasive evidence.

Hudgins and Edelman (1986) conducted a study with the duration of six weeks to examine the effect of group discussion on critical thinking development. Ten classes in five primary schools were chosen as a sample and in each class students were assigned into two groups: experimental group and control group. The instrument ‘Test of Critical Thinking’ developed by the researchers was employed in pretest and posttest to assess participants’ critical thinking. The results showed that there is no significant increase in children’s critical thinking ability in the experimental group compared to the control group. The difference is negligible. Hudgins and Edelman explained that no significant increase is due to a short period of six weeks, and that more lessons and longer discussion could bring about significant improvement of critical thinking.

Hayes and Devitt (2008) conducted a study with the duration of sixteen weeks in a college. The ACT-CAAP critical thinking test was administered in pretest and posttest to measure participants’ critical thinking skills in two groups. The results showed that group discussion in small classes can significantly improve critical thinking skills more than in large classes. Another important finding is that non-native English speakers acquired a significant improvement of their critical thinking skills, which was not found for native English speakers, though native English speakers have higher scores of critical thinking skills in both pretest and posttest than non-native English speakers. Hayes and Devitt explained that native English speakers have higher scores because of their higher reading ability. In addition, the reason why non-native English speakers obtained significant improvement of critical thinking skills while native English speakers did not is that familiarity with new terminology and frequently practicing of group discussion contributes to the development of critical thinking skills.

The empirical evidence indicates that group discussion is more effective for college students than for the students in the primary school. That is, it can impose greater influence on the improvement of critical thinking with learners who have grown up intellectually and cognitively. Its positive effects on development of critical thinking also depend on the length of discussion treatment.

Concept mapping: In addition to group discussion, a concept map has been found to be also effective in the development of critical thinking. Vacek (2009) introduced concept mapping as a teaching tool to facilitate critical thinking. He believed it would improve the use of various critical thinking skills. However, Vacek provided no experimental evidence to support such an assertion, and no description of how to use concept mapping in a particular context. The empirical evidence for the effect of concept mapping on improvement of critical thinking can be found in the study conducted by Wilgis & McConnell (2008). There is a small convenience sample of fourteen ‘Novice Graduate Nurses’ and a two-day treatment intervention in the study with only one treatment group. Concept mapping was employed as both a teaching strategy and evaluation of critical thinking. Concept mapping was found to be effective in accelerating participants’ critical thinking ability to synthesize and prioritize information, make appropriate plans and make judicious decisions. However we can still cast some doubts on the findings because of short-time treatment, no control group, and implausible instruments.

The convincing and persuasive empirical evidence is offered in the study by Lee et al. (2012). The study used quasi-experimental design in a two-year registered nurse baccalaureate program. The results showed that, although there is non-significant decrease of critical thinking in both groups, participants in the experimental group significantly outperformed the control group in inference and deduction among five critical thinking abilities and have higher growth rates of these two skills. Lee explained that the decrease of critical thinking for participants in both groups is due to regression effects with higher initial scores. As mentioned earlier, it is actually long duration of the holistic approach that confounds the effect of concept mapping.

The above studies are conducted on the basis of the content of nursing training, and thus, it may be effective only in the nursing educational setting. It needs to some studies conducted in an EFL educational situation to justify whether concept mapping is similarly plausible for EFL learners’ development of critical thinking. For that reason, Khodadady & Ghanizadeh (2011) conducted a study with the aim to investigate the influence of concept mapping on the development of critical thinking ability with EFL learners. Thirty-six students at upper intermediate and advanced levels were chosen and randomly assigned to treatment and control groups. Treatment intervention consists of concept

mapping after reading each text and formulation of required post-reading activities during the three-month session. "Watson-Glaser Critical Thinking Appraisal" (CTA) was employed to measure participants' critical thinking ability. The results showed that concept maps significantly foster EFL learners' critical thinking ability in the reading class. This study suggests that concept mapping as a teaching strategy is effective across specific disciplines in improvement of critical thinking.

Questioning: Asking right and critical questions can stimulate and direct critical thinking and push us forward towards the continuous exploration of opinions, insights and judgments (Browne & Keeley, 2007). Seker & Komur (2008) investigated the relationship between critical thinking skills and in-class questioning behaviors of students. Twenty second-year students of an English language teaching department were chosen and assigned to a higher-level group and a lower-level group in terms of critical thinking ability. A reading text was used to elicit information about questions asked by participants and the "Ennis-Weir Critical Thinking Essay Test" was used to measure critical thinking ability. It was found that students with lower-level of critical thinking ability ask less questions than those with higher-level, and that students with higher-level ask more questions concerning comprehension, application, analysis, synthesis and evaluation when compared to questions concerning knowledge asked by those with lower-level. This study proved that critical thinking ability has an important influence on the types of questions asked by participants. However, it did not provide direct evidence about effects of questioning on critical thinking development.

Alexander, Commander, Greenberg, and Ward (2010) explored the effects of a 'four-question teaching technique' on the enhancement of critical thinking in online discussion. The study used the combination of two strategies: questioning and group online discussion. Twenty-four students were chosen to participate in online discussion forums. There were three asynchronous discussion forums with topics about three different cases studies on behaviorism, social cognitivism and metacognition. The first forum was conducted during the second week of the course. The second and last forums were conducted at the middle and end of the course, respectively. The participants were randomly assigned to groups of 5 or 6, but they were not always in the same group for each forum. The four-question technique was employed for three forums, but completed only for the second discussion forum, not for others. The instrument 'Washington State University Critical and Integrative Thinking Scale (WSUCITS)' was used to measure critical thinking. The four-question technique was found to have a positive role in improving participants' critical thinking. The same effective results were found in another study by Barnett & Francis (2011). The difference is that written questions, not oral ones, were used in the study. It was found that the students receiving quizzes which contain written high order thinking questions performed significantly better than those receiving quizzes which do not contain such questions.

The evidence provided in the above studies proves that there is a close correlation between learners' critical thinking ability and the type of question. Students with higher critical thinking ability tend to ask more questions than those with lower critical thinking ability. Questioning plays a significant role in developing critical thinking.

D. Assessment of Critical Thinking Skills

Among the most commonly used tests of critical thinking skills are California Critical Thinking Skills Test, Watson-Glaser Critical Thinking Appraisal, and the Cornell Critical Thinking Test (Abrami et al., 2008; Fawkes, O'meara, Weber, & Flage, 2005; Niu et al., 2013). The California Critical Thinking Skills Test (CCTST) is a standardized, 34-item, multiple-choice test with the aim to assess three core critical thinking skills: analysis, evaluation, and inference; and two traditional reasoning skills: deduction and induction.

To examine whether the California Critical Thinking Skills Test (CCTST) measured the enhancement of critical thinking skills gained by students after they completed critical thinking courses, Facione (1990a) conducted four experiments and found that CCTST can detect the growth in critical thinking skills achieved by the students. CCTST has shown to be reliable and valid, and been widely used to assess college students critical thinking skills (Phillips, Chesnut, & Rospond, 2004). The Watson-Glaser Critical Thinking Appraisal (WGCTA) and the Cornell Critical Thinking Test (CCTT) also enjoy high popularity among researchers. Both of them are standardized, multiple-choice tests and have been proved to have high reliability and validity. However, a standardized multiple-choice test has inherent weakness.

Multiple-choice tests can only reveal test-takers' recognition of knowledge, not their underlying reasoning ability (Ku, 2009). Norris (1988) cautioned that multiple-choice critical thinking tests cannot distinguish "variance in scores due to the differences in the background beliefs of examinees which are not part of ability to think critically from variance due to differences in critical thinking ability" (p. 2). The reason is that alternative solutions to a problem and alternative approaches to reaching a solution which are the nature of critical thinking bring about difficulties for the multiple-choice tests. This type of format structure, as Yeh (2001) pointed out, cannot assess respondents' ability to weigh various claims according to available evidence, and decide which claim is well supported and why alternative claims are not well supported, even though respondents can perform well.

Ennis (1993) suggested an open-ended, but focused approach to the assessment of critical thinking skills, which reiterates his earlier suggestions of viable alternatives to multiple-choice tests, such as the addition of justification requests to multiple-choice items, essay testing and performance assessment. Therefore, a test that requires test-takers to read and evaluate arguments through written essay is considered as authentic assessment of critical thinking, such as 'The Ennis-Weir Critical Thinking Essay Test' and 'the ICAT Critical Thinking Essay Test'.

It is noticeable that there are some differences between the test through reading a written essay and through writing an essay, even though they both belong to an essay test of critical thinking. The test that requires test-takers to read and evaluate arguments through written essay can be designated as a 'receptive test', while the test that requires test-takers to apply their critical thinking into writing an essay as a 'productive test' (Hinkel, 2011). Receptive tests place emphasis on application of knowledge of reasoning into recognition, analysis, synthesis, and evaluation of arguments with more weight on declarative knowledge than procedural knowledge. The range of expected responses in receptive tests is limited due to limited arguments from input texts. In contrast, productive tests focus on application of knowledge of reasoning into reasonable and logical expression of points of view with more weight on procedural knowledge than declarative knowledge. The range of expected responses in the productive test is larger than in the receptive test.

The commonly used tests-CCTST, WGCTA, and CCTT are the examples of a receptive test, while the ICAT Critical Thinking Essay Test and the Ennis-Weir Critical Thinking Essay Test is an example of a productive test. Whether receptive test or productive test, these essay tests are time-consuming and not appropriate for large-scale assessment. Therefore, to achieve cost-effect balance, it is better to combine multiple-choice and giving reasons for choice, which could be supposed to be used in non-western settings.

In empirical practice, aforementioned tests have to be translated into different versions when they are employed in non-English speaking contexts. Instrument translation poses some threats to validity of the translated instrument (Maneesriwongul & Dixon, 2004; Peña, 2007; Rode, 2005; Sripusanapan, 2001; van Widenfelt, Treffers, Beurs, Siebelink, & Koudijs, 2005). Bias is a direct threat to validity. There are some types of bias, in particular, cultural bias, which translation cannot smooth away.

There are two procedures of instrument translation in order to reduce potential threat as much as possible. One is translation-backtranslation procedure that is commonly used to guard against potential threat to validity of translated instruments. However, linguistic translation-backtranslation is not sufficient to effectively remove cultural bias. Linguistic equivalence in the translation of research instruments cannot remove potential differences which lead to different patterns of response, due to different cultural interpretations (Peña, 2007). It is the carefully crafted and culturally appropriate translations that can ensure that examinees' performance on the measure is most likely and accurately to be reflective of their critical thinking. However, given the great difference between the western and eastern culture, it is not an amiable task to achieve culturally appropriate translation. Therefore, in practice, adaptation is commonly used in conjunction with partial translation to change, or reword, even create new questions and items so that the original cultural flavor can be maintained to a greater extent.

Another procedure is 'multidisciplinary committee approach' through which a group of people from different areas prepare translation (van de Vijver & Tanzer, 2004). It can enhance quality of translation through collective efforts and, especially, in the case when they have complementary expertise of different areas. However, it is practically unfeasible to group people with different areas of expertise, such as psychological, linguistic, and cultural. Therefore, for the assessment of critical thinking in non-western culture, in particular, Confucian culture, it is necessary to develop the valuation system to assess learners' critical thinking ability which is compatible with the local culture.

III. CONCLUSION

Since the research and instruction of critical thinking commenced in ancient Greece, it is mainly conducted in western educational institutes in western countries such as the United States of America (Atkinson, 1997; Day, 2003). Its essential core was built up in western society and its creation, development and instruction were based on western academic tradition. Atkinson expressed cautions against the development of critical thinking in the East. He believed that critical thinking is a social and cultural practice and therefore, is difficult for non-western learners to master. Therefore, on the basis of review of various conceptions and models of critical thinking, the researcher proposed the concept of critical thinking and suggested what models could be possibly employed in building the model suitable for non-western culture and society.

In pedagogical practice, a variety of instructional approaches and specific teaching strategies have been developed and experimented with, among which immersion and the holistic approach are found to be less effective than infusion and general approach and in turn than general approach in improving critical thinking skills, and group discussion, concept mapping and questioning are found to be among commonly-used teaching strategies. However, empirical evidence was mostly produced in experiments mainly conducted in western culture, which needs rigorous evidence from non-western context. For assessment of critical thinking, researchers and educators have developed a variety of inventories among which the commonly-used tests mostly employ multiple-choice format. Some took the format of essay. Both formats have their inner weakness, which requires the combination of them in order to achieve cost-effect balance, which is particularly practical for the assessment of critical thinking in non-western society.

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The Social Semiotic Analysis of Translation of Joseph Conrad's *Heart of Darkness* Based on Peircean Model

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Abstract—The aim of the present article is to investigate the meaning of the signs in Persian translation of *Heart of Darkness*. To reach the desired goal, the researcher has used social semiotics and Peirce's triadic sign model as the theoretical framework. In the current study, Peirce semiotics has been used for detecting signs. After detection 50 signs, the researcher used Peirce's triadic sign model for analyzing the translation of each sign. The researcher decoded the signs to identify their components and analyzed them in social semiotic level to clarify whether they have the same impression on the Persian version of *Heart of Darkness* as their English source or not. After performing data analysis, it was cleared that 37 signs (out of 50) in the corpus of the study have the same effect and meaning in the target text as what they have in the source text.

Index Terms—semiotics, semiotic analysis, social semiotics, and translation

I. INTRODUCTION

According to Petrilli (2003), translation exists between verbal and nonverbal languages as well as among different nonverbal languages. Translation simply cannot be constrained to the realm of linguistics but also inevitably involves the science and theory of signs, or semiotics. The act of translation "is to interpret," and thus occurs wherever signs exist. Then translation must be understood as concerning more than just the human world, and that translative processes permeate the entire living world and biosphere.

"In semiotics perspective translation is studied as a purely semiotic act that involves the transition from one semiotic system (source language) to another (target language)" (Trifonas, 2015, p.4). "Translation [...] is a phenomenon of sign reality and as such it is the object of study of semiotics." (ibid,p. 303). Bassnett (2002) mentioned that "although translation has a central core of linguistic activity, it belongs most properly to semiotics" (p.13).

"In order to establish the role of semiotics in translation, one has to look at the concepts of (1) translation, and (2) semiotics. Translation addresses aspects of communication and is concerned with the use, interpretation and manipulation of messages that is of signs; semiotics does exactly the same" (Bezuidenhout, 1998).

Conrad's *Heart of Darkness* (1899), is one of the most celebrated works of literature of the twentieth century in English which has been widely analyzed and criticized from different aspects. "On the surface it is a dreamlike tale of mystery and adventure set in central Africa; however, it is also the story of a man's symbolic journey into his own inner being" (<https://www.enotes.com/>, 2016).

Despite the large number of essays and analyses on the book, it has never been analyzed through its semiotic aspects. Hence the researcher attempts to investigate the signs in Persian translation of *Heart of Darkness*.

A. Statement of the Problem

An impressive and ever-increasing number of books deal with the theory of translation, but most of them focus on tackling specific points rather than offering a general panorama of translation theories. The latter can be found in the much less numerous publications that present a historical point of view on the discipline, but none of them has undertaken to investigate the subject from a semiotic perspective. (Coscolluela, 2003, p.105)

Although much has been written on translation in recent decades, very few titles have been concerned with transferring signs and semiotics in translation and the notable role of semiotics in translation has not been clarified. A good translation does not take place without knowing culture, sign and code system and technological environment of source text. As Torop (2008) notes (cited in Kourdis & Kukkonen 2015) "[t]ranslation semiotics itself can be regarded as a discipline that deals with mediation processes between various sign systems, and, on the macro level, with culture as a translation mechanism" (p.8).

With regard to the above explanations, the purpose of this study is highlighting that semiotics is relevant to translation studies, and show the semiotics function in translation. In order to do that *Heart of Darkness* is analyzed and the way of transferring signs from the source text to the target are examined.

The current study explores how signs convey from English version of the novel to its Persian version. It shows the importance of signs interpreting in conveying meaning.

The researcher hopes to show the importance of semiotics in translation and prepare a paper which is useful for ahead studies in semiotics translation for both translators and readers.

Semiotics has an important role to play in translation. As Popovic (cited in Mehawesh, 2014) stated, "Literary text is not just a combination of verbal signs, but it is a culturally-loaded linguistic system, and it needs a thorough examination before the process of translation is carried out. He argues that: [...] the semiotic aspect in translation is concerned with the differences met within the process of translation, which are a consequence of a different temporal and spatial realization of the translated text" (p.89).

B. Translation

"The term translation itself has several meanings: It can refer to the general subject field, the product (the text that has been translated) or the process" (Munday, 2008, p.7). According to Munday, translation is an incredibly broad notion which can be understood in many different ways (ibid). Hatim and Munday (as cited in Munday, 2009) defined translation "as:

1. The process of transferring a written text from SL to TL, conducted by a translator, or translators, in a specific socio-cultural context.
2. The written product, or TT, which results from that process and which functions in the socio-cultural context of the TL.
3. The cognitive, linguistic, visual, cultural and ideological phenomena which are an integral part of 1 and 2" (p.7).

C. Semiotics

Semiotics is a field of research that began in earnest with the innovative thought of Charles Sanders Peirce but that only began to be explored within mainstream disciplines in the late 1930s (Cobley, 2010, p.116). On *Handbook of Semiotics* (1990) N  h stated that four traditions have contributed to the "birth of Western semiotics," semantics, logic, rhetoric, and hermeneutics. "Jakobson (as cited in Chandler, 2002) defined semiotics as the general science of signs which has as its basic discipline linguistics, the science of verbal signs" (p.8).

D. Sign

"A sign [] is something which stands for somebody for something in some respect or capacity" (Johansen & Larsen, 2002, p.27). Signs are phenomena that represent other phenomena. Anything can function as a sign, since signs do not have predetermined, prototypical properties like, say, a bird or a sewing machine (ibid). Sebeok (2001) pointed out that "sign is any physical form that has been imagined or made externally (through some physical medium) to stand for an object, event, feeling, etc., known as a referent, or for a class of similar (or related) objects, events, feelings, etc., known as a referential domain. In human life, signs serve many functions. They allow people to recognize patterns in things" (p. 3).

E. Models of the Sign

- "The two dominant models of what constitutes a sign are those of the linguist Ferdinand de Saussure and the philosopher Charles Sanders Peirce" (Chandler, 2001, p.10). The researcher had to choose the suitable model to achieve the desirable goals. After analyzing and studying both models, the researcher chose the Peircean model to analyze the signs.

According to Cobley (2010), Peirce's semiotics is a general and formal theory of signs. It is general in the sense that it applies to any kind of sign. Its subject is signs and sign activity whether in humans, or animals, or machines, or anything else. Peirce's semiotics is a normative [...] science (this distinguishes it from the mainstream of Saussurean semiology). Peirce is well known for his claim that all thought is in signs and that minds should be regarded as systems of signs (ibid). As Chandler (2002) has shown on *The Basic Semiotics*, "Peirce offered a triadic (three-part) model consisting of:

- The *representamen*: the form which the sign takes (not necessarily material, though usually interpreted as such) - called by some theorists the 'sign vehicle'.
- An *interpretant*: not an interpreter but rather the *sense* made of the sign.
- An *object*: something beyond the sign to which it refers (a *referent*)" (p.29).

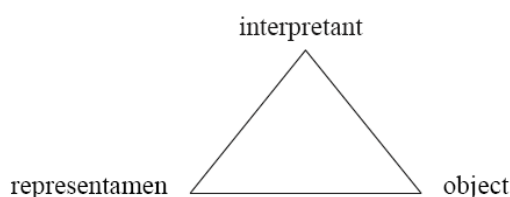


Figure1.1 Peirce's Semiotic Triangle

II. RESEARCH METHOD

The present study is a corpus based study, with a descriptive-comparative approach which was accomplished to investigate semiotics implications in the translation of the novel, *Heart of Darkness*. "*Heart of Darkness*, by Joseph Conrad, is one of the most well-known works among scholars of classical literature and post-colonial literature. Not only it is thought provoking and exciting, but also considered to be one of the most highly stylistic in its class, blending its use of narrative, symbolism, deep and challenging characters, and of course a touch of psychological evaluation that Conrad is well known for" (<http://www.wmich.edu/>, 2014).

A. Theoretical Framework

The theoretical framework for the present study is related to semiotic analysis of the signs transferring from the original text (English) to its Persian translation. The analysis is based on Peirce's triadic sign model.

B. Procedure

The criterion for selecting this book was its classic and specific language which makes it hard to read. Because of its use of ambiguity, it has fascinated readers. It is a symbolic book which contains lots of symbols and signs. Whereas the researcher needed a book which enabled her to choose enough signs for analyzing, she first studied among novels and finally selected *Heart of Darkness* which had the most number of signs and symbols. It is noteworthy that in the present study, the translated book in Persian is Dele Tariki, by Saleh Hosseini (2014) which has been published by Niloufar Publication.

As the subject of the present study is related to the issues such as signs, semiotics, translation, Peirce's sign model, and social semiotic, the researcher performed extensive research on the mentioned fields and acquired the information needed for preparing the study. It is noteworthy that due to the lack of the availability of printed sources in the field of semiotics (especially in Iran), the researcher gained her required data mostly from electronic sources.

In the next step, the signs were extracted from the original book. It is noteworthy that the framework for recognizing these signs was Peircean triadic sign model. After that, the extracted signs were decoded based on Peirce's sign model. The next step was analyzing the signs according to Peirce's triadic model, and identifying their place on Peirce's sign diagram. Then the equivalences which had been used in the process of translating signs in the Persian edition of *Heart of Darkness* were extracted. By comparing the original text (ST) with the translated text (TT), each sign was analyzed and it was discussed on the level of social semiotic.

The next step of the study was data analysis. In this section, it was cleared that which equivalents (interpretants) have been employed by the translator of *Heart of Darkness* in order to translate the signs.

III. DATA ANALYSIS AND RESULTS

As it was mentioned earlier, the study was formed to investigate and analyze the signs which had been conveyed to Persian version of *Heart of Darkness*.

The goal was to find out the role of semiotics in translation studies and analyze the sign transferring from English to Persian. It is noteworthy that in the present study, the signs are clarified according to Peirce's triadic sign model. In order to do that, the researcher extracted the signs specially those which have ideological purposes behind them based on Peirce's sign model. After that, the signs were analyzed according to the model, and their place in the triadic sign was identified. Then the equivalences which had been used in the process of translating signs were analyzed and discussed on the level of semiotics.

To perform the data analysis, based on Peirce's triadic model the following table (table 3.1) was designed. Each sign is analyzed in one separate table. The first column shows the representamen. The second column shows the object of the sign. The third column shows the interpretant of the sign. Finally the translation of the sign is presented in the last column. After filling in the table, the social semiotic analysis of the sign is presented under the table. Following the analysis a figure is drawn which analyzes the sign in Persian translation to find out whether it has the same meaning and effect of the original text or not. It is noteworthy that in this section the sentences from which the signs were extracted from have been mentioned before the tables, the signs have been underlined and the page numbers have been noted at the end of the sentences in the original text. The total of 50 signs has been chosen in the corpus of the study for 5 of which the tables and figures of data analysis have been presented as follow:

A. Sign 1: Idol

1. "Marlow sat cross-legged right aft, leaning against the mizzen-mast. He had sunken cheeks, a yellow complexion, a straight back, an ascetic aspect, and, with his arms dropped, the palms of hands outwards, resembled an idol" (Conrad, 1899, P.3).

2. "Mind," he began again, lifting one arm from the elbow, the palm of the hand outwards, so that, with his legs folded before him, he had the pose of a Buddha preaching in European clothes and without a lotus flower"... (Conrad, 1899, p.8).

3. "Marlow ceased, and sat apart, indistinct and silent, in the pose of a meditating Buddha" (Conrad, 1899, P.162)

TABLE 3.1
SEMIOTIC COMPONENTS OF BUDDHA BASED ON PEIRCE'S MODEL

No.	Representamen	Object	Interpretant	Translation
1	Idol	Marlow	Buddha statue at the moment of his enlightenment	بت
2	Buddha	Marlow	Protection, peace and dispelling of fear	بودا
3	Buddha	Marlow	Mediation	بودا

The “term Buddha (meaning awakened one or the enlightened one) may refer to Siddhārtha Gautama, the Indian spiritual teacher upon whose teachings Buddhism was founded, or to anyone who has attained the same depth and quality of enlightenment” (<http://www.bookdrum.com/>, 1982).

“The positioning of Marlow's hands corresponds to the Abhayamudrā (fearless), a symbolic hand gesture used in Buddhism and Hinduism to represent variously protection, peace, benevolence, and the dispelling of fear. In Gandhāra art, it is seen in representations of preaching” (ibid). The “Abhayamudrā "gesture of fearlessness" is a mudra (gesture) that is the gesture of reassurance and safety, which dispels fear and accords divine protection and bliss in many Indian religion. The right hand is held upright, and the palm is facing outwards” (<https://en.wikipedia.org/>, 2016).

“The lotus flower is one of the Ashtamangala (the Eight Auspicious Symbols) that permeate Buddhist art. Buddhas and bodhisattvas are often pictured sitting on a lotus or holding a lotus. The lotus can have several meanings, often referring to the inherently pure potential of the mind” (<http://www.bookdrum.com/>, 1982).

“Like the Buddha, Marlow looks to find meaning in life through experiences. The Buddha was also concerned with experiences that include multiple levels of consciences in one lifetime. Similarly, Marlow describes his journey at the beginning as happening "multiple lifetimes" ago” (<http://www.gradesaver.com/>, 2012). In addition “the novel's narrator presents Marlow as "a meditating Buddha" because his experiences in the Congo have made him introspective and to a certain degree philosophic and wise. As a young man, Marlow wished to explore the "blank places" on the map because he longed for adventure; his journeys up the Congo” (<https://www.cliffsnotes.com/>, 2000).

As mentioned above the novel “contains three brief passages in which Marlow's physical appearance is likened to that of the Buddha” (Saha, 1992, para.1). On the second quote Marlow is the object which stands for the representamen Buddha. Marlow is sitting with a pose of Buddha and telling his story for the four audiences on the deck. According to Saha (1992), “the technical term for Marlow's gestures is mudra, a Sanskrit word meaning "symbolic gesture." Basham, the noted scholar of Hindu-Buddhist culture, points out those mudras became a highly developed mode of expression in ancient Indian religion, dance, and drama” (ibid, para.12).

“The Buddha is routinely shown seated on a lotus, the traditional mystical symbol of the world that contains the Buddha. The mudra used by Marlow in this passage, however, does relate him to an important aspect of the Buddha. The description of Marlow's gesture is a precise description of one that the Buddha used frequently”; the gesture of assurance for audiences listening to his sermons. The “abhaymudra can only be used by a person whose integrity is established, and Marlow now has "the pose of a Buddha preaching" because, in a sense, his story is going to be a sermon for his audience of four” (ibid, para.13).

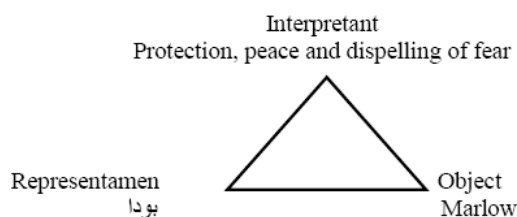


Figure 3.1 the Triadic Model for the Translation of Buddha

According to Fig. 3.1 the Persian representamen and the object are the same as the source text which are the interpretants of the same thing. The English sign (Buddha) and its translation (بودا) into Persian differ only as far as the form is concerned: They are different materializations of the same concepts, different embodiments of a single object that is independent from its expression. Both of them are translations of the same idea.

Buddha and بودا are two representamens standing for the same object, or a source representamen and a target interpretant. But given that the interpretant can be defined as a representamen determined by another representamen; they are two representamens with respect to the object they represent. But considering one relatively to the other, they are in a representamen-to-interpretant relationship.

According to Deledalle-Rhodes (cited in Cosculluela, 2003), the aim of the translator is to produce the same impression in [target text] as that produced by the text in [source text], he must try to find a representamen [in TT] which will set off a semiosis implicating the same kind of interpretants as in [ST], to create an Object [in TT] which will, as far as it is possible, correspond to Object [in ST].

In order to find a target interpretant that has an object equivalent to that of a given source representamen, the translator [...] may proceed essentially in three different ways, depending on the type of relationship to existential reality that he wants to re-create (Cosculluela, 2003). Hence, one of the iconic, indexical, or symbolic translations may be applied.

Since iconic translation covers borrowing procedure of Vinay and Darbelnet’s direct translation strategy, *بودا* is the iconic translation of the sign Buddha which represents the same concept and impression in TT as what it has in ST.

B. Sign 2: Falernian Wine

“No Falernian wine here, no going ashore” (Conrad, 1899, p.8).

TABLE 3.2
SEMIOTIC COMPONENTS OF FALERNIAN WINE BASED ON PEIRCE’S MODEL

No.	Representamen	Object	Interpretant	Translation
2	Falernian wine	Falernian wine	Being rich and belonging to a special class of the society	شراب فالرنوس

“Falernian wine was a famous wine from ancient Rome, distilled from grapes grown on the slopes of Mount Falernus on the border between Latium and Campania. Generally priced beyond the means of those outside the upper echelons of Roman society, it was primarily a drink of centurions, merchants, emperors and aristocrats. Its virtues were frequently extolled by Roman poets and scholars, including Catullus, Pliny, and Petronius. For Horace, in particular, Falernian wine symbolized the best that civilization had to offer” (<http://www.bookdrum.com/>, 1982). This stuff was the most expensive and sought-after wine in Rome for a long time. It was drunk by Rich Roman nobility. This wine was served to like of Julius Caesar.

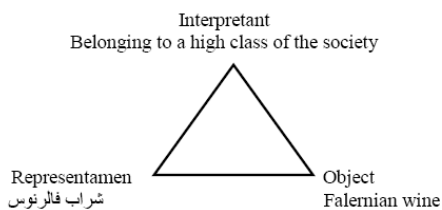


Figure 3.2 the Triadic Model for the Translation of Falernian Wine

As Fig. 3.2 illustrates the Persian representamen and the object for this sign are the same as the source text which is shown in table 3.2. The interpretant for both source text and target text represents being rich and belonging to a high level of the society. As it was mentioned this wine which belongs to ancient Rome was very expensive and not everyone afford to drink it. It was drunk by centurions, merchants, emperors and aristocrats.

The sign has the same semiosis for both source text and the target text. The translator has used borrowing to transfer the sign into Persian. Hence, according to Cosculluela (2003), the iconic translation has been used to translate the source sign to Persian.

C. Sign 3: Jupiter

“Some of the pilgrims behind the stretcher carried his arms— two shot-guns, a heavy rifle, and a light revolver carbine—the thunderbolts of that pitiful Jupiter” (Conrad, 1899, p.124).

TABLE 3.3
SEMIOTIC COMPONENTS OF JUPITER BASED ON PEIRCE’S MODEL

No.	Representamen	Object	Interpretant	Translation
3	Jupiter	Kurtz	being worshipped as a god by the tribe	ژوپيتر

Jupiter, also Jove is the god of sky and thunder and king of god in Ancient Roman religion and mythology. “Jupiter is usually thought to have originated as a sky god. His identifying implement is the thunderbolt and his primary sacred animal is the eagle, which held precedence over other birds in the taking of auspices and became one of the most common symbols of the Roman army. The two emblems were often combined to represent the god in the form of an eagle holding in its claws a thunderbolt, frequently seen on Greek and Roman coins. As the sky-god, he was a divine witness to oaths, the sacred trust on which justice and good government depend” (<https://en.wikipedia.org/>, 2016). Jupiter was the protector of the Roman state and its laws. As Jupiter Victor, he led the Roman army to victory. His attribute was the lightning or thunderbolt. (“Study Field”, 2016)

“Roman worship of Jupiter has had a lasting impact upon the Western world. In English, the adjective "jovial," which comes from Jupiter's alternative name "Jove," is still used today to describe people who are jolly, optimistic, and buoyant in temperament. The expression "by Jove!" once sworn in Roman courts, became a common colloquialism and is still used as an archaism today” (<http://www.newworldencyclopedia.org>, 2016).

According to the novel, Kurtz got the tribe to follow him. As it is shown on the main station where the harlequin is talking about Kurtz to Marlow, he says: They [the native tribe] adored him [...] he came to them with thunder and lightning [...], they had never seen anything like it [...] (p. 116).

Kurtz appointed himself to be a god who rules the jungle. As Marlow read on the Kurtz’s report for the International Society for the Suppression of Savage Customs which began like this: [...] “We whites, from the point of development we had arrived at, must necessarily appear to them [savages] in the nature of supernatural beings - we approach them with the might of a deity” (Conrad, 1899, p. 103).

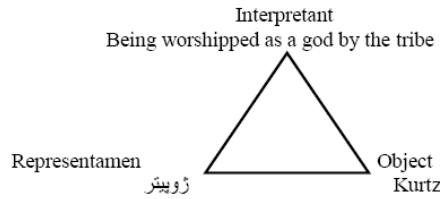


Figure 3.3 the Triadic Model for the Translation of Jupiter

As it is shown in Fig. 3.3 the representamen of the sign in Persian is ژوپيٽر which stands for the same object, Kurtz as the English text. The interpretation for both source text and target text is power and being worshiped by the tribe in the jungle. The ideology behind the sign for both texts is similar; Jupiter is the god of sky and thunder in ancient Rome which Kurtz is simlized to him. The translation of the sign has the same impression to the source text and the translator has chosen a representamen which make the semiosis implicating the same kind of interpretants and object in target text as the ones in the source text. The receiver of the translation interprets the sign by relying on his/her knowledge experience of knowing the ancient god Jupiter.

In order to find a target interpretant that has the object equivalent to source representamen, the translator has used iconic translation which according to Cosculluela’s assertions (2003), covers borrowing procedure. The translator has used borrowing to translate Jupiter into Persian.

D. Sign 4: By Jove

“By Jove! I’ve never seen anything so unreal in my life” (Conrad, 1899, p.44).

TABLE 3.4 SEMIOTIC COMPONENTS OF BY JOVE BASED ON PEIRCE’S MODEL

No.	Representamen	Object	Interpretant	Translation
4	By Jove	God	Expressing surprise or showing emphasis	به پير و پيغمبر

According to online Oxford Dictionary (2016), “by Jove is an exclamation indicating surprise or used for emphasis”. “In eighteenth and nineteenth century England, it was considered a great offense to say "By God". Instead, men would say "B Jove". Jove is an alternative name for the Roman god Jupiter. By saying "By Jove!" they could be saying "By God!" without committing a social offense” (<http://www.urbandictionary.com/>, 2016).

“By Jove” is a minced oath used for emphasis, an exclamation indicating surprise. Jove, or Jupiter, was the supreme deity of the Romans, king of the gods, equivalent to the Greek Zeus. “By Jove” basically means “by God”; it was originally a way to call on a higher power without using “by God,” which was considered blasphemous. A minced oath is a way to avoid referencing the sacred or profane, such as God or Jesus, or calling on the devil. It’s an age-old way to dance around what was considered blasphemous -that is, using the Lord’s name as a profanity, or naming the devil - or to side- step outright swearing with euphemisms, especially when startled or annoyed. (“Study Field”, 2016)

“By Jove” (or “by Jupiter”) was not a euphemism when it first showed up in English; it originally referred directly to the Roman deity. In Elizabethan times, the exclamation “by Jove” was being used both as a mild oath and as a reference to the Roman god (ibid).

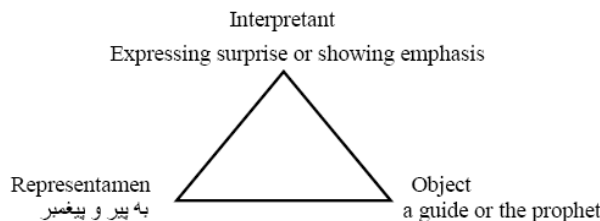


Figure 3.4 the Triadic Model for the Translation of by Jove

As it is shown in Fig. 3.4 the representamen of the Persian translation is به پير و پيغمبر which stands for a guide or the prophet. The English representamen (by Jove) and the Persian representamen in the translation (به پير و پيغمبر) differ from each other. Hence the object which they stand for is different, too. The object in translation is a guide or the

prophet. The word پیر in mysticism is the representative of the Islam prophet's inner prophecy who guides the others. The word پیغمبر refers to the prophet Muhammad. The Persian phrase به پیر و پیغمبر is an oath used to show the emphasis on veracity of something which the speaker is expressing.

Despite the differences in the representamen and the object in the source text and the translation, the translator has produced the same impression by choosing a representamen which has the same interpretant as the source text. The translator has applied modulation to translate the sign into Persian which according to Cosculluela (2003), is covered by indexical translation.

E. Sign 5: Whited Sepulchre

"In a very few hours I arrived in a city that always make me think of a whited sepulchre" (Conrad, 1899, p.15).

TABLE 3.5
SEMIOTIC COMPONENTS OF WHITED SEPULCHRE BASED ON PEIRCE'S MODEL

No.	Representamen	Object	Interpretant	Translation
5	Whited Sepulchre	Brussels	something beautiful on the outside but containing horrors within (the bodies of the dead)	قبر سفید شده

Although never actually named, Conrad's sepulchral city is clearly Brussels, the capital of Belgium; it is believed that "the whited sepulchre is probably Brussels, where the Company's headquarter is located. A sepulchre implies death and confinement, and indeed Europe is the origin of the colonial enterprises that bring death to white men and to their colonial subjects; it is also governed by a set of reified social principles that both enable cruelty, dehumanization, and evil and prohibit change. The phrase "whited sepulchre" comes from the biblical Book of Matthew. In the passage, Matthew describes "whited sepulchre" as something beautiful on the outside but containing horrors within (the bodies of the dead); thus, the image is appropriate for Brussels, given the hypocritical Belgian rhetoric about imperialism's civilizing mission. (Belgian colonies, particularly the Congo, were notorious for the violence perpetuated against the natives)" (<http://www.sparknotes.com/>, 2016).

"The Congo Free State was administered directly from King Leopold II's Royal Palace or from the Brussels offices of subsidiary companies" (<http://www.bookdrum.com/>, 1982). Marlow's interview at the Company's headquarters mirrors Conrad's own experience. He was interviewed by the managing director main offices in the city's Brederodestraat ("Study Field", 2013).

Hosseini (2014) discussed that as whited sepulchre comes from the simile applied by Jesus to hypocrites as exemplified by some scribes and Pharisees which are beautiful on the outside but the inside is full of dead people's bones. Hence, bone is the leitmotif which is presented in all over the story in different ways, like ivory, teeth, and skull (p. 24).

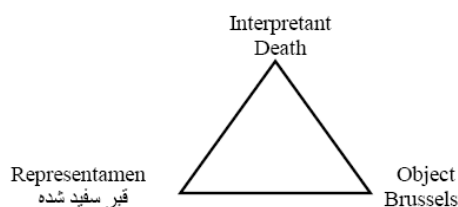


Figure 3.5 the Triadic Model for Translation of Whited Sepulchre

The Persian representamen is the translation of the English representamen, whited sepulchre. Since the source phrase representamen comes from the Bible, the native readers likely know that and it makes sense for them. They realize that the whited sepulture refers to something which is beautiful on the outside but containing horrors within (the bodies of the dead), so Brussels is a city which apparently is beautiful but its nature is dark and navigates Marlow to darkness. Due to the difference between the source and the target receiver's religion, the Persian representamen cannot have the same interpretant as the source text. Although the translator has prepared its analysis on the passages which he has added to the beginning of the book under the name 'instead of preface' (p.24). The object of the sign in both ST and TT is Brussels which no one can find it out without reading the criticisms on the book. The interpretant of the sign in Persian is death which Fig. 3.5 illustrates it. Hence the interpretant in source text differs from the Persian interpretant, so the sign does not have the same impression in Persian as what it has in English.

The translator has used literal translation for translating the sign which is an iconic translation based on Cosculluela (2003).

IV. CONCLUSION

With regards to the tables of data analysis, and the figures the researcher tends to present the results obtained in this study. It should be reminded that the researcher has chosen the total of 50 signs in the corpus of the study.

Due to the differences in culture and language of ST and TT a few of the signs (out of the 50 chosen ones) in the Persian translation do not convey the same interpretants to the source one and some other need extra information to

create the correct interpretants for the reader, however 37 signs convey the same interpretants as the source signs do. Some signs such as harlequin, Inferno, the sketch in oils, sacred fire, Jack ashore and the phrase 'Mistah Kurtz- he dead', totally 6 signs, do not have the same interpretants as what they have in the source text. The signs which need the reader's background and knowledge to have the same interpretants are 7 signs which include: Buddha, Falernian wine, Jupiter, whited sepulchre, Mephistopheles, the two women, and the phrase 'end of the world'.

Since the reader may not have any knowledge and background of these signs, she/he will have wrong interpretants of them. Hence, the researcher thinks the needed information should be applied by the translator in the footnote or somewhere else just like what the translator of the novel did. He has provided some information at the beginning of the book which helps the readers have the correct interpretants of the signs.

Cosculluela (2003) declared that in order to find a target interpretant that has an object equivalent to that of a given source representamen, the translator i.e. the interpreter may proceed essentially in three different ways, depending on the type of relationship to existential reality that he wants to recreate. He pointed out one may opt for an iconic, indexical, or symbolic translation.

Determining the role of semiotics in translation and the possibility of transferring signs from ST to TT with the same impression as what they have in the source text were the fundamental issues in the process of conducting the present study. The research conducted in a qualitative manner which provides a thick description of the matter. The result of the research provides the detail information about semiotics and translation. "Peirce extended the scope of semiotics beyond the linguistics signs used in communication between humans. According to Peirce, semiotics involved the systematic study of signs, sign systems or structures and sign functions" (Mehawesh, 2014, p.88).

Besides choosing the main framework, selecting the corpus of the study was also of great importance. In this regard, the researcher chose one of the most famous classic novels in the world which contains many signs; then the researcher attempted to take a detailed analysis based on Peirce's model to find out whether translated signs have the same impression and meaning as what they have in the source text or not.

The meaning of a sign is not contained within it, but arises in its interpretation; thereupon semiotics, respectively Peirce's model, has a significant role in translation which should be paid attention by translators.

Based on the findings of the current study it is impossible to transfer all the signs from ST to TT with the same effect and meaning, since the different interpretants which some signs have in the target text due to the differences in cultures and languages. As Eco explained (cited in Gambier, Shlesinger, & Stolze, 2004) "translation can never 'say the same thing'" (p.16).

"A translation-sign can never be a full representation of the original-object; there must always be a residue left for the next sign to use. Therefore, finding a target sign equivalent to the source cannot even be an ideal goal for translators. After studying and interpreting the source sign in view of its translation, one needs to decide from which viewpoint the target sign will represent it" (ibid, p. 21).

Some signs have ideologies behind them in the source culture which do not allow the same interpretants in the target text and indicates that signs do not merely exist in the text, and could be beyond the its content; in order to have a close impression to ST the translator should be aware of the ideology behind the signs to be able to create a translation with almost similar impression.

According to Steconi, (Gambier, Shlesinger, & Stolze, 2004) "translators need to look beyond words to carry out their tasks and make sense of what they're doing" and as Chandler (2002) pointed out "Peirce's emphasis on sense-making involves a rejection of the equation of 'content' and meaning; the meaning of a sign is not contained within it, but arises in its interpretation" (p.32). Thereupon the answer for the fourth and last question of the study is that signs exist both in the text and beyond the text.

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Teachers' Intervention in Developing English Majors' Critical Thinking When Teaching Writing in Chinese Universities

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Abstract—Developing English major students' critical thinking is very important to the development of students' overall competence. Compared with other language skills, writing asks for more critical thinking skills, and in turn writing is a proper media for teachers to develop student's critical thinking skills. From English major students' writing pieces, we can tell that most of the writing problems are related with the deficiency of critical thinking skills. Therefore, in different stages of writing teaching, teachers should intervene in students' learning and practicing by proper and purposeful directing and instructing so as to impel students to think critically and to write critically. And gradually students' critical thinking skills of interpretation, analysis, explanation, inference, evaluation and self-calibration will get improved.

Index Terms—teachers' intervention, English majors, critical thinking, writing teaching

I. INTRODUCTION

Developing students' critical thinking is an important educational goal at different levels of schooling, and writing, in particular, is an approach to develop one's critical thinking, because writing task itself is a process of planning, organizing, and expressing the writer's thinking. In English-speaking countries and in Europe, enlightened by Dewey's educational views (1909), the concept of critical thinking was introduced and defined by American scholar Robert Ennis in 1960's, and it soon became the core element of American education and spread to the other countries. However, in China, the idea of critical thinking did not catch the eyesight of the educators and teachers until the end of the 20th century, and the research on it and practice of it in teaching started its way in 21st century.

Though the study on critical thinking didn't last long in China, Chinese scholars have brought out fruitful achievements. For instance, Zhong (2002) discusses the concept of critical thinking and its application in teaching; Wen & Zhou (2006) study the cultivation and development of students' critical thinking in Chinese context; and Wu, Chen and Zhao (2014) explore the teaching modes in developing students' critical thinking. Their studies, however, are mostly general introductions to or discussions on critical thinking, and do not relate closely with specific English teaching. In recent years, some other scholars and teachers have done some studies on developing students' critical thinking in teaching English reading, speaking, or writing, but the number of the study is few. As for developing student's critical thinking in teaching writing, several pieces of research are available. Han and Yi (2009), for example, analyze the problems of critical thinking development and put forward the strategies applicable in university writing course. Wang (2015), then, analyzes the writing problems of students and discusses how teachers can use critical thinking skills to improve students' English writing. Guo and Song (2012) make a comparative study on the level of students' critical thinking showed in writing by questionnaire and compositions, and Yang (2014) makes a survey among non-English-major graduates and discusses how students' critical thinking influences their writing competence. Obviously, these studies are significant for the study on the relationship between writing and critical thinking, but none of them notice the roles of teachers in developing students' critical thinking when teaching writing. Therefore, this paper will take teachers as the key element in developing students' critical thinking in teaching writing and discuss how their intervention in writing process can help students develop such core critical thinking skills as interpretation, analysis, explanation, inference, evaluation, and self-calibration.

II. DEFICIENCY OF ENGLISH MAJORS' CRITICAL THINKING DISPLAYED IN THEIR WRITING

Traditionally, critical thinking is defined as "the process of actively and skillfully conceptualizing, applying, analyzing, synthesizing, and evaluating information to reach an answer or conclusion." (Critical – Define Critical at Dictionary. com) In language teaching, according to Richards and Schmidt (2003), critical thinking is "to encourage students more actively with materials in target language, encourage a deeper processing of it, and show respect for students as independent thinkers" (p.135). The definitions seem to tell that critical thinking is mainly related with reading comprehension, and in Chinese schools, the practice of developing students' critical thinking also started mostly in teaching reading, and teachers usually don't think much of critical thinking in writing course. However, considering the nature of writing, we should say writing should be the course that asks for more critical skills like conceptualizing,

applying, analyzing, synthesizing, and evaluating information.

Since teachers don't have much sense of critical thinking in teaching writing, their focus is usually on the structure of composition and grammatical correctness. With no proper instruction or training of critical thinking skills in teaching process, students' critical thinking competence is insufficient. Guo and Song's research (2014) shows that among the six core critical thinking skills: interpretation, analysis, explanation, inference, evaluation, and self-calibration, even in their fourth year of university, English majors are still under achieved in inference, evaluation and self-calibration. I teach freshmen's writing in my college, and from students' writing tasks, I found most of students can not use these critical thinking skills in their writing to a certain degree and demonstrate various problems in writing as follows:

(1) Without good interpretation, many students can't clarify a concept in writing, and write some round-about sentences like "There are many things happening in my life." or "However, we all know that the transgenic crops change the genes."

(2) Without analytical skill, still many students can't grasp the key words in the topic or thesis completely, and then they don't know how to use proper evidence to support the topic or thesis. So their writing often sounds empty in content and is not convincing. This is a paragraph from a student's writing titled *Are Transgenic Crops Safe?*—"Transgenic skill can increase food nutrition and quality and add categories of food. But transgenic skill is not entirely good, for it violates the nature. There are many uncertain factors that would add a lot of potential threats to food, or cause biologically pollution."

(3) Not good at explaining, students can not use proper examples to illustrate the topic, and can not develop their ideas logically, and then the unity of writing might lose from time to time. The above example paragraph also demonstrates the problem caused by lacking of explanation skill. The logic of the paragraph is confusing, and there is not a clean topic for the paragraph.

(4) Not sharp for evaluating, students can not assess the credibility of the views, and then they may use the others' views casually without questioning. The result is that their writing does not sound very convincing. In a writing titled "Should Live-streaming be Banned", a student gives such a paragraph: "If we use live-streaming effectively, we will obtain more. A professor said, 'Live-streaming is well accepted by the society. People are busy and under pressure. They need something to make them feel warm.'" This unknown "professor" is hard to persuade readers to take the idea.

(5) Lacking inference skill, students sometimes can not bring their writing to a proper conclusion naturally. They either say something unrelated at the end or start a new topic. For example, one student ends her writing titled "Is it Wise to Make Friends Online?" this way: "Ways of making friends have been greatly transformed by new technologies, which not only provide us great freedom but also create pitfalls that we shall watch out for. We should have a correct attitude to make friends online."

(6) As for self-calibration skill, without proper training in the process of writing, students usually can not assess their writing properly. For example, they don't know clearly whether their own writing or their partner's writing is good or bad. Even if they have a rough impression on the quality of the writing, they can't tell how and why. Or they don't know in what aspects the writing could be improved.

These problems show that English-major students can not think critically in English when they begin to learn this language systematically. As the matter of fact, they have not developed the critical thinking skills yet. Even when they read or write in Chinese, their mother tongue, they still can not do enough critical thinking. Therefore, developing students' critical thinking skills in English teaching will help improve their thinking competence fundamentally.

III. TEACHERS' INTERVENTION IN DEVELOPING STUDENTS' CRITICAL THINKING IN DIFFERENT STAGES OF WRITING

Learning English in Chinese context, as a general phenomenon, students rely much on teachers' instruction and guiding, for there are not rich English resources like native English teachers, textbooks with authentic materials, and target culture. Therefore, in developing students' critical thinking in writing, teachers play important roles in different stages of teaching. William and Burden (2000) explain four functions of teachers' intervention in language teaching: developing students' independent learning ability, helping students obtain and process learning materials effectively, interacting with students, and directing students to understand and give feedback to teachers' purpose of intervening. The aims of teachers' intervention mentioned here are consistent with the core spirit of critical thinking, and therefore in different teaching stages, teachers' active and purposeful intervention will help students to form critical thinking and write originally and critically.

A. *In Pre-writing Stage*

Pre-writing activities include presentation of writing knowledge and generating ideas, and these activities also provide with good timing for teachers to intervene in and to develop students' critical thinking.

In presenting writing theories or knowledge, teachers usually use some reading passages or paragraphs as samples for students to learn. Keeping the sense of intervention in mind, teachers can not only ask students to observe the structure of a passage and the use of words and sentences in it, but more importantly, teachers should direct students to analyze and evaluate the ideas expressed, the ways of argumentation, and language expressions by asking Wh-questions like "Are the ideas in the passage meaningful? Why?", "Is there any evidence? What is it? Is it relevant and workable?", "Is the arguing logical? Why or why not?", and "Do the words and sentences express the ideas clearly? And how?" Posing

Wh-questions like these, organizing students to discuss the questions and asking them to give specific answers are means of intervening by teachers to push students to think critically. Moreover, teachers can further ask students to compare different samples, to find out the differences among the ways of organization, argumentation, expressing, and to assess the strong points and weak ones in these pieces of writing. These activities will help students to touch the essence of critical thinking and to learn that reflecting and questioning are two important elements of critical thinking.

After a full observation to the samples and a full discussion of those questions, now it is time for teachers to choose a proper topic for students to practice the relevant type of writing. As a chance to cultivate students' critical thinking again, the topic the teacher chose should be interesting and thought-provoking, which enables students to think, to argue, and to look for evidence to support. However, if teachers only present a topic and then ask students to write without helping them to generate ideas, the frequent situation is that students have no idea of what to write. For example, when teaching how to write a piece of exposition with the way of comparison and contrast, I presented my students with the topic of "Young People Born in 1980's and 1990's". When reading the title firstly, students were very happy, because they are the ones who were born in 1990's. But when I asked them in what aspects they would make the comparison or contrast, most of them were at a loss. Thus understanding a writing topic and helping students to generate ideas are activities for teachers to use to intervene so as to improve students' awareness of critical thinking.

For generating ideas relevant to the given topic, teachers can introduce "brainstorming" to students. "Brainstorming" can be done collectively as a class work or a group work, in which way students can generate various ideas related to the topic. As to the above topic, the teacher can use class work and ask each individual student to give a word or a word phrase he/she thinks related with the topic. In order to make students think actively, the teacher must make clear to them that there is no "good" or "bad" ideas in brainstorming and that any idea is acceptable. Then the teacher writes the list of words on the blackboard. Usually students will give nouns or adjectives like "personality", "finance state", "job", "marriage", "relationship with parents", "values", "characteristics", "selfish", "generous", "independent", etc. Obviously, some are general words, and some are specific ones. In such a case, the teacher could guide students to do another brainstorming to those general words such as "job" or "values". And this time students will be more clear what jobs those young people born in different ages would prefer to. However, the more significant purpose of this activity is that teachers usually don't stop at those ideas generated by students, but further ask students to sort out the ideas according to the types of information or writing purpose and put them into a useful order. Surely, after a few brainstorming done collectively in class, teachers can require students to do brainstorming individually when they do writing assignments after class. Besides, teachers can also introduce the other similar ways for generating ideas like list-making, role-playing on paper, Wh-questions, etc. Teachers' intervention like this is likely to impel students to compare, to analyze, to evaluate, to negate, or to assert, in which process students develop their critical thinking gradually.

B. In While-writing Stage

Activities in while-writing stage include outlining, drafting, and revising. One of the effective ways of intervention in this stage is to organize students to interact with one another, during which process students have to listen patiently to their partners, trying to make sense of what they have heard. Moreover, they have to evaluate their partners' work, telling them their opinions; and they have to use facts and clear expressions to convince their partners.

The first task for students to perform in outlining is to write a good thesis. Most students at the beginning of learning to write don't know what a good thesis sounds like and what relationship holds between the thesis and the content in the outline. For example, some students might mention the importance of the topic instead of presenting the key points, like "It is important to know the differences between the young people born in 1980's and in 1990's." Or they may simply write "Young people born in 1980's and in 1990's are different." So for several times when students begin to learn to write outlines, the practice should be done in class and teachers should keep asking students to exchange their outlines and see if they have listed the key points or not by asking each other the question "In what aspects are you going to make the exposition?" Teachers' intervening like this will help students form the habit of thinking specifically. The progress of students is usually very evident, and after several rewriting some could write the thesis like "Young people born in 1980's and in 1990's bear some similarities, but they are different in their relationship with their parents, choice of jobs, attitudes to marriage, and values." With such a thesis, students can easily outline the main content of the writing.

When drafting, students will face the problems of illogic organization and Chinese ways of thinking in presenting ideas. Again, teachers can not assign all writing work as homework. For an effective intervention, teachers should take a few class times to do the drafting, in which process students can finish their first drafts, read one another's work, evaluate their partners' work and tell their opinions on drafts. Surely, teachers should demonstrate the questions that students will ask each other. The questions should include inquiries and evaluation on the use of words, formation of sentences, overall structure, development of paragraphs, arrangement of the details, etc. The following passage is an example from a student who just started to learn to write a descriptive writing:

Mr. Zhao

Mr. Zhao is a special man. His teaching method is different from teachers in our department.

For example, he teaches us extensive reading. Other teachers tell us needn't pre-reading, and some words, if you don't know its meaning you can jump it, or guess it. But Mr. Zhao demands us pre-reading, he is a careful man, for

example, he always teaches grammars sentence by sentence.

He always says he is a good teacher, is a professor, and his method very well, and we know that, and we know can get many knowledge from him. We believe him that is a good teacher.

In a word, he is a different teacher.

It is easily seen that there are many problems in punctuation, wording, sentence structures, paragraph organization, and content in the draft. If the students working in pairs follow the teacher's demonstration of questions and evaluation to read and make some inquiries, they both will realize the existence of the problems and make some improvements in writing. In fact, after this pair work, the writer made a great progress in writing. For example, she added a topic sentence to the second paragraph like "Mr. Zhao is different in his teaching methods." At least now she knew that she should use a topic sentence to start a new paragraph instead of using "for example" at the beginning of a paragraph. Moreover, she revised the third paragraph in tone, and also wrote a topic sentence for it and supported with some simple examples. More importantly, in such a reading and sharing, both students will deepen and broaden their thinking span and improve critical thinking skills of analysis, explanation, inference, and self-calibration.

And in revising, the serious problems are that students can not find the mistakes and inappropriateness in their writing. Then in these situations, for a few times at least, teachers should intervene in the classroom teaching by asking students to read one another's outline and their drafts in groups and to do some discussion. The discussion itself is a process of argumentation, in which process students learn to express themselves and persuade the others with facts. Similarly, teachers' intervention should also be done by presenting students some questions related diction, sentences, organization, and content. Teachers remind first of students that revising does not mean a simple correction of mistakes in grammar, spelling, punctuation and other mechanics, but they should focus more on organization and content. So the questions should include the ones like "What is the topic of the writing?", "What is the thesis? Is it supported by sufficient facts like examples, details, etc.?", "Does each paragraph have an idea? How is it expressed?", "In what order are all paragraphs arranged?", etc. In the whole discussion and exchanging, the writer will learn how to explain his/her thinking and writing, and the other members in the group will learn how to express their opinions in facts. They will all learn in these activities that facts speak louder.

C. *In Post-writing Stage*

The main task in post-writing stage is to evaluate students' writing. Usually, three ways are adopted: teacher criticism, peer criticism and self revision. All these ways are useful in developing students' critical thinking.

In using teacher criticism, I find the best way of intervening is not to correct students writing word by word, but use some correcting symbols like underlining, inserting, labeling, abbreviating and so on to mark the wrong or improper places, and then ask students to explain the meaning of the symbols and do their own correction. In this way students have to reflect, analyze, explain, and correct.

Taking the method of peer criticism, both students could get improvement in writing skill and in critical thinking skills, because both of them have to learn how to express their own ideas clearly, how to make the other accept his/her opinions and suggestions, and how to make a complete and valuable assessment to a piece of writing. The job itself is a critical thinking skill. The teachers' intervention in this activity is to demonstrate the steps and the assessing questions, and observe students' interaction keenly so as to give a hand any time when needed. The steps include finding a partner and exchanging compositions; reading first time for understanding; reading second time to underline any words, phrases, and sentences that don't seem correct or that are difficult to understand; reading third time for contents and write down the questions on the Comments Sheet; and write at least three suggestions to the writer for improving the composition. This process is very useful in developing students' skills of evaluation and inference. As to the questions that students use to assess the compositions, Wh-questions again are best ones to impel students to think critically. For example, teachers should direct students to assess the content, the organization, sentences and words by asking Wh-questions like "What is the thesis of the composition? Is it clear?", "Is there a topic sentence for each paragraph? What is it?", "What facts are used to support the topic? How are they organized?", etc.

Self revision is an effective and convenient way for students to develop their critical thinking skills. After finishing each composition, students should check their work by asking themselves questions on content, organization, structure and expression, and then do some correction. A good habit of self revision will help students to think critically and improve all critical thinking skills, particularly the skills of evaluation and self-calibration. The teachers' intervention at this stage is to provide students with some self-checking questions and occasionally requires students to hand in both the first draft and the final copy.

IV. CONCLUSION

In Chinese context, it is easy to tell that university English-major students are poor in critical thinking, because it is not well trained and cultivated in their educational progress. However, it is also well known that critical thinking is very important for students to improve their overall competence and their innovation. Writing is a cognitive and thinking process which involves expressing one's idea, structuring, organizing, composing, and revising. And in writing process, writers need to argue with evidence, to convince in facts, to make inference, and to organize logically. All these abilities are parts of critical thinking competence. Therefore, comparing with other skills of English language, writing is more

effective in developing students' critical thinking owing to the essence of writing itself as a complex process of critical thinking. Therefore, in the process of teaching writing, teachers' proper intervention with directing, questioning and organizing tasks in different stages of teaching will impel students to think critically. Proper intervention in teaching university English writing not only improves students' writing skill, but also helps develop their critical thinking skills such as interpretation, analysis, explanation, inference, evaluation and self-calibration.

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On Strategies of Non-equivalence in English-Chinese Translation

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Abstract—With the more and more deeper research in translation, non-equivalence has always been an important factor to influence the quality of passage. This paper will combine the existing translation theories to analyze the reasons causing the non-equivalence from the Chinese-English cultural levels. Then it lists five points of translation strategies with examples. At the end of thesis, the conclusion is drawn that there are absolute non-equivalence and relative equivalence. Only master the language styles and cultural background between English and Chinese and decline cultural differences, the translation will be done perfectly.

Index Terms—non-equivalence, translation strategies, culture, language

I. INTRODUCTION

Translation, as everyone knows, is a rather complicated course. Ever since people got into engaging in translation practice, the study on translation has been developed all along. As the research moves along, all sorts of contradiction appears. But in recent years, the controversy began to focus on the non-equivalence of translation. The essence of translation requires that there are equivalences between the target text and the source text. Therefore, equivalence and non-equivalence, as the two important factors for translation quality, become the meaningful topic to be discussed in this thesis.

A. *The Definition of Non-equivalence*

As is well-known, equivalence is the most important and useful translation standard in Chinese-English translation. But as a matter of fact, there always exists a large amount of non-equivalence phenomena. So what is non-equivalence and in what ways these non-equivalences display.

In Chinese-English translation, equivalence is a merely relative concept based on non-equivalence, there is no absolute equivalence and we cannot achieve the complete equivalence. Non-equivalence can mean that the target language has no direct equivalent for a word or a phrase that occurs in the source text (Baker, 1993)

As a means to communicate, language is a rather intricate system with all its elements intermingled. Because of different culture background, linguistic habit and ideology in English and Chinese nations, there is no absolute equivalence. (Lian, 2006).

B. *The Influence of Non-equivalence*

In English-Chinese translation, relative untranslatability may be caused by non-equivalence and how to translate perfectly and natively, is a big challenge to translators. For example, the idiom translation, some superficial content can be translated, but deep connotation cannot. Neither Chinese nor English, there are some part of idioms origin from their own language or allusion, which encompass specific, personal and geographic names. If we translate it in word-for-word, the reader can not catch on; if there are too many explanations for easily comprehending, the translation will be lack of conciseness. For instance, 东施效颦, the general translation is blind imitation with ludicrous affection, it is well-known that Dongshi is the name of Chinese ancient ugly, this kind of translation cannot convey the meaning of the source text. For this reason, translator should more focus on culture difference and acknowledge it.

II. THE CULTURE FACTOR CAUSING THE NON-EQUIVALENCE

The cultural factor is more important than the linguistic differences in translation. Culture is a big problem for foreign language learners on account of different cultural settings (Baker, 1993). Take the foreign joke for example; it is tough for us to get the laughing point, even though we understand its meaning, we still cannot appreciate it because of short of the same cultural setting. The non-equivalence in culture aspect displays in different historic culture, regional culture, custom and ways of thinking.

A. *Difference in Historic Culture*

Dragon is a kind of totem imagine in Chinese history. In the legends, it combined snake, bird, horse, deer, fish and eagle into one, which could govern rainfall as a miraculous animal. In the eyes of Chinese, the dragon is a symbol of good luck and be proud as 'descendants of the dragon'. Its valor and perseverance have been highly valued by Chinese nation. But in western countries, dragon is the symbol of wickedness and evil spirit with wings and scale. And it is

regarded as fierce monster, which need to perish. In the Bible, Satan, the evil, against God, was called the great dragon. In modern English, dragon is a derogatory term. If a woman is referred to as dragon, it means that she is fierce and disgusting.

B. *Difference in Regional Culture*

China and English countries belong to various civilization systems with different natural environment. Specific geographic position cultivate distinct cultures, thus make people hold different concepts to the same phenomenon (Liu.2012). Britain is maritime state with high development of navigation, while China settles in Asian continent relied on land. Hence 'water' is often used in English, nevertheless "山" is prior to employ.e.g. spend like water 挥霍无度, To be in hot water 陷入困境, As weak as water 身体虚弱, 意志薄弱, Draw water to one's own mill 谋取私利, 他山之石, 可以攻玉 stone carved can be tuned into jade, 东山再起 rise from the ashes. (Zhong, 2012)

In addition, specific environment breed particular living beings. A case study of '雨后春笋', Chinese is accustomed to translation to 'to spring up like bamboos', but English prefer the translation 'to spring up like mushrooms'. That is because there is lack of optimum environment for bamboos in Britain. And china is in continent, which has continental climate, so 'hot', 'tropical', 'heat' to describe the summer. However, Britain is located in northern Europe, which has a mild sea climate. So summer is related to 'kind', 'beautiful', 'soft'.

C. *Difference in Custom*

Both English and Chinese nations keep a dog, whereas they hold different attitudes to dog. In English nation, their aim to keep a dog is not only to look after the house, but to company. Even it can be the child for who have none. The dog has quite a number of privilege and preferential treatment. Therefore, it is easy to understand why there are a large amount of commendatory phrases and sentences with 'dog', such as 'love me, love my dog' 爱屋及乌; 'a lucky dog' 幸运的家伙; 'help a lame dog over a stile' 雪中送炭, and so on. Chinese people seem to more focus on dog's slavery than the westerners. The main purpose is to keep the door. So comparing to the dog in English nation, the dog in china holds a lower position. In many cases, in the eyes of Chinese, the dog is nasty. And the words relate to 'dog' hold derogatory sense. For instance, 狗仗人势; 狗腿子; 狗嘴里吐不出象牙.

D. *Difference in Ways of Thinking*

Ways of thinking are influenced by culture. The Chinese thinking is rather inclined to concrete, subject, straightforward thinking than abstract, object, reverse thinking of westerner's, which cause the non-equivalence between the source language and the target language (Zhou, 2005). Here, various attitude toward color and number, are listed to declare.

The words of color are one of the important parts of words in language. And, referring to specific color, it also carries cultural connotation. Hence, there is non-equivalence between the target language and the source language to comprehend with difficulty. In traditional Chinese culture, black is solemn color with the symbol of justice and integrity. Such as 'black face; Bao qingtian', the facial makeup of 'zhang fei' and 'li kui' in Beijing opera. However, in Bible, black is embodiment of evil. Such as 'black Friday'. Red is kind of propitious color in china, newlyweds will wear red clothes when holding wedding, and children will get a red packet. However, in western countries, red is viewed as unlucky and bloody.

Another color having distinct difference is 'white'. In western, white represents purity, niceness and happiness. In wedding day, new couples will wear white wedding dress in white scene. But white symbolizes at opposite poles in china, white color associates with death.

In the eyes of westerners, number 7 is a lucky number which equal to number 8 in china. In western, many brands named with 7, such as '7-up' 七喜. While in china, number 7 is usual number with no special meaning.

In western, number 13 is regarded as ominous number and synonymous with betray since Jesus was betrayed by his thirteenth adherent Judas for 30 dollars. And there are 13 people participating in the Last Supper; even the date of that day was 13. But, in china, number 13 do not have such a meaning. Chinese view number 6 as the most auspicious number. In ancient, there were '六经' '六艺' '六亲' '身怀六甲', and so on. Nonetheless, 'six' is an unpopular number. People were created in sixth days with lots of shortcomings which needed stay with god to wash away the sins. Take the following idioms for example, six of one and half a dozen of the other (半斤八两), hit/knock sb for six (给人以毁灭性的打击).

III. STRATEGIES ABOUT NON-EQUIVALENCE IN ENGLISH-CHINESE TRANSLATION

Translation is a rough and tremendous task for translators. Translation is not word to word or phrase to phrase. As a form of communication, translation is as a matter of fact a cultural and linguistic fusion. (Zhong, 2012) An excellent translator need to be familiar with the source language and the target language, because lack of the knowledge of cultural background (Peter. 2001), it is fairly difficult. Here the author just lists five primary strategies and try to achieve the maximum equivalence. The following will introduce these five strategies one after another.

A. Conversion

Conversion has been the favored means of translating. When we are in the learning of English, teachers implant constantly the concept of ‘part of speech’, so part of speech like noun, verb, preposition, conjunction, pronoun, adjective, and adverb and so on, are fixed in our mind and make out with ease (Liu, 2012). What was supposed to be favorable, it may be obstacle for translator. For as much as the concept of ‘part of speech’ is based on the surface structures of individual languages, while Chinese and English have big differences. In English, a concept expressed by noun or by verb in Chinese; a adverb in Chinese translated into English may convert to adjective. This kind of example can be found everywhere.

1) Noun to verb/verb to noun

In English, a noun derived from verb or having behavioral meanings can be translated into corresponding verb in Chinese, vice versa.

(1) The improbably smile was a big encouragement for the man.

(她竟然会笑, 对这个男人来说是极大的鼓励。)(Noun to verb)

(2) Qinghai is the ideal place for traveling, because there is no shortage of sea.

(青海是旅游的理想之处, 因为那里根本不缺乏海。)(verb to noun)

(3) The camel is characterized by the ability to go for long periods without water.

骆驼的特点是能够长期行走而不用喝水。(verb to noun)

(4) He impressed me as a man of great ability. 他给我的印象是他相当有能力

2) Proposition to verb/verb to proposition

There are large amount of proposition in English, it enriches the English expressions. While in Chinese verb is more used than proposition. They can also convert each other.

(1) He does not like to be interrupted when he is about an important piece of work. (他在做一件重要工作时, 从不喜欢有人打扰。)(Proposition to verb)

(2) Though plane tickets are expensive, there are still thousands upon thousands of people who travel by air. (尽管机票昂贵, 但还是有成千上万的人们乘坐飞机旅行。)(Proposition to verb)

3) Adjective to adverb/adverb to adjective

In English-Chinese translation, if a noun in English converts into adjective or verb in Chinese, then adjective in the source text, which describes noun, will correspondingly translate into adverb in Chinese. For example:

The detective is making a comprehensive investigation of this case. (侦探在全面地调查这件案子。)(Adjective to adverb)

The judge require companies to treat all employees reasonably equally. (法官要求公司所有雇员既合理又平等的待遇。)(adverb to adjective)

4) Noun to adjective

It is a great importance mastering two or more foreign languages nowadays. (当今掌握两门或更多的外语是很重要的。)

To the disappointment of the spectator, the match has to be abandoned. (使观众失望的是, 这次比赛不得不取消。)

He is a great success in his career, but a total failure as a father. (他在事业上很出色, 但是一个不完全称职的父亲。)

B. Negation

Negation can also be called ‘the positive expression with negative translation’ or ‘the negative expression with positive translation’. Its basic conception is that the source text is written in one point, yet the translation from opposite one.

(1) Lily was Stephen’s stepmother, and had been not one of the families anytime these 34 years. (丽莉是斯蒂芬的继母。34年来, 这家子一直把他当外人。)

(2) With Mark’s notorious score in mind, I expected to see a much worse score this time. (由于对迈克的差透的成绩有所耳闻, 所以看到这次成绩还过得去, 真出乎我的意料。)(Zhong, 2012. P. 46)

(3) I hear everything. (什么都瞒不过我。)

C. Amplification

In English-Chinese translation, sometimes translators have to slightly add some words to make the translation more vivid. In fact, this kind of method has a golden rule: add words but not add meanings, delete words but not delete meanings.

Amplification, also called addition, which means adding some certain words to explain the sentence that is easily understand for source readers but not for target readers (Peter, 2001). Since English and Chinese are two part of language areas and each has their own historical and cultural background, many ideas and idiomatic expressions which are tacit for the original people, but may be difficult to understand for people abroad. Therefore, for easily understand for the target readers, the translator should amplify the source text a little.

(1) There are a crowd of all sorts, some passant holding umbrella, some talking happily in the teahouse, which constitute a vivid life picture.

译文：看着人群，有打着伞穿梭的路人，有在茶馆谈笑风生的好朋友们，形形色色，构成了一幅生活百态图。

This sentence, we can say it was the masterpiece of amplification. In fact, the adding meaning in the target language, which we can find in the source language, however, it is just not obvious. ‘crowd’, the translation ‘形形色色’ better express the meaning of its plural form. It is not impossible to delete the adding words, but it affects the readability of reading.

(2) We have not lost control of our time, but every little things wasting time will cause our fear. The shortsighted people has sold his birthright for present, but the smart people will concern longer affection.

译文：我们尚未丧失对时间的控制，不过任何浪费时间的小事都引发人们对未来的担忧，为了眼前的利益，目光短浅的人在浪费现在的时间，但是聪明的人会为了更长远的未来考虑。

Here, the adding meaning, “为了眼前的利益” is added in order to make Chinese readers have a better understanding of the text.

D. Domestication

In the book of Lian Shuneng, *A Course book on English-Chinese Translation* defined domestication as follow: “Domestication is a strategy in which a transparent, fluent style is adopted to minimize the strangeness of the foreign text for target language readers.” (Lian, 2006, P: 167). And the advocates of domestication forcefully state that the target text should be translated into a language that is as natural and fluent as the target language. That is to say, domestication is a TL-reader oriented translation strategy. This strategy can make the target readers refrain from the cultural non-equivalence. Take the “Benz” for example; Mercedes-Benz is one of the most famous automobile brands all over the world. At first, it was translated into “本茨”，which was not impressive for Chinese buyer as this translation did not make them realize that this is a brand name of a car. So they will be less likely to buy it. Later operator was aware of this reason and decided to retranslated into “奔驰”，which makes Chinese consumers imagine the feature of high quality. And this translation helped boost sales. Example 1: I’d much rather see her once or twice and not do anything about it---what could I do about it anyway? She is a bit out of my class, don’t you think? If I did try to do anything, I’d only get sent off with a flea in my ear.

我宁愿见他一两面就算了----我还能干什么？你没看到她和我怎么相称吗？我要干点什么，也只会碰一鼻子灰。

In the original text, ‘a flea in one’s ear’ means ‘耳朵上有跳蚤’，which is a metaphor implied an irony; And ‘send somebody off with a flea in one’s ear’ means drive somebody away with harsh words, which is similar with the Chinese ‘碰一鼻子灰’。But if translate it into the former one, too plain; instead of, the latter one will be more active and native. (Zhou 2005. P: 59)

E. Foreignization

Foreignization is related to source language culture, which strives to preserve the foreign style as possible in order to turn the source language and culture into the target one (Baker, 1993).

In the long history of China, Chinese language has formed large amount of words which are culture-related and from religions, customs, foods, festivals and so on. For translators, it’s difficult for them to use equivalent words to express those culture-featured words. On the basis of what have been discussed, foreignization can preserve the original culture and avoid misunderstand, so translators often use this kind of approach. For example, ‘臭豆腐’. ‘臭豆腐’ is Chinese special food with strong smell. But for English, they might have no idea about it. However, only if adopting the foreignizing strategy and translating into ‘stinky tofu’, can the foreigners get a vivid image.

IV. CONCLUSION

By constantly deepening study to the translation, non-equivalence, as a very essential criterion, has begun attracted people’s eyeball from some new heights. The previous research pays more attention to the equivalence, for instance, distinguished translator---Eugene Nida, he has a vital theory “functional equivalence”. There are fewer researches about non-equivalence, and how to deal with the contradiction to finally achieve the equivalence at the greatest extent.

In the process of translation, we should transfer the focus from the source text and the target text to target reader, that is to say, as receivers of message is more stressed and the response of readers is the real criterion. (Nida. 1964) Because the cultural and linguistic differences between Chinese and English, non-equivalence is inevitable in the process of Chinese-English translation. So author analyzes the non-equivalence from the points of cultural difference and linguistic difference and cites it in detailed by some practical examples. Then, the author lists five translation strategies to compensate the non-equivalence. They are respectively conversion, negation, amplification, domestication and foreignization. By doing so, the final goal can be achieved and it also needs us to never-ending pursuit to the equivalence.

According to the above mention, how to be an excellent translator or reader, the author will give some advice as follow: Firstly, they not only need to grasp the native culture and language, but also the foreign. Both the possession of

knowledge between the source language and the target language, we can correctly deal with the differences. Secondly, receptor-oriented is efficient strategy. Only standing in the view of receptor, we can translate vividly and natively. For instance, if the reader is children, translators need to employ plain or vivid words on account of their limited knowledge and experience, standing the children's point of view.

There are some mistakes and weakness in this thesis on account of the limitation of certain knowledge and experience. Hence, those who have the chance to read this thesis mildly point out the deficiency so that the author can correct them. The author will be overwhelmed with gratitude.

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Gender-related Emotionality in EFL Students' Classroom: An Experience Sampling Analysis

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Abstract—This study addresses one of the neglected issues in second language acquisition (SLA) research namely emotionality in EFL students. Based on domain specificity dimension of social-cognitive model of emotions, this study aims to capture students' ongoing and spontaneous emotions through experience sampling method. That is, it analyzed 96 forms which students completed at random times and upon receiving random signals in the EFL class. The forms were then analyzed based on the difference between females and males in the following areas: 1) EFL-related activities vs. non-EFL-related activities; 2) the frequency of different emotions; 3) the antecedents of students' emotional states; 4) students' use of emotion regulation strategies and the valence of emotions. The overall results indicated that females and males differed in significant ways in diverse facets of emotional experience. First, females outperformed in the amount of involvement in EFL-related tasks and thinking. Second, they reported experiencing the class emotionally different. Particularly, they experienced greater amount of anxiety and hope comparing to males. Third, they differed in the degree to which they attributed their emotions to teachers meaning that teachers have a more crucial role in emotional dispositions of female students. The implications were then discussed in the light of teachers' responsibility in facilitating communication of emotion and creating positive emotional climate.

Index Terms—academic emotions, EFL context, emotion antecedent, emotion regulation strategies, experience sampling method

I. INTRODUCTION

Emotion is an integral part of learning. It can have important consequences for students' academic performance (Mega, Ronconi, & De Beni, 2014). Furthermore, emotion affects students' cognitive processes and their psychological and physical health (Romero, et al., 2014; Villavicencio, 2011). Positive emotions enhance cognitive processes particularly on tasks which require creativity and fantasy (Fredrickson, 2001). Negative emotions, on the other hand, have a negative influence on learning by directing learners' attention to themselves, rather than to the task, while learners are in the search of a way to get rid of their negative feelings (Hascher, 2010). Converging evidence from other lines of research has also shown that emotional competencies are particularly related to behavioral tendencies in academic life.

Qualter and colleagues (Qualter, Whiteley, Hutchinson & Pope, 2007), for instance, demonstrated that students with higher emotional capability (defined in term of emotional intelligence) were better able to cope with transition to high school. Teacher concerns about effort, home study and behavior, grade point average, number of unauthorized attendances, and late arrivals during the year were the measures of transition to high school. Petrides, Fredrickson & Furnham (2004) also indicated that high levels of emotional intelligence were negatively correlated with unauthorized absences and exclusions from school even after controlling for personality variables.

Except for the significance of emotions in students' learning and academic performance, the topic is under-researched particularly in second language acquisition. There is a serious dearth of research on learners' emotional states while they embark on second language learning. This is especially surprising given that the journey of learning a new language carry with itself such heavy emotional loads that scholars in the field recommend lowering the affective filter in order to facilitate learning and receptivity to input (Krashen, 1977). Theoretically, the area of SLA suffers from the lack of a comprehensive validated theory that explains the role of emotions and different emotion qualities (positive or negative) on learning (Bless & Fiedler, 1999). However, "SLA researchers have hardly brought the integral component of affect-emotions in their own right—to the foreground of their research foci in a holistic manner (Imai, 2010, p. 278)".

II. RESEARCH QUESTIONS

This study aims to first, fill the gap in SLA research by documenting EFL students' emotional states as they are involved in foreign language learning. Second, a situated view of emotions is adopted in order to depict students' in-moment emotions. To this aim, experience sampling method was used as a means to capture students' ongoing

spontaneous emotions through the use of forms which they were required to fill out at random times during English class. It was believed that a domain-specific study of EFL emotions (Goetz, Pekrun, & Zirngibl, 2003) is demanded as the area has been only inadequately explored.

Domain-specific emotion research has been primarily carried out in relation to mathematics (e.g. Evans & Morgan, 2006) and music (e.g. Zentner & Grandjean, 2008). Yet, only a handful of empirical studies exist on emotionality in language classes (Mercer, 2005; Imai 2010) which present a fragmented, incomplete picture of the status of emotions involved in language learning. It is assumed that the exploration of EFL students' emotions will inspire increased attention to students' emotional state and communication of emotions among teachers and students. If this communication is handled properly, it can result in increased receptivity to language input, target culture, and eventually increased levels of language learning. Therefore, the following research questions are addressed in this study:

1. Is there any significant difference between females and males in the degree of involvement in EFL-related thoughts and activities?
2. Is there any significant difference between females and males in the experience of different emotions?
3. Is there any significant difference between females and males in the antecedents of their emotions?
4. Is there any significant difference between females and males in the use of different emotion regulation strategies?

III. REVIEW OF LITERATURE

In the prevalent literature on SLA, the term emotion is incorporated under the umbrella term affect which covers a wide range of constructs and definitions including emotion and motivation (D'oronyei, 2005; Gardner, 2001) as well as personality factors (Dewaele & Furnham, 1999; Ehrman, Leaver, & Oxford, 2003). From among the affective variables involved in language learning, only anxiety has been extensively examined. That is the reason why Schutz and Pekrun (2007) criticized the status quo on the grounds that we know much more about anxiety than any other emotional tendencies.

However, in spite of substantial amount of studies on the topic, anxiety research has ended up with conflicting results concerning the relationship between anxiety and language achievement. Scovel (1978) attributed the existing inconsistencies to the different measures and conceptualizations of anxiety and proposed that one had to differentiate between facilitating and debilitating anxiety if the contradictions were to be resolved. Facilitating anxiety arises as a result of a complete match between task difficulty and the amount of anxiety triggered. Debilitating anxiety, in contrast, emerges when the excessive amount of anxiety aroused leads to work avoidance or insufficient work performance.

Motivation, has captured considerable scholarly attention among SLA researchers. Traditionally, it has been categorized as binary classifications: integrative/instrumental and intrinsic/ extrinsic (e.g. D'oronyei, 1998; Gardner, 2001). Later, it was conceptualized in terms of alternative constructs such as self-determination theory (e.g., Noels, 2001), attribution theories (e.g., Williams, Burden, & Al-Baharna, 2001), and willingness to communicate (e.g., Clément, Baker, & MacIntyre, 2003). Except for anxiety and motivation, other emotions (positive and negative) have been largely sidelined (Pekrun, Goetz, Titz, & Perry, 2002). Imai (2010) disapproved the mainstream SLA research for limitations on several grounds and deemed a fuller understanding of the complexity of affective variables involved in language learning necessary.

First, he contended that the overemphasis on the role of anxiety has caused other emotions, particularly positive ones, to be remained intact. Second, emotionality has been manifested as an individualistic construct disregarding its interpersonal and communicative dimensions. Third, cognitive appraisal has been considered as the sole antecedent of the emotions while research in psychology provides evidence on the importance of mood in emotional arousal. Finally, methodologically too, the available research is restricted to retrospective reflection and participants' self-report rather than naturalistic observation of emotional behaviors of learners.

Put differently, in the mainstream SLA research emotions are treated as independent and detachable from the particular context in which they are experienced. This way, an important part of information about subjects' emotional experiences are lost since students' interpretation and appraisal of emotional events are geared to the context in which they arise. This is due to the fact that not only the different components of the immediate context are the object of interpretation and appraisal but also the meaning attached to the situation is based on individual knowledge about that situation (Op't Eynde, De Corte & Verschaffel, 2006). This view calls for the study of emotions of learning as they occur in educational arena i.e. the classroom setting.

IV. METHODOLOGY

A. *Participants*

Participants of this study consisted of 35 English learners aged between 11 and 40 years, consisting of 12 (34.3%) boys and 23 (65.7%) girls who attended different English institutes in a small city in South Khorasan province in Iran. The sample was recruited randomly from a list of the 6 available English institutes in the city. The researcher randomly visited several classes in each institute, described the project and invited volunteered learners to take part in the study. They were from different proficiency levels including elementary to advanced ones. Given that the participants were

required to keep a diary for the duration of one week and upon receiving the signals and in order to achieve sound information about learners' emotions, only volunteered students were asked to participate in the study.

B. Instrumentation

1. Academic Emotions

In order to examine students' EFL emotions, the category of emotions extracted from academic emotion questionnaire (Pekrun, Goetz, & Perry, 2005) was employed. Academic emotions are defined as those emotions experienced in a variety of achievement-related situations including attending class, taking tests and exams, studying and doing homework by oneself, studying or doing homework in a learning group, and other situations in which individuals are cognitively occupied with academic achievement (Goetz, et al., 2003). The category consists of nine emotions including enjoyment, hope, pride, relief, anger, anxiety, hopelessness, shame, and boredom. The selection of these emotions for the questionnaire was based on the results of several exploratory studies documenting emotions that occur most frequently in students (Pekrun, 1992; Pekrun et al., 2002; Titz, 2001). Additionally, the selection of emotions was informed by a three-dimensional taxonomy (Pekrun, Goetz, Frenzel, Barchfeld, & Perry, 2011) including activity emotions (enjoyment, boredom, and anger), prospective outcome emotions (hope, anxiety, and hopelessness), and retrospective outcome emotions (pride, relief, and shame). Participants were asked to circle the emotions they were experiencing at the moment on a 7-point Likert scale from 1 (not at all) to 7 (very much).

2. Emotion Regulation Strategies

The emotion regulation strategies students employed were assessed using a reduced version of the Emotional Regulation Questionnaire (ERQ; Gross & John, 2003). It comprises cognitive reappraisal and expressive suppression strategies with 2 items included in each category. Sample items of cognitive reappraisal strategies include ('I control my emotions by changing the way I think about the situation I am in' and 'When I am faced with a stressful situation, I make myself think about it in a way that helps me stay calm') and two expressive suppression strategies also include ('I control my emotions by not expressing them' and 'I keep my emotions to myself'). Students were required to indicate the degree to which they subscribe to each strategy using a seven-point rating scale ranging from 1 (strongly disagree) to 7 (strongly agree).

C. Procedure

We used experience sampling method (Csikszentmihalyi & Larson, 1987) to probe students' emotional state in EFL class. Participants received electronic pagers which sent signals on a random schedule two times during every two-hour time block that they were in English class. A training session was also scheduled in the first week of December to instruct students on how to carry the pagers and respond to the experience sampling form (ESF). At each signal, they were asked to respond to an ESF with open-ended and scaled items for the duration of one week (from 17th to 24th in December). Approvals were also obtained from English teachers as well as institute officials. The form contained several demographic questions such as participants' age, gender, and the English level (elementary, pre-intermediate, intermediate, upper intermediate, advanced) they were studying.

Item 1 in the ESF asked participants about the activity in which they were involved at the time they received the signal. The second item asked about participants' thoughts at that moment. Information about participants' emotional tendencies was obtained using a 7-point Likert scale on which they were required to indicate the academic emotions they were experiencing. The next section asked respondents to reflect on their emotions and describe who elicited those emotions and how. Finally, they replied how they dealt with their emotions at that moment through the emotion regulation strategies scale explained earlier. Overall, the procedure resulted in an average of 2.7 completed questionnaires per person or 96 forms in general. From these, girls provided 62 (64.6 %) completed forms and boys 34 (35.4%).

D. Data Analysis

First, in the ESF responses to the questions "What were you doing?" and "What were you thinking about?" were coded as either a) EFL-related activities (e.g. exams, answering teacher's questions, homework) or b) non-EFL-related activities (friends and family affairs, business, other courses at university and school) and the frequency of each category was tallied for females and males. Second, the frequency of those emotions having the highest intensity was tabulated across each questionnaire and the significance of the difference between females and males was checked using X^2 test. Third, the antecedents of students' emotional states were analyzed through calculating the frequency of students' referral to themselves, teacher, and classmates as the sources of their emotions and X^2 's were performed to check the significance of the differences between genders. Finally, students' use of emotion regulation strategies was examined with reference to both gender and the valence of emotion (positive vs. negative) through two-way MANOVA with gender and emotion being set as the independent variables and strategy types (cognitive reappraisal and expressive suppression) as the dependent variables.

V. DATA INTERPRETATION AND RESULTS

A. Students' Activities and Thoughts in EFL Class

Analysis of students' activities and thoughts at the time they received the signal reveal that participants referred to EFL-related activities in 69.8% and to EFL-related thoughts in 57.3% of their reports. Sample replies for EFL-related activities include "I was reading the passage; I was answering teacher's questions; I was checking the meaning of some new words in my cell phone dictionary." EFL-related thoughts also include "I was searching the meaning of some familiar words in my mind; I was thinking it's a good idea to read the lesson in advance before the class". Non-EFL-related activities and thoughts comprise 3.1% and 24% (respectively) of the students' reports. Examples of non-EFL-related activities are reading the SMS just received and laughing at the teacher. Non-EFL-related thoughts varied widely from the football match shown the day before the class to money making, romantic relationships, and the classmate's appearance. There were also cases where the coding of the thoughts and activities was not attainable due to the ambiguous replies students provided (such as I was thinking; I was speaking) or not replying at all. Chi-square tests used to check the significance of the difference between genders and the results indicate that females significantly involved in more EFL-related activities and thought than males did. Table 1 presents the distribution of activities and thoughts across females and males and the chi-square results.

TABLE 1:
FREQUENCY OF EFL-RELATED AND NON EFL-RELATED ACTIVITIES AND THOUGHTS AND CHI RESULTS OF THE DIFFERENCE BETWEEN GENDERS

	EFL-related activities	Non-EFL-related activities	Ambiguous cases	EFL-related thoughts	Non-EFL-related thoughts	Ambiguous cases
females	74.2%	1.6%	24.2%	62.9%	22.6%	14.5%
males	61.7%	6%	32.3%	47%	26.5%	26.5%
Total	69.8%	3.1%	27%	57.3%	24%	18.7%
Chi-square	.002*	.56	-	.002*	.29	-

B. Students' Emotions in EFL Class

Participants score highest on enjoyment and anxiety both accounting for 29.1% of the emotions they experienced. Other emotions in the order of frequency include hope, relief, boredom, pride, hopelessness, shame, and anger. These results show that while the EFL class is generally perceived positively by the students (given that their top 3 priorities are positive emotions), there is always an amalgamation of enjoyment and anxiety reducing on their positive emotionality. Anger, too, is the emotion with the least frequency of occurrence implying that EFL students rarely experience it during the class. Furthermore, a closer look at the percentages of positive and negative emotions indicates that there are significant differences between the two genders in their perception of some emotions. The results of X^2 tests also shows that females significantly experience greater hope and anxiety during the EFL class ($df=8$, $p=.014$ and $.002$ respectively). Table 2 portrays the percentage of different emotions as well as the results of chi-square tests.

TABLE 2:
FREQUENCY OF STUDENTS' EMOTIONS AND CHI SQUARE RESULTS OF THE DIFFERENCE BETWEEN GENDERS

	Enjoyment %	Hope %	Pride %	Relief %	Anger %	Anxiety %	Boredom %	Hopelessness %	Shame %
Females	27.4	29	4.8	16.1	4.8	35.5	14.5	8	4.8
Males	32.3	17.6	17.6	17.6	2.9	17.6	11.7	8.8	8.8
Total	29.1	25	9.4	16.6	4.1	29.1	13.5	8.3	6.2
Chi-square	.257	.014*	.317	.317	.317	.002*	.166	.480	1.000

C. Antecedents of Students' Emotions

The most frequent source of students' emotional state is student themselves though teachers are also influential in almost half of the students' emotional arousals. Particularly, cross-gender comparisons through Chi-square tests indicate that female students significantly outnumber in the amount of self- and teacher- instigated emotions. Put differently, teachers, while being the antecedent of half of the females' emotional dispositions, exert a less obvious influence on males. They instigated students to feel in a positive way through praising them and being energetic and positive towards them. In addition, giving students opportunities for extra credits, disciplined class management system, student-centered teaching, and good explanation and elaboration were the sources of students' positive emotions. On the contrary, belittling students and scorning them for the mistakes they have committed, making students anxious through demanding tests and tasks, reminding students of the time limit and frequently looking at their watch while they were on exam, and lack of preparation for teaching were mentioned as sources of negative emotions.

Students' self-induced antecedents of negative emotions also include lack of time and planning, lack of self-confidence and ability in handling particular tasks, heavy burden of out-of-class tasks and duties which prevented students from concentration and preparation, and boredom. On the other hand, their intrinsic motivation towards language learning, adequate forethought and organization, and goal attainment provoked positive emotions in students. Respondents' classmates also activated their positive emotions through being cooperative, leading classroom discussions, and commenting on ongoing tasks and topics. By contrast, classmates' reviewing questions and answers

when the exam was over prompted students' anxiety and stress. Table 3 depicts different antecedents of students' emotions in percent. Some participants referred to more than one source of arousal which resulted in total score to be greater than 100%.

TABLE 3:
FREQUENCY OF THE ANTECEDENTS OF STUDENTS' EMOTIONS AND CHI SQUARE RESULTS OF THE DIFFERENCE BETWEEN GENDERS

	Students themselves	teacher	Classmate
females	50%	50%	17.7%
males	47%	35.3%	20.5%
Total	49%	44.8%	18.75%
Chi-square	.029*	.004*	.34

D. Students' Emotion Regulation Strategies

Finally, to probe the significance of difference between genders in the use of emotion regulation strategies for positive and negative emotions a two-way MANOVA was run. The findings show that the use of cognitive reappraisal and expressive suppression strategies is not significantly different either for the two genders or for the particular positive and negative emotions. In other words, not only isn't there any association between the valence of emotions (being positive and negative) and retrieval of particular strategies, but also the use of strategies is not significantly different between females and males. The interaction effect of gender and emotions is also insignificant (Wilks' Lambda $p = .46$). Table 4 displays the results.

TABLE 4:
MANOVA RESULTS OF THE DIFFERENCE BETWEEN GENDERS AND EMOTION TYPES IN THE USE OF EMOTION REGULATION STRATEGIES

Source	Dependent Variable	df	Mean Square	F	Sig.
gender	cognitive reappraisal	1	2.334	.196	.659
	expressive suppression	1	3.563	.208	.650
emotion	cognitive reappraisal	1	10.478	.880	.351
	expressive suppression	1	18.730	1.092	.300
gender * emotion	cognitive reappraisal	1	2.841	.239	.627
	expressive suppression	1	26.722	1.558	.216

VI. MAJOR FINDINGS AND DISCUSSION

This study investigated gender-related emotionality in EFL students through experience sampling method. Analysis of results obtained from students' forms completed during EFL class indicated that females and males differed in significant ways with respect to different dimensions of emotional state. First, females significantly involved in more EFL-related activities and thoughts while in class than males did. By the same token, based on a meta-analysis of 502 effect sizes drawn from 369 samples, Voyer and Voyer (2014) found a female advantage particularly for language courses. This perseverance from the part of female learners can be due to being more goal-oriented and serious in pursuing their objectives. It may also indicate their higher self-efficacy beliefs since students with higher self-efficacy are reported to pursue mastery goals involving challenge and gaining new knowledge as well as performance goals including good grades and outperforming others (Komarraju & Nadler, 2013). However, definite conclusions in this regard demand further research and exploration.

Second, it was demonstrated through our data that learning a foreign language is primarily accompanied with enjoyment and anxiety. That is, while the experience was self-rewarding and joyful in itself, students constantly reported feeling anxious during the class. In the same way, Dewaele and MacIntyre (2014) reported that foreign language enjoyment was significantly higher than foreign language anxiety in 1746 foreign language learners from around the world and similar to our findings, female participants reported both more anxiety and more enjoyment. The females in Park and French's study (2013) too, reported higher anxiety levels compared to males. Anxiety has been always reported as one of the most dominant emotions whose reference can be traced mainly to expectancies of failure (Pekrun et. al, 2002).

Females' anxiety can come from a variety of sources including tests, speaking in front of the opposite gender, speededness of listening files (Price, 1991) as well as other components of reading and writing skills (Hilleson, 1996). Nonetheless, analysis of the activities in which students were involved at the moment they reported anxiety revealed that they were either taking or thinking about exams or were afraid of being questioned in front of others. As such, it seems that the main reference of females' anxiety is oral and written tests. In fact, the results obtained from other studies also corroborate that even enjoyment itself is a by-product of positive learning results such as good grades (Pekrun, 1998).

Our results may justify in part the findings of the previous studies (Goetz, Frenzel, Stoeger, & Hall, 2010) that achievement-related situations have a negative effect on students' enjoyment. Particularly, the anxiety accompanying achievement settings may give rise to negative emotionality in students with the resultant reduction of enjoyment. In addition, achievement-related settings are evaluative by nature leading to a feeling of threat to self-worth (Covington 1992). Such threats can potentially bring about a decrease in enjoyment. Moreover, in our study female participants reported significantly greater feeling of hope in comparison to males. One explanation may be that females tend to interpret the experience of language learning as a path for future achievement and success. For instance, one of the participants explained that she was learning English so as to perform better at university entrance exam and to be accepted in her favorite academic major.

By and large, the most frequent types of emotions in this study (enjoyment, hope, anxiety), according to Pekrun's (1992) cognitive-motivational model of emotions, were all activating emotions. In his model, Pekrun proposed that academic emotions influence academic performance through the mediating mechanisms of motivation, strategies for learning, cognitive resources, self-regulation, and external regulation of learning. In other words, activating emotions enhance learning through stimulating motivation, facilitating the use of flexible and creative learning strategies, and directing attention towards academic tasks and hence, improving task-related thinking. This explanation account for the other findings of this study that having been instigated through these emotions, students substantially focused on EFL-related tasks and thoughts. However, the exact mediating mechanisms which motivated students to concentrate on academic tasks and thinking remain to be explored. Future lines of research can scrutinize the relationship between students' emotional state and their level of motivation, strategy use, and class-related achievement.

Students' perception of the locus of emotional arousal also indicated that while their own propensities were the source of almost 50% of their emotions, teachers also played a significant role in encouraging students' emotions accounting for nearly 45% of emotions experienced in class. In Hascher's study too (2007, 2008) 59% of emotions were attributed to teachers implying that teachers have a critical role in students' emotional predispositions. With respect to the choice of emotion regulation strategies, our data showed that neither participants' gender nor emotion valence were influential in the retrieval of particular strategies. This is unlike other studies which report greater use of regulatory strategies by women (e.g. Nolen-Hoeksema, 2012).

VII. CONCLUSION

The findings of the present study revealed that experience sampling method provided us with the added advantage of probing students' real-life and real time EFL emotions which might have evaded through other retrospective recall methods. In addition, the weeklong sampling period deepened our understanding of the frequency of emotions which could not have achieved otherwise. The overall conclusion obtained from such an analysis is that females and males not only are different with respect to the amount of persistence they allocate to language learning but also perceive the experience emotionally different. They also tend to seek the reference of their emotional orientation in different sources.

Considering these findings, teachers have to acknowledge that emotions are an integral part of the profession and that teaching involves complex inter-relationships with students. This view requires them to set realistic views about teaching and sensible expectations from students. Additionally, they are demanded, through reflective practices, to accurately identify their own emotions as well as students' emotional experiences and deal with them in the most appropriate manner. Without doubt, teachers' emotions are as important to students' emotions as teachers' instructional behavior (Becker, Goetz, Morger, & Ranellucci, 2014). Their ability to create a positive emotional climate in the classroom is critical to the learning that occurs in schools and students' academic success. Furthermore, the characteristics of teaching have been shown to have a strong effect on students' emotions particularly enjoyment and hope as well as students' perceived control (Muntaner-Mas, Vidal-Conti, Sesé & Palou, 2017).

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An Investigation of the Relationship between Pragmatic Competence and Motivation for Non-English Majors

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Abstract—Language is used for communication. Pragmatic competence, which is essential in English teaching, is an important component of communicative competence. The development of pragmatic competence will enhance that of foreign language learners' communicative competence. This study discusses the relation between pragmatic competence and language learning motivation. Results show that students' general pragmatic competence is at a low level. Most of the subjects hold instrumental motivation as their dominant motivation. Significant correlation has been found between pragmatic competence and language learning motivation ($r=.582$; $p=.000$). According to the survey results, the author provides several suggestions on cultivating and maintaining learners' motivation in their pragmatic learning.

Index Terms—pragmatic competence, communicative competence, language learning motivation, pragmatic development

I. INTRODUCTION

It is acknowledged that in China the ultimate goal of the English teaching in college is to develop students' communication competence. However, L2 learners in China often complain that, after learning English for many years, they cannot communicate with foreigners fluently, appropriately and successfully, although they own a high level of grammatical competence. So it is of practical significance to explore how English learners develop their pragmatic competence.

Though, it is widely accepted that motivation plays an important role in second language learning. However, in practical studies of the relationship between motivation and pragmatic competence, most of them focuses on issues of second pragmatic use, few involve in the specific study whether motivation can promote the development of pragmatic competence and how to develop learners' pragmatic competence by improving learners' motivation. That is especially true in China. The current study aims at exploring the relations of pragmatic competence and language learning motivation and shedding light on the way to motivate L2 learners in their pragmatic development. It also intends to provide pedagogic implications for English teaching in China.

II. LITERATURE REVIEW

A. Pragmatic Competence

Second language researchers have been studying nonnative speakers' pragmatic ability for more than two decades, and pragmatics has been defined in various ways, there is still a lack of a clear, widely accepted definition of the term. It is widely accepted that pragmatic competence is an important parameter in evaluating an advanced language learner. To develop communicative competence, it is inevitably involved the development of pragmatic competence.

Leech (1983) and his colleague Jenny Thomas (1983) subdivide pragmatics into pragmlinguistic and sociopragmatic components. Pragmlinguistics refers to the resources for conveying communicative acts and relational or interpersonal meanings. Socialpragmatics was described by Leech (1983, p.10) as 'the sociological interface of pragmatics, referring to the social perceptions underlying participants' interpretation and performance of communicative action. Chinese scholars take both the speaker's and the hearer's competence into account, they also give the definition of pragmatic competence. Professor He ziran argues that pragmatic competence refers to the ability to use a language appropriately in practical communication, which focuses on two aspects: the ability to produce appropriate language and at the same time to interpret correctly what the speaker says according to the speech context. And the current study mainly focuses on two aspects: pragmlinguistic competence and sociopragmatic competence.

In the area of interlanguage pragmatic competence, some scholars still make great contribution on this area. Takahashi (2001) speculated that motivation could be one of the most influential ID variables to account for differences in learners' noticing of target request forms. Schmidt (1993) argued that integratively motivated learners are more likely to pay close attention to the pragmatic aspects of input than those who are not so motivated. Cook (2001) also pointed out the possibility that exceptionally highly motivated JFL learners notice pragmatic functions that are taught and can judge what constitutes a polite speech style in Japanese. Takahashi (2005) claimed that learners differentially noticed

the target pragmalinguistic features, as contended by Crookes and Schmidt (1991). This implies a complex interplay between learners' motivational dispositions and their attentional targets at the pragmatic level. Thus the study of the relationship between motivational and L2 learners' pragmatic is significant, for it might provide Chinese EFL teachers as well as learners a new perspective in enhancing students' pragmatic competence by strengthening their pragmatic learning motivation.

B. Language Learning Motivation

In the area of SLA, more and more researchers emphasize the role of motivation on language learning. Motivation has an effect on second/ foreign language learning. Generally speaking, it is considered as one of the main determinants of second/ foreign language learning achievement (Oxford & Shearin, 1994; Dörnyei, 1994). It directly influences learners' using of learning strategies, how much learners interact with native speakers, how high their L2 proficiency level will become, and how long they will persevere and maintain L2 skills after the L2 study is over(Oxford & Shearin, 1994). As a matter of fact, all these influence the development of L2 learners' pragmatic competence. We will discuss several effective motivation models in the following sections.

In 1980s, scholars in China begin to study second language learning motivation. Studies on the relations between learners' motivation and their language achievement are fruitful. Wu Yian & Liu Runqing (1993) have found that the Chinese learners' motivation is instrument-oriented instead of integrativeness-oriented, they argue that motivation is helpful for language learning. In her studies, Wen Qiufang (1996, 2001) investigated language learners' motivation, attitude and strategy. She offered that their relations have relative high stability. She suggested dividing learners' motivation into two sub-categories: surface motivation and deep motivation. The latter one is related to learners' interest and more facilitative to language learning. Gao Yihong and her research team (2003) discussed Chinese EFL learners' motivation type under Chinese EFL environment.

All these ILP studies suggest that motivation is one of the IDs variables that highly constrain pragmatic attention and awareness. Diversity and fruitful these studies are, little research has been done concerning the roles of motivation in language learners' pragmatic development. That is the concern of the current study.

III. METHODOLOGY

A. Instruments

As has mentioned, one of the objects of the current study is to investigate the correlation between language learners' motivation and their pragmatic competence. To achieve this aim, the best way is to use questionnaire to gather data from a large number of learners. In this study, multiple-choice questionnaire is used to measure learners' pragmatic competence, five-point Likert scales questionnaire for motivation.

1. Pragmatic competence questionnaire

There are various questionnaire designed to measure language learners' pragmatic competence, such as Bardovi-Harlig's, He Ziran's and Zhang Xiaomei's, etc. In the current study, we obtained data from EFL learners in China, who were quite different from the ESL learners. Therefore, the multiple-questionnaire developed by Prof. He Ziran (1987) is adopted. It is of high validity and reliability and it was designed in the EFL environment in China.

2. Motivation questionnaire

Motivation questionnaire adopted from Gardner's AMTB (Attitude/ Motivation Test Battery) (1985b) and other sources and made necessary modification to suit the present study. They were chosen because they were developed based on models in motivational and educational psychology which specifically referred to the motivation/attention interface. The reliability of the questionnaire in the current study is .89 (Cronbach's alpha, n=111).

The Motivation Questionnaire in the study consists of four parts. Part one is about students' orientation in learning English. Part two is students' attitudes toward target language. Part three is about students' English class anxiety. Part four concerns the motivational strength in their English learning. All the motivational variables measured by items that were rated on five-point Likert scales from "1= strongly disagree" to "5= strongly agree". And it was given in Chinese in order to ensure that the subjects have an accurate understanding of the items.

B. Subjects

The subjects in this study involved 111 sophomore non-English majors from Huaian normal university. Among them, 40 major in Chinese, 28 major in mathematics, 21 major in computer science and 22 major in Chemistry. They are 46 girls and 65 boys. 34 of them had passed the CET Band-4 and others had at least taken part in the CET Band-4 once but failed. All the 111 students were required to finish a pragmatic competence questionnaire. They were allowed to use dictionaries when they had difficulties in understanding the questions, but were not permitted to discuss with others. Time was not limited. In answering the motivation questionnaire, the students were asked to indicate their opinion about each statement by giving their immediate reactions to each of the motivation items. Therefore, the true information of students' motivation could be got. This questionnaire was also conducted in the same four classes, and the average time in answering it is about forty minutes.

IV. RESULTS AND DISCUSSION

A. The Subjects' General Pragmatic Competence and Their Motivation in Learning English

The purpose of this study is to make it clear the relationship between learning motivation and students' pragmatic competence, so we'll just give a general description of students' pragmatic competence and their motivation. The result (Table 4-1) shows that the scores the students get are not so satisfactory, with the minimum 2.00; maximum 19.00. The mean is nearly 13. Generally speaking, only when a student gets 60 per cent correct answers of the questions, we can say he or she passes the examination. Of the total 111 students, 83.8 per cent are under the pass line. This indicates that the pragmatic competence of the subjects is still at a low level.

TABLE 4-1
SCORES OF THE SUBJECTS' PRAGMATIC COMPETENCE

N	Valid	111
	Missing	0
Mean		12.9459
Std. Error of Mean		.37660
Median		14.0000
Mode		15.00
Std. Deviation		3.96768
Variance		15.743
Range		17.00
Minimum		2.00
Maximum		19.00
Sum		1437.00
Percentiles	25	11.0000
	50	14.0000
	75	17.0000

The result of motivation questionnaire (Table 4-2) shows that both of the students' instrumental and integrative orientation got high mean scores, but the mean of instrumental orientation (3,945) is higher than that of integrative orientation (3,653). That is, the students in the current study had a relatively strong disposition to improve their L2 for practical use. While the attitude to TL community and interest in TL culture only got 2.972 and 2.653 respectively. Thus we may infer that the students' instrumental orientation is stronger than their integrative orientation and the dominant motivational type in college students' English learning is instrumentally oriented.

TABLE 4-2
MEANS AND STANDARD DEVIATIONS FOR THE MOTIVATION SUBSCALES NOTES: N= 111

Category	Mean	Std. Deviation
Integrative orientation	3.653	.921
Instrumental orientation	3.945	.863
English class anxiety	3.333	1.027
Attitude to TL community	2.972	1.021
Interest in TL culture	2.653	1.098
Motivational strength	3.207	.983

B. Correlations between Motivation Factors and Pragmatic Competence

The major theoretical motivation for this study was to see what links could be discovered between learning motivation and students' pragmatic competence. We follow Gardner (1985) in believing that motivated learners learn more because they seek out input, interaction, and instruction, and when they are exposed to target language input they pay attention to it and actively process it. In other words, motivated learners may pay more attention to the pragmatic aspect of the target language. This could be testified by our investigation. From table 4-3, we can see the correlation between students' language learning motivation and pragmatic competence.

In table 4-3, pragmatic competence is significantly correlated with language learning motivation ($r = .582$, $p = .000$). The significant correlation suggests that high level of language learning motivation in learning language does necessarily result in a corresponding development of pragmatic competence. Results of the correlation analysis between orientation/anxiety/attitude/motivation and the pragmatic competence are shown in Table 4-4 followed by the analysis.

TABLE 4-3
CORRELATION BETWEEN LANGUAGE LEARNING MOTIVATION AND PRAGMATIC COMPETENCE

		Language learning motivation	Pragmatic competence
Language learning motivation	Pearson correlation	1.000	.582
	Sig.(2-tailed)		.000
Pragmatic competence	Pearson correlation	.582	1.000
	Sig.(2-tailed)	.000	.

Table 4-4 shows the correlation between motivational factors and pragmatic competence. The correlational analysis revealed that, among the six motivation subscales, three factors were significantly related to students' pragmatic competence. They are instrumental motivation ($r = .502$, $p = .005$); integrative motivation ($r = .593$, $p = .000$) and

motivational strength ($r=.459$, $p=.018$). The correlations between pragmatic competence and three other factors are insignificant. They are English class anxiety ($r=.314$, $p=.303$); attitude to TL community ($r=-.036$, $p=.749$) and interest in TL culture ($r=-.257$, $p=.019$). We'll have a brief look at them.

TABLE 4-4
CORRELATION BETWEEN MOTIVATION FACTORS AND PRAGMATIC COMPETENCE

Pragmatic score	instrumental orientation	integrative orientation	English class anxiety	attitude to TL community	interest in TL culture	motivational strength
Pearson correlation	.502**	.593**	.314	-.036	-.257**	.459*
Sig. (2-tailed)	.005	.000	.303	.749	.019	.018

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

1. Correlation between instrumental motivation and pragmatic competence

Table 4-2 shows that the correlation between both pragmatic competence and instrumental motivation is significant with the Pearson Correlation $r=.502$, $p=.005$. Instrument motivation has to do with practical reasons for language learning, such as getting a promotion, well pay etc. The significant correlation between instrumental motivation and pragmatic competence indicates that this type of motivation does facilitate the development of pragmatic competence in Chinese EFL learning environment, just as Gardner himself admitted that instrumental motivation is also facilitative in a foreign language learning situation (Gardner & Lambert, 1972). Language learners with instrumental motivation devote more effort and time in language learning because they want to have financial rewards, and they can get satisfaction from the learning rewards. But Gardner and MacIntyre (1993) claim that once any chance for receiving a reward is eliminated, learners may also cease applying extra effort. So in the practice of English teaching, language teachers should take actions to enhance the language learners' instrumental motivation.

2. Correlation between integrative motivation and pragmatic competence

From table 4-2 we can see, the correlation between pragmatic competence and integrative motivation reaches a significant level ($r=.593$, $p=.000$), this result gives support to Gardner's social-educational model and the acculturation model. In social-educational model, integrative motivation is treated as a favorable variable in L2 learning since if the learners admire the target culture, he will read its literature, look for opportunities to practice the language, and take various kinds of activities to promote the development of the language. Schumann (1986), submitted low social distance; positive attitudes toward the second language community and high integrative motivation to use the second language for communication have led to a considerable increase in overall communicative competence. Students in the current study own a high level of integrative motivation, they become "productively engaged in learning tasks, and sustains that engagement without the need for continual encouragement or direction" (Crookes & Schmidt, 1991). It is the ideal motivational type that the teachers appreciate and try to develop among his/her students.

3. Correlation between students' English class anxiety and pragmatic competence

Table 4-4 demonstrates that the correlation between students' English class anxiety and pragmatic competence is insignificant ($r=.314$, $p=.303$). The insignificant correlation between English class anxiety and pragmatic competence indicates that the situational anxiety does not play a positive role in facilitating the development of pragmatic competence. As situational anxiety can be both helpful and harmful to language learning, in the current study, the subjects' English class anxiety is not helpful for their language learning. This finding gives effort to some previous studies. Gardner (1985b) found negative correlation of anxiety with proficiency test performance; Young (1986) also found negative correlation of anxiety with performance in speaking and writing tasks. Due to such a result, language teachers should take actions to reduce language learners' situational anxiety, provide activities that address varied learning styles and strategies in the classroom, help students realistically assess their performance, and develop their pragmatic competence.

4. Correlation between students' attitude to TL community/interest in TL culture and pragmatic competence

There are no significant correlation between students' attitude to TL community/interest in TL culture and pragmatic competence ($r=-.036$, $p=.749$; $r=-.257$, $p=.019$). Surprisingly, the correlation between the variables is negative, which indicates that the more interested they are in TL community and culture, the lower their pragmatic competence is. This result indicates that students' attitude to TL community and interest in TL culture have no facilitative role in pragmatic development. What led to such a phenomenon? In Gardner's social educational model (1985a), attitude is viewed as an indirect factor that plays its role in ultimate language achievement through motivation. In the current study, the students' dominant motivation type is instrument motivation, that is, the students tend to study English for some practical reasons instead of the language itself. In the current language learning context in China, examinations such as CET Band 4 or Band 6 or the Entrance Examination for Candidate Postgraduate determines whether the students can get an ideal job or a chance for further postgraduate study. Thereby, the students with instrumental motivation have to bury themselves into the practical use of the target language not the language itself. Moreover, the students' strong desire to change their present situation might attach more significance to their lower pragmatic competence, and therefore led to a negative correlation between the variables.

V. FINDINGS AND PEDAGOGICAL IMPLICATIONS

A. *Main Findings*

The analysis of the relationship between pragmatic competence questionnaire and motivation questionnaire is to find the correlations between motivational variables and pragmatic competence. The findings are:

1 The correlation between motivation and pragmatic competence is significant ($r=.582$, $p=.000$).

2 Not all the motivational variables have positive role to facilitate the development of pragmatic competence. The correlations between both instrument and integrative motivation and pragmatic competence are significant. English class anxiety is not significantly correlated with pragmatic competence. No significant correlation has been found between students' attitudes to TL community and culture and pragmatic competence.

From the results obtained by the investigation, we think that the following questions are worth considering for English teachers and learners: how to develop the language learners' integrative motivation? How to raise learners' positive attitudes toward pragmatic learning in their pragmatic development? How to sustain learners' motivation to ensure their pragmatic competence development?

B. *Pedagogical Implications*

1. Making pragmatic learning as part and parcel of English learning

In pragmatic learning, the first and most important is to motivate students to set pragmatic development as one of the goals in learning English. It will be difficult for the students to put their effort into the effective learning process without desire to learn. Pragmatic knowledge is vital to ensure the learners to use the target language in an appropriate way so make pragmatic learning as part and parcel of English learning is important. Once pragmatic competence is set as a goal of language learning, the students will consciously devote much effort on pragmatic learning, which in turn will facilitate the development of their pragmatic competence.

2. Raising students' pragmatic awareness by instruction

The low level of the students' pragmatic competence in the present study implies that pragmatic knowledge deserves special attention in EFL teaching. Through pragmatic teaching, both pragmalinguistic and sociopragmatic competence can be introduced to the students, thus construct a positive environment to promote their pragmatic competence development. Several ways could be adopted to raise students' pragmatic awareness. Here we only introduce two major ones which are commonly used: teacher presentation and students discovery.

In terms of teacher presentation, teachers can introduce information got from research issues on pragmatics to students inductively or deductively. In order to show the importance of contextual variables in the use of different language forms, teachers need to provide detailed information on the participants, their status, the situations, and the speech events that are occurring, the information provided to students in awareness raising activities will help learners build awareness of pragmatic features both sociopragmatic or pragmalinguistic.

The student's discovery procedure means that students can be given a variety of observation assignments inside and outside the classroom which can focus on sociopragmatic or pragmalinguistic features. For instance, a sociopragmatic task could be designed to observe under what conditions native speakers of American English express regrettable, when, for what kinds of situations, and to whom. A pragmalinguistic task could focus on the strategies and linguistic means by which apologizing is accomplished, what formulae are used, and what additional means of expressing apologize are employed. In these activities, students are invited to be researchers. They become ethnographers and observe and record naturally occurring speech acts. Through these activities, students can become keen and reflective observers of language use.

3. Practicing L2 pragmatic abilities to guarantee pragmatic development

Options for students to practice their L2 pragmatic abilities are necessary. Researchers have found that the use of the target language plays a crucial role in SLA (Seliger, 1977; Swain 1993, 1995, 1998). Swain (1993, 1995, 1998) claims that producing language serves second language acquisition in several ways: to enhance fluency; to promote "noticing"; to test hypotheses; to reflect on language use; to notice the gap; to develop discourse skills; to develop a personal voice. Producing the target language may prompt L2 learners to process subsequent input and pay attention to pragmatic features in the input.

In order to develop students' pragmatic competence, Classroom activities, student-centered interactions, can offer opportunities for students to practice their L2 pragmatic abilities. Such small group interaction requires that students take alternating discourse roles as speaker and hearer, then different types of task may engage students in different speech events and communicative actions. Activities such as roleplay, simulation and drama engage students in different social roles and speech events. Such activities provide opportunities to practice the wide range of pragmatic and sociolinguistic abilities that students need in interpersonal counters inside and outside the classroom.

4. Motivation maintaining

Motivation, viewed as a key factor in L2 learning in SLA research, should not only be regarded as a trigger in the initiation phase of language learning, but also should be sustained in the learning process. Dörnyei (2001) gave some suggestions on motivation maintaining. They are: (1) setting 'proximal subgoals'; (2) improving the quality of the learning experience; (3) increasing the learner's self confidence; (4) creating the learner autonomy; and (5) promoting self-motivating learner strategies. Crookes and Schmidt (1989) also give some suggestions on fostering and maintaining students' motivation. Such as: using learning tasks to pose a reasonable challenge to the students ---neither too difficult

nor too easy; providing opportunities for group work, tasks designed in the perceptions of learners' needs and wants and providing plenty of variety in classroom activities. Following those advice, something could be done to sustain and promote students' motivation in language teaching. For example: to teachers, while developing students' pragmatic competence, they could divide the overall goal into some subgoals, and choose some appropriate activities, which students could perform well, to let the students feel a sense of success in learning, which in turn will stimulate the students' motivation. To students, they could be encouraged to take part in language activities and be taught the strategies to encourage themselves in the learning process.

5. Considering pragmatic ability as a teaching goal

The purpose of language teaching activities is to help students become more effective and successful communicators. That is, to help students develop their communicative competence. While pragmatic competence is a vital component of communicative competence, so it is important for language teachers to take developing students' pragmatic competence as a teaching goal in their language classroom.

Kasper (2001) points out; the research that has been done to date does indicate that pragmatic development, though observed to occur in second language classrooms without instruction, can be facilitated by instruction, particularly when that instruction is of an explicit nature.

Previous studies have suggested the teachability of language pragmatic features. And we should make pragmatic ability as a teaching goal. In Chinese EFL environment, English classroom provide an ideal arena for exploring the relationship between learners' subjectivity and L2 use. In the classroom, learners have the opportunity to reflect on their communicative encounters and to experiment with different pragmatic options. For Chinese language learners, classroom may be the only available environment where language learners can try out what using the L2 feels like, and how more or less comfortable they are with different aspects of L2 pragmatics. Thus sheltered environment of the L2 classroom should be prepared and offered to give the opportunities to learners to communicate effectively in L2, to promote the development of their pragmatic competence.

VI. CONCLUSION

The present study has probed into the relationship between pragmatic competence and motivation for non-English majors. Correlation analysis show that college students' language learning motivation is significantly correlated with their pragmatic competence, which means high motivated students will possess high pragmatic competence, but not all the motivational variables have positive role to facilitate the development of pragmatic competence. Instrumental motivation is evidenced to be the dominant motivation type of Chinese learners', which indicates that English learning in China is mainly for practical purpose. The correlation between pragmatic competence and integrative motivation is significant. No significant correlation has been found between English class anxiety and pragmatic. The students demonstrate low level of attitudes to TL community and culture, and no significant correlation has been found between the attitude and pragmatic competence.

According to the study results, some suggestions are given on how to cultivate students' pragmatic competence by motivating them in pragmatic learning, including raising both teachers' and students' pragmatic awareness; creating opportunities for students to practice their L2 pragmatic ability; helping students maintaining their language learning motivation; making the cultivation of pragmatic competence as a teaching goal. To develop students' pragmatic competence, it needs the endeavor of both teachers and students.

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On Countermeasures of How English Education in Colleges and Universities Serves the Development of Chengdu Economic Zone—Taking Leshan City as an Example

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Abstract—The purpose of English education is to cultivate competent English talents who can meet the need of society. Guided by how English education in colleges and universities serves the development of Chengdu Economic Zone, and based on the characteristics of Leshan economic development, the paper is to analyze the English talents demand in Leshan City and to analyze the problems in how English education of colleges and universities in Leshan serves the development of Chengdu Economic Zone, as well as to study the countermeasures accordingly, aiming to promote English education in colleges and universities in Leshan City and to improve the construction and development of Chengdu Economic Zone.

Index Terms—English education in Colleges and Universities, Chengdu economic zone, countermeasures study, Leshan City

I. INTRODUCTION

Economic globalization is the inevitable trend in the current world. Most countries in the world, developing countries or developed countries, all want to do business with each other so as to improve their economic power and improve their people's living standard. For China, in order to develop foreign trade with other countries, English has to be put to an important place. Students, especially graduates from colleges and universities have to master a good command of English. Under this circumstance, the link between English education in colleges and universities and regional economy is becoming closer and closer. English education is the vital basis of the development of regional economy. For Leshan City, which is subordinate to Chengdu Economic Zone, the rapid development of economy renders a higher demand for practical English talents and English talents of comprehensive capabilities. A win-win situation should be established between English education in colleges and universities of Leshan City and the development of Chengdu Economic Zone.

II. INTERACTION BETWEEN ENGLISH EDUCATION OF COLLEGES AND UNIVERSITIES IN LESHAN CITY AND THE DEVELOPMENT OF CHENGDU ECONOMIC ZONE

The important goal of English education of colleges and universities in Leshan City is to cultivate professional talents for the construction and development of Chengdu Economic Zone. Only when English education of colleges and universities in Leshan City develops coordinately with Chengdu Economic Zone can it serve Chengdu Economic Zone better, conversely, the better development of Chengdu Economic Zone can promote English education of colleges and universities in Leshan City.

1. The positive effect of English education of colleges and universities in Leshan City on the development of Chengdu Economic Zone: To help to introduce the abundant tourism resources like Leshan Giant Buddha and Emei Mountain to the world in a better way, thus to promote the development of Leshan tourism industry and to further improve the development of Chengdu Economic Zone; To help to promote the development of the export and import trade of specialty products in Leshan City, thus to make Chengdu Economic Zone keep pace of the world more fluently; To help to improve the attraction of foreign investment of Leshan City, thus to promote the foreign cooperation of Chengdu Economic Zone.

2. The positive effect of the development of Chengdu Economic Zone on English education of colleges and universities in Leshan City: The better development of Chengdu Economic Zone means higher government revenue, and consequently higher capital investment in Leshan higher education, which is good for the development of English education of colleges and universities in Leshan City; The better development of Chengdu Economic Zone means more employment opportunities, and consequently higher job market for Leshan graduates from colleges and universities, which is good for the development of English education of colleges and universities in Leshan City; The better development of Chengdu Economic Zone means quicker development of high-end technology, which promotes the cultivation of high-level talents by English education of colleges and universities in Leshan City.

III. THE CHARACTERISTICS OF LESHAN ECONOMIC DEVELOPMENT AND THE ENGLISH TALENTS DEMAND IN LESHAN

1. The characteristics of Leshan economic development: Economic aggregate increases rapidly (In the first half of 2016, the total output value in Leshan reached 59.46 billion RMB, with a growth of 5.2%. The increase value of above-scale industries grew by 4.7%. Fixed assets investment in Leshan reached 46.95 billion RMB, with a growth of 8.7%); Industry power increases gradually. Industries like electronic information, new energy and modern equipment manufacture develop better. The production of glyphosate ranks the first in Asia. The scales of stainless steel and construction ceramics rank the first in West China. And there are 5 key provincial cultivation parks, 5 parks of 10 billion scale, and 649 above-scale industries and enterprises; The service industry prospers. Industries like tourism, finance and trade develop maturely. Tourism economic aggregate and the number of banks and financial institutes are second to Chengdu in the range of Sichuan Province. Now, Leshan is trying its best to develop the modern service industry based on tourism industry as the leading industry and trying to create the second-level financial center in Sichuan Province; Modern agriculture develops quickly. There is National Agricultural Science and Technology Park as well as 6 leading enterprises of national agriculture industrialization. Comprehensive development level of tea industry ranks the first in Sichuan Province, with a reputation of "Home of China Green Tea"; Regional technology talents highland has been established at a preliminary level. There are one National High and New Tech Development Zone, one National Agricultural Science and Technology Park, one National Sustainable Development Experimental Zone, and one National Silicon Material Base. There are 10 scientific research institutions and colleges as well as universities. There are 34 national engineering research centers of provincial level and municipal level. There are 39 National High-tech Enterprises. And there are 50 provincial innovative enterprises.

2. The English talents demand in Leshan: The author made a survey about the English talents demand in many companies and enterprises in Leshan such as Leshan Giant Buddha Administrative Committee, Mountain Emei Administrative Committee, Leshan Phoenix Co, Ltd., Leshan He Bang Group, etc. And it was found that all the companies and enterprises' demand for English talents quality is higher and higher. Actually, companies and enterprises need graduates with professional skills as well as professional English without the on-the-job training. In the fast-paced world, efficiency means everything. So the graduates should be adaptable to the work as soon as they graduate from the colleges and universities. That means they have to prepare themselves for this in the four years' study in colleges and universities. To be specific, the English talents demand in Leshan lies in the following 3 aspects: the first, basic English skills and communicative abilities, especially in business English; secondly, knowledge of foreign culture background, especially etiquette concerning foreign affairs; finally, professional English (such as computer English, logistics English, electronic business English, finance English and hotel English, etc.), especially in English listening and reading skills. Above all, the rapid development of Leshan economy demands practical English talents with high quality. Thus, English education pattern in colleges and universities in Leshan should take it as the guidance and enhance the cooperation between schools and companies, facing all kinds of profession, so as to meet the actual need of the construction and development of Chengdu Economic Zone.

IV. PROBLEMS EXISTING IN THE WAY ENGLISH EDUCATION IN COLLEGES AND UNIVERSITIES OF LESHAN SERVES CHENGDU ECONOMIC ZONE

The author carried out a survey in the several colleges and universities in Leshan City, such as Leshan Normal University, The Engineering & Technical College of Chengdu University of Technology, and Leshan Vocational & Technical College, etc. And it was found that there are still several problems existing in the way English education in colleges and universities of Leshan serves Chengdu Economic Zone as follows:

1. Vague orientation of transformation from common colleges and universities to practical colleges and universities: On October, 2015, Ministry of Education clearly put forward the guidance and instruction that local colleges and universities are to transform from common colleges and universities to practical colleges and universities. But the truth is that in colleges and universities in Leshan City only several science majors have the consciousness of serving local regional economy, while English major fails to serve Chengdu Economic Zone cultivating English-major students in a traditional way. So in this case, the graduates fail to adapt themselves to the work when they graduate from the colleges and universities because they lack the skills and professional experience demanded by the companies and enterprises that have no time and patience to train the graduates.

2. Inconsistence between the curriculum setting and textbooks selecting and the need of companies and enterprises: The curriculum setting of English education in Leshan's colleges and universities is mostly about basic English courses, without offering professional English courses. What's more, textbooks in the colleges and universities are solely that of College English, instead of that collaborated by schools and companies. In this case, the students, especially the non-English majors, lack interest in English study, which causes the students' poor communicative ability in English and inability to serve the development of Chengdu Economic Zone. So in this case, the graduates fail to keep pace the world even if they have a good command of professional knowledge in that the lack of English competence hinders their work in a big way.

3. Teaching faculty fails to meet the demand of regional economy: As a matter of fact, the teaching faculty of English education in Leshan's colleges and universities is weak, with a low percentage of teachers with double certificates. The

English teachers have only English knowledge, lacking professional knowledge and practical experience corresponding to the non-English majors they teach, which in a big way hinders the cultivation of practical talents and talents of comprehensive capabilities. So in this case, the teachers of English can only teach English and the students fail to get involved in the professional English which is closely related to their major. This is also an important reason for the graduates from the colleges and universities fail to meet the demand of the companies and enterprises in Chengdu Economic Zone.

4. Practice base construction in Leshan's colleges and universities has limitations: The construction of practice base in Leshan's colleges and universities lacks scientific preparation and long-term planning thus is limited in some way. English major does construct practical practice base off campus, but non-English majors' practice is only limited in listening practice in language lab, which causes their poor practical ability in English. Although non-English majors have practical classes, the classes are directed only by their professional language without involving practical English practice. So in this case, the graduates lack badly professional skills and experience that the companies and enterprises in Chengdu Economic Zone demand.

V. COUNTERMEASURES OF HOW ENGLISH EDUCATION IN COLLEGES AND UNIVERSITIES SERVES THE DEVELOPMENT OF CHENGDU ECONOMIC ZONE

After analyzing the above-mentioned problems existing in the way English education in colleges and universities of Leshan serves Chengdu Economic Zone, the author concluded the following countermeasure of how English education in Leshan's colleges and universities serves the development of Chengdu Economic Zone:

1. The colleges and universities in Leshan should make clear the orientation of education, that is, to serve the regional economy: to adjust the orientation of education from the common universities and colleges to practical and technical colleges and universities. The colleges and universities can not follow the traditional way of cultivating students any more; instead, they should try to cultivate what the companies and enterprises in Chengdu Economic Zone demand. The colleges and universities should firmly stick to the idea that the quality of practical talents is the most important thing for the school's survival and development and the cultivation of talents is the center. To be specific, the orientation of education should be "being guided by job market; cultivating talents of comprehensive abilities and practical talents of high quality with equal stress on integrity and ability, with healthy mind and body, with competent professional abilities; being adaptable to the transformation from common colleges and universities to practical colleges and universities and to the demand of regional economy in order to serve local regional economy." Some specific countermeasures are as follows: the colleges and universities set up specialized institute for cooperating with the local companies and enterprises, in charge of all the business between the colleges and universities and the local companies and enterprises, in charge of the technology transfer, service, consulting business, co-establishing talents cultivation base with the local companies and universities, in charge of the co-establishing scientific research base, in charge of the construction and management of the platform of scientific and technological fruits transfer, and in charge of establishing assessment system for the colleges and universities' local service, with a purpose of promoting the cooperation of colleges and universities and local companies and enterprises, supporting cultural education, scientific technology and talents of all kinds so as to serve the local economic development on the whole.

2. The colleges and universities in Leshan should set up English curriculum system oriented to job market and Chengdu Economic Zone: The colleges and universities in Leshan City should follow the need of the country and regional economic and social development, adjusting the overall arrangement, optimizing the structure, with a purpose of striving to set up practical English curriculum system. The English curriculum system should be transformed from "theory orientation" to "practice orientation". The colleges and universities in Leshan City should give up the traditional way of setting up English curriculum system and selecting the textbooks solely according to the theory and knowledge. Instead, they should analyze in a scientific way the professional ability and English competence according to the employment positions in the job market and consequently setting up English curriculum system in a way that the English curriculum system has its professional characteristics with both expertise professionalism and flexibility. What's more, the colleges and universities in Leshan City should actively and positively invite the local companies and universities to collaborate the textbooks and set up English curriculum together so as to make both the textbooks and curriculum practical and efficient as well as oriented to the demand. And finally, the colleges and universities should make sure that the curriculum system can enable the students to practice what they learn in the class by establishing practice base, internship practice and other flexible approaches, so as to let the students to get a clue by themselves about what kind of talents and graduates the Chengdu Economic Zone need. Only in this way can the students know how to prepare themselves in the school for the future job hunting and work.

3. The colleges and universities in Leshan should perfect its teaching faculty: The colleges and universities should offer all the teachers related training and further-study-program, in order to establish a team of teachers of double certificates with both good professional knowledge and a good command of English. In addition, the colleges and universities in Leshan should encourage all the teachers go out of campus to get to know the front-line work of the companies and enterprises in order to accumulate practical experience. The colleges and universities should improve the professional level of the teachers through many ways, such as teachers' working in companies and enterprises and special training, etc. Meanwhile, the colleges and universities should actively cooperate with the companies and

enterprises, probing into new developmental systems such as “joint teaching and scientific researching”, “mutual employment” and “positions transfer”, etc. The colleges and universities should employ the professionals and experts as well as talents of high technology from the companies and enterprises, in order to further perfect the teaching faculty. Finally, the colleges and universities should amend the title evaluation method for the teachers, further perfect the requirements of the quality and quantity in the teachers’ teaching and scientific research, attach equal importance to teaching index of the teachers, social service index of the teachers, and scientific research index of the teachers, be in favor of the teachers of double certificates in terms of teachers’ title evaluation and performance assessment, so as to direct the teachers to put their time and energy into improving the teaching quality. Only in this way can the interest of the students be aroused and the quality of the graduates be guaranteed.

4. The colleges and universities in Leshan should enforce the cooperation with the companies and enterprises in the cultivation of talents through different ways, such as jointly establishing practice base, jointly cultivating practical talents by order of the companies and enterprises. In addition, the colleges and universities should actively invite the companies and enterprises to take part in the curriculum setting and textbooks selecting of the school. On the other hand, the companies and enterprise provide the practice base and practice equipment for the students, and also arrange special technicians regularly instruct the students’ professional knowledge study to make sure that the students can learn different knowledge beyond what they can learn in their books. What’s more, the colleges and universities should adjust the practice courses and practice plan according to the position requirements of the companies and enterprises, regularly arrange the students’ visit to the front-lion work in the companies and enterprises and appoint the teachers to work with positions in the companies and enterprises in order to get the practical experience which is beneficial to both the teachers and the students. And finally, the colleges and universities should make full use of the professional teaching faculty and the advanced equipment of the companies and enterprises to jointly establish practice base for the students. Through jointly establishing the practice base, the colleges and universities can not only enable the students to link the theory with the practice, and enforce the students’ practical abilities, but also enable the students to feel the culture of the companies and enterprises by themselves so as to accumulate valuable experience to prepare themselves for the future job-hunting and work.

VI. CONCLUSION

In recent years, Leshan City witnesses a quick development in its economy, with increasingly obvious characteristics of tourism economy and export-oriented economy. Under this circumstance, Leshan City and the whole Chengdu Economic Zone render a higher and higher demand for English graduates in colleges and universities especially in their practical abilities and communicative capabilities. English education in Leshan’s colleges and universities can promote the development of Chengdu Economic Zone, especially can promote the development of foreign trade economy and foreign cooperation and communication, which helps to make Chengdu Economic Zone keep pace with the world better. English education in Leshan’s colleges and universities must follow the characteristics of the construction and development of Chengdu Economic Zone, guided by job market of the graduates of Leshan’s colleges and universities, meet the demand of the companies and enterprises, set up goals of talents cultivation in a rational way, set up English courses in a scientific way, actively collaborate textbooks with companies and enterprise, and strive to cultivate teaching faculty with double certificates. Only in this way can the English education in Leshan’s colleges and universities and the development of Chengdu Economic Zone reach a win-win situation. And only in this way can the graduates from the colleges and universities become talents of comprehensive abilities and practical talents who are badly needed by the companies and enterprises.

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Effects of PowerPoint Presentations on Reading Comprehension of Deaf and Hard of Hearing Students in Iranian Exceptional High Schools

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Abstract—It is becoming increasingly difficult to ignore the role of PowerPoint presentation on reading comprehension of deaf and hard of hearing (D/HH) students in schools. Based on different studies, PowerPoint, a common multimedia tool, has a crucial role in teaching and learning through providing a suitable understanding of the text and motivating students. The present study aimed to examine the predictive effects of PowerPoint presentations on reading comprehension of D/HH students. As reported in the literature, reading levels of deaf high school students are equal to those of fourth grade hearing students. Therefore, a visual computer-mediated approach was implemented to monitor the reading comprehension progress of 20 D/HH students in Iranian high schools. The reading comprehension of the experimental and control groups were compared by conducting the Stanford Achievement Test and applying paired t-tests. Our findings indicated a significant difference between the mean reading comprehension scores of the two groups.

Index Terms—deaf students, PowerPoint, reading comprehension, technology, visual intervention

I. INTRODUCTION

English language is viewed as a second language for deaf and hard-of-hearing (D/HH) students and allows us to emphasize on complexity in acquiring and learning in a related framework to improve skills and to address the educational goals. Since nearly a high percentage of D/HH students struggle with literacy barriers, a fundamental educational framework with adequate attention to relevant monitoring and design strategies is needed to improve literacy-dependent skills in these students. It is known that some D/HH students have problems with reading skills due to their English competencies (Trezek & Wang, 2006). About 90% of D/HH children are born into non-deaf families and are not exposed to sign language until later in life. This can result in lack of communication, which leads to learning problems in school (Andrews & Covell, 2006).

It is necessary to perform further research on the strengthening of the learning environment, increasing the availability of the materials, and meeting the educational needs of deaf students. Print literacy and functional literacy levels in reading comprehension are usually challenging for deaf learners. The nature of deafness presents an impediment to the acquisition of the spoken language in the hearing environment and thus interferes with literacy development in that language (Garberoglio 2012). It is well known that for hearing individuals, phonological codes play an important part in learning to read. The role that these codes play in determining advanced reading skills in deaf readers, however, is a matter of debate. Because deaf children and adults only have degraded access to the sounds of spoken language, they may only develop partial or underspecified phonological representations that support reading acquisition of an alphabetical language in readers who can hear. The phonology of spoken language consists of language-specific patterning sounds which are combined to construct the word. The recoding of written symbols into correct sounds is the main step during the reading process. Most deaf students are fitted to cochlear implant and hearing aids to distinguish speech sounds and interpretation of auditory inputs. The Qualitative Similarity Hypothesis (QSH) suggested that D/HH children require match speech representation with the written text to correctly read. Consequently, lip-reading and visual cuing system could have been developed by speech representation. The reading skills of D/HH students are considered as a critical challenge in the educational system, mainly for high school settings. The Federal Commission of Education of Deaf (1988) has reported the failure of the education system in the deaf community. Based on the analysis of almost four decades of national-level achievement data, the median achievement gap between D/HH and hearing students remains large and since the gap is larger in reading than in mathematics and other fields, the identification of related factors that affect the academic performance for D/HH learners should be the center of focus. So far, however, there has been little discussion about technological interventions for promoting the reading comprehension ability of deaf students. The current research sought to clarify the effects of visual inputs to specify the ability of PowerPoint presentation to improve the reading comprehension of high-school D/HH students in Iran.

Various studies have confirmed the crucial role of technology in pedagogy. In fact, effective learning methods based on this approach have been developed to remove educational barriers. Lately, the employment of PowerPoint (a type of interactive media) presentations in classroom direction has expanded around the world. However, the impacts of this method on the students' learning and demeanors have not been determined. Moreover, there is a paucity of research on instructional strategies aiming to obviate these barriers in D/HH learners. Most studies in the field of deaf education have only focused on online interventions and teacher consultants in learning and have generally ignored the most common multimedia tool. In this point of view, implementing an effective practical and accessible strategy to decrease reading-related issues can facilitate the development of an evidence-based intervention for improving the reading comprehension of the D/HH. With the large number of technological tools and complexity of their application (in some cases), little effort needs to be taken to encourage educators and teachers to apply materials and then increase the functional ability of hearing impaired students. The evolution of technology combined with educational necessities led to communication between deaf and hearing people. As Cardoso et al. (2016), Maiorana-Basasand Pagliaro (2014), and Strickland (2013) stated, with the aid of technology, deaf students go through the learning route without any sources of concern and stress in their communications with others.

Purpose of the Study

This researcher intended to explore the effects of PowerPoint presentation on reading comprehension of D/HH students in high school context.

II. LITERATURE REVIEW

In recent years, there has been an increasing amount of literature on PowerPoint presentation and reading comprehension of hearing students in high schools.

Visual tools are the most important tools for D/HH people in classroom setting. D/HH people require visual input in order to process information (Trezek & Wang, 2006). In other words, since these people have some degree of hearing loss, they require visual input to perform any learning-based activity. Virtual classrooms are normally supposed to provide any form of visuals, such as PowerPoint presentations. Knowing that D/HH people have a harder time with the English language depending on the language used in the home while growing up, interpreters or other visual input methods using the American Sign Language is one of the best methods for D/HH people to learn classroom material (Trezek & Wang, 2006). The proof that PowerPoint presentations affect learning is to a great extent recounted. Bryant and Hunton (2000) argued that the level of enhanced learning is a component of a perplexing arrangement of cooperation between the learner and medium characteristics. Mason and Hlynka (1998) believed that PowerPoint structures the substance and handling of a lesson. Utilizing PowerPoint can also help learners take notes (Cook, 1998). According to Harrison (1999), PowerPoint improves direction and persuades learners to comprehend. PowerPoint presentations fuse design, live picture, and shading (symbolism). Human information processing theories concentrate on how the human memory framework accumulates, changes, compacts, expounds, encodes, recovers, and uses data. Sensory registers, short-term memory, and long-term memory are the three noteworthy stockpiling structures of the human mind. The sensory framework registers boost and hold memories for a short time until they are perceived or lost. Short-term memory, with its restricted limit, gets data from tangible registers. It holds data longer than the sensory registers through a practice procedure, reusing the data over and over. Long-term memory is a changeless store of human learning and gets data from both sensory registers and the transient memory framework (Moore et al., 1996).

Reynolds and Baker (1987) found that introducing materials on a computer screen expanded consideration and thus learning.

Furthermore, cognitive theory proposes that learning is enhanced when the learners' favored presentation styles are harmonious with the properties of the instructive innovation. While providing teachers with rules of utilizing innovation for direction, Bryant and Hunton (2000) suggested that individual attributes had to be checked in instructional outline. Double coding hypothesis recommends that learners should favor presentation styles. While a few people learn and review well from outwardly displayed data, others gain the most from verbally exhibited data. Kozma (1994) indicated that comprehending the relationship between media and learning required the consideration of the cooperation between the properties of the medium and the intellectual procedures of learners.

Reading skill is the main domain among different approaches in second language learning. In any written passage, the ultimate aim of reading is reading comprehension. Reid and Lienemann (2006) and Cawthon et al. (2011) referred to reading as a complex process which involved reading real words in isolation or in context with comprehension. Prestigiacomo (2012) defined reading comprehension as an ability to understand and describe a piece of text and to answer related questions.

According to Hoover and Gough (1972), two components, decoding and linguistic comprehension, are involved in reading comprehension. Decoding refers to the recognition of words and consists of phonological skills. Linguistic comprehension refers to the ability to achieve semantic information at the word level and consists of general language skills. On the one hand, comprehension relies on the decoding process by someone who can powerfully use his/her meta cognitive capacity needed to draw meaning from text. On the other hand, decoding depends on comprehension and comparing the meanings of words. Therefore, there is a mutual relationship between comprehension and decoding (Benedict, Rivera, & Antia, 2015).

Some reading models have been specifically developed to offer a profound understanding of the reading process to comprehend the text. Advocates of the bottom-up processing model assumed that inferring meaning from text is a process that begins with learning letters, words, and sentences as parts of the language (Dockery, 2013). They argued that the reading component takes place via decoding and linguistic comprehension (Gough, 1972; Gough & Tanmer, 1986; Mueller, & Hurtig, 2010). During the reading process, reader systematically advances by decoding single words and then sounding out to reach comprehending phase. In fact, failure to comprehend a piece of text indicates that decoding and comprehension of a word is missed in the process. Meanwhile, successful reading comprehension requires the mentioned critical elements. The top-down processing model suggests that the interaction between prior knowledge of the reader and the text facilitates the comprehension process. Thus, when the readers do not have experience with the topic being read, the appropriate comprehension will not occur. Dockery (2013) and Harris and Terleksi (2010) believed that because of deficits of D/HH students in knowing critical elements necessary for reading, most of these students continuously face difficulties in the top-down process.

Over the past two decades, minimal developments have been reported in the academic writing and reading performance among D/HH students (Rose, 2006). Due to dynamic communication in all children, cognition and language are seen to be two crucial factors in learning process. However, the deaf community face underachievement in reading and have to deal with barriers in the comprehension process.

In a recent study, Belenger et al. (2012) found that reading difficulties among individuals with early severe to profound deafness stemmed from their additional visual cognition in processing information compared to hearing people. At the same time, they suggested that the visual span of skilled deaf readers was larger than that of skilled hearing readers. In general, the results showed that although skilled deaf readers read at a slightly lower grade level than skilled hearing readers, attention distribution of these individuals was wider (See Rayner, 2009).

According to Spencer and Marschark (2010) and Easterbooks and Beal-Alvarez (2013), due to limited access to large and representative samples, there have not been sufficient empirical studies about D/HH students. Many studies have evaluated reading comprehension problems in D/HH children. Nikkhou et al. (2012) showed that one of the main long-standing concerns among D/HH students was their low levels of reading comprehension. In 2009, the Office of Special Education Programs reported that during 2000-2001, in the national level, nearly 85% of the D/HH students scored below 50th (Bendict). The low academic performance of D/HH students in processing language is caused by difficulties in comprehending texts (Marschark, Sapere, Convertino, Mayer, Wauters, & Sarchet, 2009). Musselwhite and Kingdebaun (1997) argued that classes for impaired students traditionally lacked relevant activities. In fact, due to academic or social reasons, the students' physical attendance in the classroom seemed sufficient and their full participation was neglected. Within the context of national large-scale assessment data, Traxler (2000) reported that the average reading comprehension scores a norm sample of D/HH students was less than the levels of knowledge and skills required for effective grade-level work.

Miller (2006) examined the relationship between Jewish students with pre-lingual deafness and their reading comprehension skill. He found that the students' comprehension ability was considerably lower than that of their hearing peers. Likewise, Sharifi et al. (2010) indicated that Iranian hard-of-hearing students had significantly lower reading comprehension ability compared to their hearing peers.

Regarding the use of PowerPoint in the classroom, Samiei Lari (2014) conducted an experimental study on 56 female students of a secondary school in Lar. The experimental and control groups were taught separately by using technology (PowerPoint presentation) and a traditional method, such as textbooks, respectively. While the two groups had no significant differences at the beginning of the year, post-test scores of the experimental group were significantly higher than those of the control group. In addition, Kuo et al. (2014) conducted a study on 134 students (72 boys and 62 girls) from six classes of two public elementary schools in Taiwan. The content materials and teachers were the same for both the experimental and control groups. The researchers examined the academic achievement (e.g. semester grades and test scores) of the students and found that multimodal presentation system (MPS) improved the effectiveness of English as a Second Language (ESL) learning. In fact, there was a statistically significant difference between the experimental and control groups in terms of learning effectiveness (i.e. academic achievement and learning satisfaction).

In contrast, Moore (2012) examined the differential effects of a computer-based program on improving the reading performance of deaf students. He used the reading component of the Ticket to Read (TTR®) to determine if this educational program could promote deaf students' fluency and comprehension. A dependent t-test was conducted using 27 deaf students' pre- and post-test scores (before and after nine weeks of education, respectively) and the exploratory data analysis involved 54 students in 27 matched pairs. Moore applied the TTR® as an intervention just for the reading component and the phonic component was not investigated. The differential effects of the TTR® were also examined across two variables, i.e. gender and grade level, to evaluate reading comprehension of the students compared with deaf students who did not use the TTR®. The mean differences between the pre- and post-test reading assessment scores of the experimental group were also analyzed. The research findings suggested that the TTR® used to develop the reading comprehension did not yield statistically significant differences in the experimental group. Furthermore, there was no significant difference between the control and experimental groups in reading comprehension across gender and grade level variables.

The present study is different from previous research on the application of PowerPoint in English as Foreign Language (EFL) classrooms as it sought to plan an intervention to remove challenges faced by D/HH students in reading comprehension. Many of the instructional interventions used for hearing students are difficult to use for students with hearing loss because they are often based on the use of auditory elements such as reading aloud. A student with hearing loss will not benefit from instruction based on an auditory input unless he/she has access to sound. Previous studies mainly focused on technological interventions other than PowerPoint presentation among hearing students (not deaf students). This accessible multimedia tool allows both teachers and students, especially deaf students, to engage in an interactional mode of the learning process.

We intended to explore whether the semiotic visual stimulus, such as graphics and pictorial text, would make a progress in reading comprehension of D/HH students in exceptional high school settings.

III. METHODOLOGY

Procedure

In Iran, the D/HH students study the same English book taught to hearing students and no attention is paid to their physical and cognitive limitations. In fact, the contents of course books are not different in usual and exceptional high schools. The learners study the English book over 12 sessions, and at the end of the semester, their performance is evaluated through a final exam.

In the present experimental study, both groups were tested based on an adaption from the Stanford Achievement Test (SAT) before the teaching process. The pre-test contained four short passages followed by seven multiple choice questions to assess reading comprehension proficiency. The participants were asked to read the multiple choice questions and select the correct answer based on the passages.

After the pre-test, the experimental and control groups began the learning of short passages in their English books to improve their reading comprehension. Besides the teachers' usual instruction, the experimental group was presented with PowerPoint slides. However, the control group continued their learning with traditional oral delivery of content and teacher writing on the whiteboard (without any PowerPoint presentation). In each session, the slides were presented in the class with some following multiple choice questions for more struggling. The content of the training material was the same for both groups. Furthermore, the teacher acted as an interpreter and it took 12 weeks to execute the research plan. A total of four lessons of the textbook were taught during the winter semester, 2015 (three days a week). At the end of the term, when the teaching of the passages was finished (over 12 sessions), the post-test was administrated to evaluate the students' progress in reading comprehension.

Participants

The participants of the study were recruited from Jamal Aldin Asad Abadi (Baghcheban) high school, an urban exceptional high school for D/HH students, in Tehran, Iran. Two 10 person groups of male students (age: 17-21 years) with various degrees of hearing loss were enrolled as the control and experimental groups. In all students, deafness started before the age three and had a hearing loss greater than 85 DB on the better hearing ear. They had usual nonverbal intelligence and used lip-reading and sign language as the language of communication in the classroom setting.

Instruments

The pre- and post-tests were developed by the researchers exactly based on the short passages and their related questions in the students' textbook. The SAT was applied to assess the students' reading comprehension. The SAT is a standardized testing package used in the schools of the United States to determine how well the students understand different subjects. It is available for all grades (kindergarten through the 12th grade). The students' mean scores were using paired t-tests in SPSS (SPSS Inc., Chicago, IL, USA).

IV. RESULTS AND DISCUSSION

In order to use parametric tests, it was necessary to ensure the normality of data distribution. Therefore, one sample Kolmogorov-Smirnov test was first applied to evaluate normality.

Paired t-tests were applied to compare pre- and post-test scores in the experimental group (Table1). There was a significant difference between the mean scores ($t=6.676$; $p<0.05$). This supported the positive effect of PowerPoint presentation on the participants' reading comprehension.

TABLE 1
PAIRED SAMPLES T-TEST FOR EXPERIMENTAL GROUP

		Paired Differences					
		Mean	Std. Deviation	Std. Error Mean T	Df	Sig. (2-tailed)	
Pair 1	Pre-test , post test	8.43000	3.99322	1.26277	6.676	9	.000

The mean pre- and post-test scores of the control group were compared using paired t-tests. According to Table 2, there was no significant difference between the mean scores of the control group ($t=2.185$; $p>0.05$).

TABLE 2
 PAIRED SAMPLES T-TEST FOR CONTROL GROUP

		Paired Differences		T	Df	Sig. (2-tailed)
		Mean	Std. Deviation			
Pair 2	Pre-test, Post-test	1.77200	2.56474	.81104	2.185	.057

As seen in Table 3, there was not a significant difference between the mean pre-test scores of the experimental and control groups ($t = 0.165$; $p > 0.05$). However, the two groups had a significant difference in terms of post-test scores ($t = 6.181$; $p < 0.05$; Table 4). This, again, highlighted the role of PowerPoint presentation in improving deaf learners' reading comprehension.

TABLE 3
 INDEPENDENT SAMPLES TEST FOR PRE-TEST OF TWO GROUPS

		Levene's Test for Equality of Variances t-test for Equality of Means						
		F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Scores	Equal variances assumed	.211	.651	.169	18	.868	.17000	1.00824
	Equal variances not assumed			.169	16.337	.868	.17000	1.00824

TABLE 4
 INDEPENDENT SAMPLES TEST FOR POST-TEST OF TWO GROUPS

		Levene's Test for Equality of Variances		t-test for Equality of Means			Mean Difference	Std. Error Difference
		F	Sig.	T	Df	Sig. (2-tailed)		
Scores	Equal variances assumed	1.032	.323	6.181	18	.000	7.22800	1.16946
	Equal variances not assumed			6.181	16.876	.000	7.22800	1.16946

D/HH students seem to be heavily reliant on the American Sign Language for their communication needs. Therefore, they may also need something "visual", such as PowerPoint presentations, to help them learn.

The purpose of the current study was to explore the effects of PowerPoint presentation on the reading comprehension of Iranian deaf students. Based on our findings, the use of PowerPoint presentation led to a significant difference between the two groups regarding comprehension performance. Similarly, SamieiLari (2014) demonstrated a significant difference between the two control and experimental groups. In fact, the use of technology to teach the experimental group resulted in significantly higher learning and motivation at the end of the educational year. Therefore, the use of new ways of teaching language, such as PowerPoint presentations, was reported to play a critical role in language learning and was suggested as a facilitator in pedagogy. What is so different and novel about this study, however, is that it recruited D/HH students and mainly focused on the reading comprehension skill of these students as a main part of English language learning. The current study supported the findings of Kuo and et al. (2015) who examined the predictive effects of the multimedia presentation system (MPS) on academic achievement of students. They found that the MPS facilitated ESL learning and concluded that implementing a multimedia program in class led to significantly better learning achievements among the students. They argued that in comparison to traditional methods, MPS could increase the learners' achievements and satisfaction.

On the contrary, the findings of the current study were not in line with those reported by Moore who suggested that using TTR® did not improve the reading comprehension of deaf students across gender and grade level variables. One possible reason for such an inconsistency might be that the computer-based program itself was planned for hearing students and not D/HH people.

The current study had some limitations. First, the scarcity of studies related to deaf education and technology made the work route more complicated. Another limitation of the study was time constraints on PowerPoint presentation. In order to achieve effective learning outcomes among deaf learners, more time should be devoted to presenting the slides. In fact, additional sessions are needed to teach the reading comprehension materials in order to prevent interfering factors in routine educational program. In the point of empirical view, however, considering the limitations of deaf education, designing a practical technology method would be beneficial to improve the deaf educational system mainly in the Iranian context.

V. CONCLUSION AND RECOMMENDATION

This study highlighted the effective role of PowerPoint presentations in promoting the academic reading skills and reading comprehension of D/HH students. The use of PowerPoint during a semester significantly enhanced the achievements of the experimental group in reading comprehension. A significant difference was observed between the mean post-test scores of the experimental and control groups, i.e. PowerPoint presentations could improve deaf learners' reading comprehension ($t = 6.181$; $p < 0.05$). In the future, instructors and teachers may be able to use technological applications and new multimedia interventions to remove the existing instructional barriers and enhance

reading comprehension in second language learning of students with hearing loss. However, considering the physical and cognitive limitations of the deaf community, further research is required before the planning of any intervention. In fact, all aspects of deaf education should be considered in instructional methods. Moreover, there may be other computer-based programs made for hearing students that would be more beneficial in helping deaf students improve their reading performance. Future research should be conducted using those computer-based programs to assess their viability as an educational intervention for deaf students.

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Translation Aesthetics in Children's Literature

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Abstract—Despite the fact that children's literature is an important branch of the literary polysystem, it was neglected as a peripheral subject for long. It is not until in recent years that much attention is increasingly poured into it due to the rapid development of economy and booming cross-cultural exchanges. Currently, the newly-developed children's literature is gradually occupying a dominant position and winning children's favor. Translated works are no exception. Numerous classic children's literary works from abroad are translated and retranslated. People tend to care much about translation activities, yet forget to formulate the theoretical framework. The thesis attempts to explore how to incorporate translation aesthetics into children's literature translation. Children's literature is characterized by its artistry, which is no doubt linked to children's unique disposition. Children's rich imagination, their acute sense of color, rhythm and children-favored animated images, etc. should be given priority in the process of translation. Based on Liu Miqing's interpretation of translation aesthetics, the thesis will be developed from the perspective of the aesthetic object, the aesthetic subject and their respective aesthetic constituents. Further discussion is given as to the realization of aesthetic transference and representation in translating children's literature under the guidance of translation aesthetics.

Index Terms—children's literature, translation aesthetics, aesthetic representation

I. INTRODUCTION

A. Concept of Translation Aesthetics

It has been globally accepted that aesthetics is of great significance to translation theory, particularly literary translation. Scholars and translation theorists strive to obtain a refreshing perspective from the integration of the two branches of subjects. The combination of aesthetics with translation theory — translation aesthetics has experienced a long historical development both in China and the western world. In *A Dictionary of Translation Studies* compiled by Fang Mengzhi (2004), translation aesthetics is aimed at tracing the aesthetic origin of translation, exploring the significance of aesthetics to translation, recognizing the scientific and artistic quality of translation from the perspective of aesthetics, putting forward aesthetic standards applicable to different literary styles based on fundamental aesthetic methodology, analyzing, illustrating and settling aesthetic problems of inter-lingual transferences.

B. Translation Aesthetics in China

Translation aesthetics, as a matter of fact, is deeply rooted in the soil of China's culture and civilization. In other words, translation aesthetics is essentially the foundation of both the classical and modern translation theory in China.

In China, the nature of beauty and the relationship between beauty and truth have always been a major concern in aesthetics since ancient times. The aesthetic thought can be traced back as early as to the times when Confucius (551-497B.C.), a world-famous philosopher and educator whose thoughts and principles dominate China for more than 2000 years, established the Confucian aesthetics which stressed that harmony could find its place in the "supreme beauty" and "the unity between beauty and truth". Subsequently, Lao Zi (about 571-471B.C), a philosopher in the Spring and Autumn Period of ancient China, followed the steps of Confucius and further illustrated his philosophy of beauty and truth with his dictum from *Dao De Jing* (Classic of the Dao), that "words that are faithful are not beautiful while words that are beautiful are not faithful." (2005) This indicates his preference for literal faithfulness and objection against beauty in form. His idea is often cited to clarify the dispute between fidelity to the original and artistry in translation. However, his principle of literal translation evoked heated debate and met with strong criticism from advocates who were in favor of free translation. One of the most distinguished representatives is Xuan Zang (604-662 A.D), the most prolific monk-translator of Buddhist sutras. He didn't deny the necessity of being faithful to the source works, yet intelligibility in language form or readability for target readers could never be neglected.

The debate on translation aesthetics, like the correlation between content and form rose and fell for centuries. Not until in the year 1896 did the famous translator Yan Fu initiated his three-character principle of "faithfulness, smoothness and elegance". The criterion of elegance is the proposed from the perspective of aesthetic translation. The principle has made such a tremendous influence in the development of translation theory that until now translators are still studying them in depth and trying to seek some guidance in their translation practice. (Wang Bingqin, 2005)

Based upon Yan Fu's idea, Lin Yutang wrote *On Translation* in 1933, where Lin put forth the concept of translation being art, and a triad of principles on translation: Faithfulness, Fluency, and Beauty. According to his systematic analysis, faithfulness and fluency are supposed to be taken as the very foundation of literary translation, while beauty indicates the trend in pursuing the ideal artistic effect. That explains why he has been considered as a representative of

the “translation-as-art” school.

In the 1950s, Fu Lei, a famous Chinese translator put forward his principle of “spiritual resemblance” or “spiritual resonance”. He believed that aesthetic ideas made distinctions between the West and China. So translators should be responsible for representing the artistic beauty of the original language, rather than translating word for word.

In the 1960s, Qian Zhongshu, a productive scholar in the study of translation theories, proposed the concept of “transfiguration” or “sublimation” in literature translation. In his opinion, the top standard of literary translation is sublimation which can help to avoid the awkward way of translation and meanwhile maintain the original flavor of the source text despite the different language usages between the source text and the target one. (Wang Bingqin, 2005)

In brief, the translation notions mentioned above, taken as a whole, carry the typical features of China’s classic aesthetics and contributed a lot to the Chinese traditional translation theory. Based on previous studies on the traditional translation aesthetics home and abroad, modern translation aesthetics is steadily heading for maturity. In the last two decades, a considerably large number of scholars, linguists and aestheticians attempted to apply this newly developed theory to direct their translation practice. Actually, some of their studies have born rich fruit, monographs and papers coming out in succession such as those of Liu Miqing’s and Xu Yuanchong’s.

Liu Miqing is a high prolific translation theorist. He is also one of the first theorists who presented the idea of translation aesthetics. In 1996, his paper *Translation in the Perspective of Aesthetics* was published in which he stated the undeniable relationship between aesthetics and translation. He believed that studies of translation from or into Chinese were definitely related to strict observation of the basic translation rules from the perspective of aesthetics. In 1999, Liu Miqing published his book *Modern Translation Theory* and brought with new scientific and systematic modern Chinese translation theories. In 2005, another book *An Introduction to Translation Aesthetics* written by Liu built the theoretical framework of translation aesthetics. Xu Yuanchong (2006), another distinguished translation theorist and translator in modern period, wrote *On Translation* and proposed his translation theories-- “Three Beauties”, that is, beauty in sense, beauty in sound and beauty in form through translation practice in poetry. Specifically, he set a certain translation criterion and built a theoretical framework to meet the standardized requirements of verse translation. On the other hand, the author also noticed that it was rather difficult to fulfill the ideal of conveying all the three beauties simultaneously in verse translation. In 2006, he wrote the book *The Art of Translation*, in which his preference for translation as a form of art is clearly expressed.

C. *Aesthetical Function of Children’s Literature*

The reason why a literary work could be a genuine literary work lies in its literary beauty. (Liu Miqing, 2005) Children’s literature as a genre of literature, also possesses its artistic beauty. The process of creating or appreciating children’s literature is undeniably an aesthetical activity. As children’s literature tends to be children-oriented, the artistic beauty of children’s literature cannot be accomplished without considering children’s psychological characteristics. Accordingly, children’s literature is a kind of literary art incorporating beauty of language with children’s aesthetical tastes and psychological characteristics. As a matter of fact, children’s literature is multi-functional, namely, entertaining, educational, and aesthetical. However, the first two functions are realized on the basis of the third one. In other words, children’s appreciation of children’s literature, whether simply for fun or education, might better be conducted in a children-friendly manner which could arouse their interest in reading and ultimately touch their innermost soul with the artistic beauty of both content and form. Take fairy tales for example, animals, plants and almost everything in it can speak and express their feelings just like human beings, and their vivid utterances, lovely images, picturesque settings, etc. altogether bring about an imaginary story with the aid of children’s language and imagination. The plot and the theme, whether revealed or veiled in the story help children distinguish the beauty from the evil. Thus, children can enjoy their reading and at the same time, build up their aesthetic awareness through reading books.

Wang Quangen (1994), an expert in the study of children’s literature, points out that writers of children’s literature should not only understand children’s ways of thinking and characteristics of their aesthetic awareness, but play a dominant role in guiding and facilitating them in reading abilities. Adults, as the major composer and aesthetic subject of children’s literature are responsible for accomplishing its functions, nourishing children’s minds with knowledge, purity, beauty and fantasy.

D. *Summary*

Throughout the glorious history of China, the traditional study of literary beauty can be traced back to several thousands years ago. As a part of the literature in general, it’s believed that it is not until the late Qing dynasty that the translation of children’s literature appeared. After a century’s development, though gaining much more attention than ever before, children’s literature in China has still been in a peripheral status in literary polysystem. It is true of the translation of children’s literature. Still, some distinguished Chinese scholars are dedicated to the glorious cause such as Bing Xin, Ye Shengtao, Ba Jin and Zhang Tianyi and some other children’s translators whose works are endeared by children readers even today.

Translation of children’s literature has a profound significance. First of all, the translated children’s literature provides a channel for children to learn about the outside world and builds a bridge among children of different cultures. Secondly, the translated children’s literature serves as a supplement for Chinese children’s literature and enriches the

resources of Chinese literature. Translators and writers can draw the essence from the translated children's literature. They borrow the feature, the style in various forms from the foreign literature to produce works that is entertaining, educational and aesthetic for Chinese children.

II. TRANSLATION AESTHETICS AND CHILDREN'S LITERATURE TRANSLATION

Today, domestic publishing houses are introducing series of books from every corner of the world to help children enjoy the cultural diversity. It is undeniable that children's literature translation is of great significance in cultural exchanges. Yet, compared with the translation practice, the work of translation studies on children's literature still falls a bit behind. Translators and scholars working in this field start to attach much importance to the establishment of its theoretical framework for the convenience of their translation practice. Among it, the integration of children's literature translation and translation aesthetics leaves much space for our study. The exploration that has been done reveals that children's literature also contains its aesthetic value, so its translation should desirably represent the beauty of the source text, and the translated version should fit in with children's aesthetic needs and satisfy the requirements of translation aesthetics. Still, it remains a big issue for our scholars and translators committed in this field as to how translators can explore the aesthetic function and realize the aesthetic value in an effective way.

Aesthetic Constituents in Children's Literature Translation

In the field of aesthetics, the aesthetic object and the aesthetic subject, as two essential constituents, are inseparable as an organic unity. So is the case with the translation aesthetics. They constantly interact, accommodate, compromise and get unified with each other in the process of aesthetic activity in literary translation and ultimately realize the aesthetic representation of the source text. Children's literature, regardless of its distinctive features, possesses all the general characteristics of literary works. When it comes to aesthetic activities in literary translation, children's literature is no exception, involving both the aesthetic object and the aesthetic subject.

1. The Aesthetic Object and Its Aesthetic Constituents

It is generally acknowledged that the aesthetic object refers to all the objective parts that are involved in human's aesthetic activities. The aesthetic object must be bound up with aesthetic subject, hence a unified pair of opposites. Until now, the definition of the aesthetic object in literary translation has not yet been clarified. Fu Zhongxuan states that there are two aesthetic objects: the original text (or the source text) and the translated text (or the target text), as the translation activity involves the conversion of two different language systems (1993), while Liu Miqing (2005) believes the aesthetic object refers to the source text with aesthetic values. Only with that, human's aesthetic requirements could be satisfied. When it comes to the attributes the aesthetic object possesses, he further stressed that it was unfavorable, even futile to pursue or explore the aesthetic value of the target text with no reference to the original one in literary translation. (Liu Miqing, 2005)

As far as the representation of aesthetic values is concerned, translators are required to be able to appreciate the artistic beauty both in the source language and the target one, to accurately transfer and recreate the original beauty in the target text. For that reason, a comparative analysis between the two versions of texts in the process of translating should be made to justify whether the transference of aesthetic values between target text and source one could be attained. Therefore, the author of the thesis personally believes the translated text or the target text should undoubtedly be one of the basic aesthetic objects besides the original one.

In spite of some minor differences in defining the aesthetic object, the two scholars still hold similar opinions as to its aesthetic constituents with different terminology. In this paper, we'll mainly rely on Liu Miqing's theory to examine how these artistic features could be satisfactorily transferred and then represented in another language on the basis of his classification of the aesthetic object.

The importance should be attached to their translation studies both in practice and in theory. As is mentioned previously, children's literary language is distinctive on various levels given their lower cognitive and intelligent level. As a result, how to represent its unique artistic beauty that can cater to children's needs and interests in the process of translation is an issue worthy of careful study. Before that, it would be better for us to clarify a fact that the general differences are primarily based on parataxis in Chinese and hypotaxis in English which lead to different grammatical categories and grammatical usages of a certain word. In this case, it is necessary to make a contrastive survey between the target text and the original one as to how to accomplish an ideal aesthetic effect in children's literature translation.

1.1 Formal Aesthetic System

According to Liu Miqing (2005), the aesthetic object consists of two systems: the formal aesthetic system and the non-formal aesthetic system. The formal aesthetic system, alternatively, the aesthetic semiotic system, is a combination of the external form, internal form and rational form. The external form can be perceived directly by senses, while the internal form is an intermediate stage that helps to access the rational form which ultimately touches upon or reveals the significance hidden behind the form. It's easily understandable that the formal aesthetic system with different layers is upgraded gradually in the process of aesthetic activity. Both the form and the content are inevitably involved in the binary interaction to present the aesthetic value of the source text. Briefly speaking, formal aesthetic constituents are visible and audible. Since formal aesthetic constituents are perceptible by means of diction, syntactical structures, rhetorical methods and texture of a text, we'll take a close look at how the artistic beauties are presented and represented at different levels in the translating process in the part of case study.

Like adult literature, works of children's literature are also written in artistic language which evokes children's interest and stimulates their imagination. On the other hand, it's interesting to note that its language is easier to be understood with the special features of vividness, simplicity and musicality. For instance, modal particles, reduplicated words, onomatopoeia are frequently used to reinforce the desirable effect that children prefer. In addition, what is equally important lies in the right approach to the issue, that is, how to make its syntactic structures understood by children in the light of their cognitive ability and aesthetic acceptability. Last but not least, translators are supposed to strictly observe the norms of a language. If a certain linguistic combination or a rigid grammatical usage is violated arbitrarily, it is likely that young readers even adults will be made confused. As for this point, Yang Shicheng (1994) once put it this way, "I think overemphasis on the techniques of language regardless of the content and the fact that children readers are still in the phase of language learning, may lead to the losses of artistic values for children's literature."(p.82)

1.2 Non-Formal Aesthetic System

Apart from the formal aesthetic system, the non-formal aesthetic system also contributes a lot to the aesthetic charm of literary works. Constituents in the non-formal aesthetic system are non-substantial, abstract and can't be perceived directly. In translation aesthetics, the non-formal aesthetic system is termed as "indefinite, non-quantitative and infinite fuzzy sets or sets of fuzziness." (Liu Miqing, 2005, p141). Although the non-formal aesthetic system is characterized by fuzziness, it is not a mystery that cannot be uncovered. To some degree, non-formal aesthetic constituents are somewhat related to the writer's personality. Therefore, a competent translator should try to feel the same way as the original writer feels about his works. Only in this way can the inherent artistry of the original text be transferred and represented to its utmost. In the part of case study, we'll deal with the point from the angle of aesthetic representation in imagery and feeling. In children's literature translation, the non-formal aesthetic constituents seem a bit complicated and abstract especially for young readers in their early stage. Therefore, translators should turn to some feasible translation techniques for help. Different ways of translation just like literal translation, free translation, foreignization, domestication, etc. can be employed to convey the original meaning as well as its aesthetic information. The most frequent use of imagery in children's literature is a typical feature which has been studied repeatedly. Simply speaking, imagery is an important symbol creating a kind of emotion or atmosphere to strengthen the aesthetic effect. In the process of translation, translators should pay attention to its connotation and cultural differences so that our young readers could have a better understanding of its implicit meaning and the writer's emotion. Considering children's limited comprehension and immature psychology, adults are sometimes encouraged to offer some guidance to children's reading.

2. The Aesthetic Subject and Its Aesthetic Constituents

Just as scholars in the translation academics vary in their opinions about the aesthetic object, they also display different attitudes towards the concept of aesthetic subject. Fu Zhongxuan claims that the aesthetic subject is composed of the three elements, namely, the translator, the editor and the receptor (or the reader). He explains that the translator is the aesthetic subject of the original text, while the editor is the aesthetic subject of both the target and original text. Meanwhile, the receptor or the reader should be an aesthetic subject of the target text. Whereas, according to Liu Miqing's understanding, the aesthetic subject in translation aesthetics refers to the part of the translator. The aesthetic subject is defined in aesthetics theories as the person who is capable of making aesthetic judgment, and actively exploring the aesthetic object once inspired under certain given circumstances. (Lin Li, 1990) This is true of translation aesthetics. Translators are the aesthetic subjects of the source language, while readers are the aesthetic subjects of the target language. In this sense, the aesthetic subject consists of both translators and readers.

2.1 Translator

Translators as a component of the aesthetic subject play an active part in the aesthetic activity instead of passively accepting information from the source text. Based on the opinion of Liu Miqing (2005), translators are characterized by their objectivity and subjectivity. Being objective means translators should transfer the artistic beauty of the source text faithfully and accurately and try to make the responses of both target readers and source readers equivalent. On the other hand, being subjective means translators enjoy certain freedom to cultivate their potential and recreate their translation works so long as they do not distort or depart from the original text either in form or in content. Therefore, a competent translator with a conscientious attitude and subjective dynamics should be endowed with three aesthetic qualities: aesthetic feeling, knowledge, capability and tenacity.

Nowadays, the focus of translation study is no longer confined to the field of linguistics. Scholars and translators gradually think of the translation activities as a way of intercultural communication. Therefore, translators of the younger generation shoulder the responsibility to bridge the cultural gap through their translation activities. Thus, how to cultivate people's cultural awareness and represent cultural charm in the process of translation is a demanding task for us to fulfill.

According to Xu Jun (2010), the goal of translation, to a large extent, manipulates the attitude, principle and approach a translator possibly adopts. Whether a resulting text is successful or not has much to do with the translator's ability in understanding various elements and their relationship. The role that the translator plays in children's literature is evident, hence can never be neglected. As we've discussed previously, translators are required to take the uniqueness of children's literature and children's limited comprehension abilities into full consideration, especially when they hope to

represent the artistic beauty of the original text. This calls for their conscientious attitudes towards the aesthetic judgment, transference and representation in the translating process. For the sake of evoking children's interest and cultivating their aesthetic capabilities, transference of aesthetic elements should be given equal weight, if not more, compared with the fidelity of its content. Therefore, translators are supposed to give full play to their subjective dynamics. Basically, translators should first of all try to put themselves in children's place and release their imagination to the greatest extent based on their life experience, their abundant knowledge and their persistent efforts to realize the goal of serving for children's education.

2.2 Reader

What seemingly matters most is the role of readers since the process of translation currently tends to be more reader-oriented than text-oriented. Readers' responses and aesthetic evaluation can be of crucial importance in deciding to what extent the aesthetic value is represented. Though readers do not directly get involved in the process of translation, they may indirectly influence its reproduction. For instance, they can participate in the translation activities based on their aesthetic outlook, take advantage of their own aesthetic experience, knowledge and imagination to make their aesthetic appraisal and judgment.

In the translation of children's literature, children as the major target reader group, are one of the aesthetic subjects. Just like adults, they have their own aesthetic judgments of the literary works. As we have mentioned before, children are severely restricted by their life inexperience, their lack of knowledge and immature development in mind and body. Their focus in appreciating literary works is totally different from that of adults. In general, what interests them most is the sort of literary works full of novelty, imagination, purity, beauty and so on. Children's literary aesthetic appreciation, particularly in their early stages, relies heavily on intuition. For example, they tend to shift their attention unconsciously from something abstract to concrete ones such as the varied colors, sounds, shapes and the like that appeal to them remarkably. Apart from that, children often do not set a clear goal for their reading. Their simple purpose is to have fun and derive much pleasure from reading. Yet, the truth cannot be denied that children do have their inherent abilities to make aesthetic judgments. Therefore, the most essential task for the translator is to respect children's nature and translate the literary works on the basis of children's cognition and psychology.

III. CONCLUSION

It's universally acknowledged that translation aesthetics is no longer an independent subject which involves interdisciplinary relevance. Its dependence and relevance can be explored from the perspective of translation, aesthetics, linguistics, literature, philosophy, etc. Based on that, it's no point arguing whether translation is a science or art, particularly within the sphere of literary translation. A critical view should be held in identifying the nature of translation.

Take linguistics for instance, its studies are basically not intended for literary translation. However, its observation and analysis of linguistic commonalities can be turned into positive use in guiding translation practice. Translation is an interlingual transfer and communication between two languages. Its complexity is self-evident. However, scientific rules do exist to manipulate our way of rendering in case the basic meaning and general form in the target text deviate too much from the source text. Translators are supposed to regulate and accommodate their way of translation to the dominating core rules between two languages. On the other hand, the process of translation, especially in literary works is not always governed by scientific rules. It has much to do with artistry. Artistic quality is an indispensable feature in literary translation. Therefore, translators are also required to make an artistic distinction among different styles.

Translation aesthetics makes a compromise on the controversial subject. It involves both science and art, and neither of them can be completely rejected in accomplishing the ultimate task of aesthetic representation. It's also the case where translation of children's literature is involved. According to the above scientific analysis of children and children's literature, it can be concluded that children are born with aesthetic sensitivity and children's literature serves as an important medium and tool in cultivating and establishing their correct aesthetic attitudes. As a result, translation aesthetics in children's literature will have to shoulder heavier responsibilities and should never be neglected. In translating children's literary works, representation of aesthetic elements can be dealt with from the aesthetic object's formal and non-formal aesthetic system according to the interpretation of aesthetic representation made by the prominent translation theorist Liu Miqing.

To sum up, translation is essentially an activity based on objective rules and artistic insights. This is applicable to translating children's literary works. As to aesthetic representation, much remains to be done. The requirements of scientific and artistic approaches will be more and more delicate and complicated. The only way out is to combine both approaches and absorb the strengths of each translation theory to facilitate the development of children's literature.

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The Use of Body Language in English Teaching

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Abstract—Body language means action, expression and posture with something meaningful. In classroom teaching, the teachers' body language can help to increase the effect of sound language. It is an important method for teachers to learn about the students by noticing the students' body language. Teachers can get feedback information by watching the students' expressions in their eyes, on their faces and noticing their actions, as to adjust and organize the teaching in class timely and effectively. Nowadays nonverbal communication has been used in many fields. With the continual reform of language teaching and learning methods, teachers have great challenge in organize the classes in English and create English-learning circumstances. However, with students' limitation, teachers have to simplify their teaching language with the help of facial expression and body movements.

Index Terms—use, body language, English teaching

I. INTRODUCTION

Body language is an important medium in people's communication. It includes gestures and facial expressions. As we know, language is important in communication, but nonverbal communication also can't be neglected. American psychologist Albert said, people get 55% information from expressions.

In classroom teaching, nonverbal communication is more important than verbal one. When teaching, teachers will try their best to arouse the student's interest of learning English. Body language as a secondary means of teaching English is vivid, it can warm up the class atmosphere, help students to understand the point, shorten the distance between teacher and students, stir interest of learning English, improving the quality of education.

So, in teaching, teachers should learn and work hard to master the means of communication in the application of classroom, servicing teaching.

II. THE NECESSITY AND IMPORTANCE OF BODY LANGUAGE IN ENGLISH TEACHING

Body language is a silent and true language, which can express a person's inner world, it always catch one's eye mostly in non-communicative. As a non-communicative, body language is the support and supplement of teaching, and occupies an important position in teaching. A qualified teacher needs not only profound knowledge and good eloquence, but also dignified and harmonized body language. Just like the educationist Makarenko (1998) said: "If a teacher is no expressions and not good at express to people, it's not a qualified teacher." (P. 52)

A. *The Importance of Body Language*

If a teacher can be just right of using body language in classroom teaching, it's every look, every smiles, every action will have a strong psychological effect on students. At this time, silence is the best words. Therefore, the body language takes an important place that oral language can't replace.

1. To enhance the educational influence

Teaching by example is better than word. Teaching by example of teacher is reflected in many ways, and body language is a part of teaching by example. (Brown, 2002, P.367) On the communication between teachers and students, all of the attitudes, feelings and self-cultivation are displayed through the instrument, facial expression, gestures, glances and even clothing, hairstyle have far-reaching implications on students.

The appearance is the first impression of teachers to students and students' preferences of a subject always begin with the goodwill, admiration of teachers. It will give students a good impression and add the charm of education, if teachers are well groomed, smartly dressed, generous and conversely, if teachers have fluffy and messy hair, wear slovenly and untidy clothes, or indulge in dress up, fancy dress, it will give students an irresponsible, hot-tempered, half-hearted impression, and may lead the students in private discussions, divert the students' attention, affect classroom teaching. The teachers' appearance should be neither dressed up, not old fashioned. It not only maintains modesty, but also follows time fashioned and personal style. The appearance should be just with the demeanor and temperament of teachers, set a good educational style to students. This is a more conducive atmosphere for study, which will make students more relaxed, enjoyable to learning.

2. To improve the effects of sound language

In English teaching, teachers transmit information mainly rely on oral language, but using body language to attract students' attention is more lively, exact and effective. Body language is also indispensable when communicating. On the one hand, body language can transmit information directly. In classroom, teachers can convey the sure or unsure

information with eyesight and expression. Sometimes, an encouraging eyes, a meaning smile, or a scornful expression, will influence students. And when the oral language is not the same as the body language, students always believe what they see. On the other hand, it's the most delicate interpret of oral language and students can find teachers' feeling attitude and illocutionary from body language. On teaching, teachers' change of expression has important influence on students' mood of learning, students don't like the teachers, who are straight, clod and serious. So, teacher should use body language to coordinate with oral language reasonable when teaching.

3. To strengthen the role of information

As one knows, the communication of people is through language and nonverbal language to express. And nonverbal language (body language) as an information carrier, takes an important role that other carrier can't be replaced. American phycologist Meilalissi (1999) thinks: The effect of acceptance of information is the sum of 7% words, 38% tone and 55% facial expression. So we can see that the body language is important on teaching. (P.178)

B. The Necessity of Body Language

In China, teacher impacts student not only on teaching content, but also on the thinking style. If a teacher is preciseness, the students will feel the class boring, and have no passion to learn. On the other hand, the teacher with passion, the students will be full of vigor, and the teaching will become interesting and proceed smoothly.

1. To arouse the atmosphere of classroom

It'll make a comfortable and loose class atmosphere to students, if a teacher has good appearance; generous gesture; and reasonable eyes. This also can be a good foundation of a lesson. For example, when I teach the sentence "what's this / what are these?" I can take one pen and three books to ask them. Using body language I can convey information more directly. And through the practice, students can understand how to use the sentence and distinguish singular from plural form. Using this method, practicing again and again, all of the students' attention can be attracted, and most of the students can grasp the knowledge.

On teaching, whether we always use body language flexible and skillfully depend on the needs of students. At this time, students' attention is obviously focused, the consciousness of practice in classroom activities is enhanced, the interest, feeling and will of students are stimulated, then the effect of teaching can be improved.

2. To inspire students' imagination

Body language has strong defining and performance, it can make the language visualize and materialize. Teachers' body language can create a imagine space to student when it shows vivid and interest. When I practice in Xin Yu NO.3 Middle school, my instructor always uses body language to inspire students. She always does some action, and let students guess. And then ask students to use their imagination to make a dialogue of what she did. This method can not only make students grasp the knowledge, but also improve their imagination.

After students answer the questions, we usually use eyes, expression to repeat students. A kind of look, a courage word, a sure gesture can stir students' positive feeling, produce interest and responsibility of study. On the contrary, it'll take despair, depress, or even terrified feeling to students. So, in classroom, we should use body language appropriately, and use positively, encouragement methods to arouse the learning interest of the students.

3. To grasp the students' mood

The famous educator Johann Helnrich Pestalozzi (2000) said "Any good-education is required to be like parents' eyes, which can very accurately see a child's psychological state and various change from his eyes, small mouth and cheeks every day, even every moment."(P. 45)

In classroom, the exchange feeling between teachers and students can narrow the gap of them and make the relation more harmonious. It'll help to create a good learning environment, and improve the learning effect. The use of body language is a good way to improve the relationship of teachers and students.

It is said that "人逢喜事精神爽" people feeling and emotions are often manifested from the external organs, teachers should catch the information on time. We can push the teaching to climax, when students have natural appearance absorbed in class. If students wear a woebegone look, we should adjust teaching, find the reason, and resolve it. Teachers also can check the teaching effect, adjust the method and pace, relying on the students' focus eyes, avid attention, and unpredictable look. Teachers and students are influenced and attracted each other with body language.

In teaching, we should make the body language yield well, and arouse the curiosity of students, in order to create a good and harmonious classroom atmosphere, grasp the knowledge efficiently and qualitatively, improve the teaching quality effectively.

III. THE USE OF BODY LANGUAGE IN ENGLISH TEACHING

The use of body language is the need of English teaching goal. The use of body language can arouse students' interest of learning, and keep the curiosity. Body language can help students do some things or actions in accordance with teachers' commands. The use of body language can enhance the learning effect.

A. The Skill of Use Body Language in English Teaching

The use of body language is not only to embody the new curriculum, but also the need of the goal of English teaching. Teachers' body language can explore students' intellects, develop the potential of right brain. It has alternative function,

accessibility function, feedback function. In classroom, teacher's body language mainly includes: eyes, physical, appearance, gesture, body language, and distance. Different classroom needs different body language. (Zhang, 2005, P.298)

1. The use of eyes

Eyes are an important part on our faces. There is an old saying, "eyes are windows of the soul." Eye contact plays an important role in the communication between teachers and students. A good teacher always knows how to use eye contact. Teachers often have a face to face communication with students, so eye contract can be described in the following kinds: survey, focus.

Survey is to look around students regularly. In teaching, teacher can remind students to listen to the teacher careful relying on survey. After asking the question, the survey of teacher can find the student who wants to answer, and remind the students who don't think about.

Focus is to use eyes staring at a student for a long time. Focus includes serious one. Instruction watch can make a congenial learning atmosphere. And the close watch is the most important focus. When students feel nervous, teacher's smiling eyes will let students relax.

2. The use of smile

A smile gives positive feedback and impacts the affective domain by communicating pleasure, trust, friendliness, interest, excitement, or surprise. A frown communicates displeasure, disapproval, and anger, a deadpan expression communicates distrust, low energy, and disinterest.

Smile is the most frequent using in teaching, "teacher's smile can conquest students' mind." Smile can not only build the interaction between teacher and student, create a harmonious classroom atmosphere, but also convey the feeling what can't express by word, let students feel the teacher's love.

In school English teaching, the use of smile is particularly important. As most of pupils, study is difficult and boring, and their English knowledge of is limited. So they usually feel anxious, nervous. Teacher's natural smile in the classroom can ease the students' pressure on learning English, and help students to create hopeful and optimistic mind.

3. The use of gesture

Gesture is a very complex kind of body language, which is the most useful tool for communication before people create and use spoken language.

Usually, people use hand contact or hand movements to interpret each other's mental activity or state of mind, and express our intent by hand.

In English classroom, we usually use English to teach, but pupils' knowledge and teachers' oral English limit the teachers' expression. In classroom, teacher can use gesture to express the meaning of words, concisely and comprehensively, and visually. For example, when we teach pronoun: I, you, he, she, we, teacher can point to himself says I, point to a girl says she ... students can understand easily. Through gesture, students feel interesting, and the teaching effect will good.

B. *The Interaction of Body Language between Teachers and Students*

The performance of body language is to help to release of the student's emotion. Using body language can help them reduce the anxiety and pressure of expressing in English, and gain confidence and achievement. Body language is an effective teaching method to help students to perceive key points, participate in classroom and cooperate with other students when study. Students' participation is just what the New Curriculum advocated. Body language can also play the role of evaluation in learning, it's a formative evaluation. The attention of teacher will encourage students to think, and answer the question leisurely. If the teacher gives a smile to the students after he finishes the question, the dullest students can understand the commendations and rewards. Students' learning motivation and self-confidence will grow unconsciously. In short, the interpretation of body language can be a good basic idea of English language course.

1. The sound development of body language

Good interaction between teachers and students can build a good relationship. When teacher find there're crack in the teacher-student relationship, they'll try their best to communicate with students, under the specific circumstances of each students, using different helps. At the same time, they reflect on their own teaching process and teaching effectiveness, continue to enhance and improve their teaching skills.

Body language is the bridge of teacher-student communication. It's not only important method of teacher's feedback, but also the way of students to know teacher. Teachers being aware of using body language to transmit information indirectly, can help them have the initiative of teaching, in order to achieve the effect not only by oral language.

2. The improper use of body language

Body language can promote the sound development of teacher-student interaction. But, body language is also a double-edged sword. If teachers use body language improperly, body language will give a negative impact on students. On the one hand, it can range from destruction of classroom atmosphere. And transferring knowledge can not be correctly. On the other hand, it will damage the professional image of teachers and mislead the behavior of students. To be worse, it will result in harm to students in Psychology and personality. Those are adverse consequences. Moreover, violent body language will greatly stimulate students' psychology to revolt and lead to more serious consequences.

C. *The Principle of Teachers' Body Language*

Because body language is very important, we advocate teacher, especially, teachers use body language to regulate the classroom atmosphere, improve the teacher-student relationship, and raise teaching effect. But we should pay attention to the principle when use body language.

1. To be appropriate.

Although, body language can replace the words, our students are not deaf ones. In English class, we should use English to teach as possible as we can, and encourage students to say, use body language to help communicate at proper time.

2. To be natural

Students always imitate teachers' every movement. If teacher's body language is unnatural, it'll impact on the teacher's image, make students difficult to be friend with her/ him. In teaching, we not only need the natural body language, but also need the natural opportunity. We should use body language when we can't express with words. At this time, the natural use of body language plays the effect of silence or silent speaking. So, teacher's body language should be natural and harmonious.

3. To be clear

What the teachers say and do will have a profound impact on the lives of your students, so the use of body language should be clear. Teacher should also pay attention to the consistency when using body language. Otherwise, the communication between teacher's and students will confuse, and it's difficult for students to learn.

IV. CONCLUSION

Body language as a supplementary method of teaching English is vivid. It can help students to understand, enliven the classroom atmosphere, and improve the students' interest of learning English and the quality of classroom teaching. In teaching, if teacher can use the body language correctly, properly and naturally, it'll help to exploit the complex thinking of students. Furthermore, body language teaching can help students to know the background of learning English, make students know the atmosphere of English, and understand English will have different meanings when we use different gestures and expressions. The body language can also help teachers to get students ready for class, make the emotion of students active, enliven the classroom atmosphere, and strengthen teaching effects.

In a word, in English teaching, Non-communication tools cannot be ignored. Teachers should pay attention to the using of body language in classroom teaching. We should stand out the importance of body language, use body language to help teach. As to increase the feeling of teaching points, improve the teaching effect, use body language to service English teaching.

We should advocate using body language in English teaching, but teachers should pay attention to the use rule and using skills. The usage of body language should be right, natural and clear.

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A Functional Analysis of Present Perfect in Persian

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Abstract—The aim of this article is to establish the present perfect functions syntactically and semantically in Persian. Taking the definition of perfect, typically functioning to express anteriority or perfect aspect, the authors analyzed this construction in Persian in terms of function, meaning, and usage. Using functional-typological approach, the category of perfect was analyzed in regards to form, composition, meaning, expression, and its specific uses in Persian in order to determine its fundamental functions and meanings. From a synchronic point of view, the resultative, experiential and current-relevance meanings of this construction could be covered from the compound verb form. The discussion on the meanings of the Persian compound form of present perfect was based on the analysis of its occurrences in contemporary spoken standard texts, including movies, talk shows, and TV serials as well as written texts and the authors' intuitions, in rare cases. Fundamental to the present study were three assumptions: First, a closer look at the data indicates that there are both temporal and aspectual tendencies in this construction. Second, the findings lend support to the claim that indirect information, usually described under the label of evidentiality in many contexts, is a part of their functions. Third, a modified version of Kyparsky's theory of event structure is used and we promote the idea of "hierarchical structure," for the Persian perfect functions where the current relevance of a prior event is the main function and other functions are entailed from this.

Index Terms—Persian, aspect, evidentiality, perfect, form, function

I. INTRODUCTION

It is generally believed that undertaking investigations on present perfect construction, even if studied by several researchers including (Comrie, 1976; Dahl, 1985; Givon, 1982; Mahmoodi Bakhtiari, 2002; McCoard, 1978 and Taleghani, 2008), could hardly be described as plain sailing. This circumstance, in the main, arises from the complex structures of perfect, which, according to many linguists, are bound up with tense since it does show the features of tense at least as a relative tense and is indubitably tied to aspect. Such a dual relationship becomes even more appreciable when it comes to focusing on Persian since, few if any, investigations have been conducted in this relation so far. The data reported in this study provides convincing evidence that present perfect in modern spoken Persian has been reduced from compound to simple in terms of form, however, the function remains constant. It has a significant interaction with the past tense and perfect aspect on the one hand, and exhibits various time reference ambiguities on the other. The authors base their work on Givon's theory of perfect, however, they also use a modified version of the theory of event structure of perfect proposed by Kyparsky (2002) which is among the closest frameworks to Persian present perfect and present a hierarchical structure for the functions of present perfect in Persian. It is therefore of interest to further investigate the possible developments of the present perfect in its current use and describe some salient properties of this construction.

Investigating the functions of present perfect in contemporary spoken Persian is interesting in several ways. These concern a brief description on diachronic change of its form and function, reduction of the form in many occasions. First, the history of the perfect in terms of form and function from Old Persian to the Middle Persian and from the Middle Persian to the Modern Contemporary Persian is of great interest especially when it comes into competition with the morphologically marked past tense. Second, Persian language, like many other languages, has undergone enormous changes in the course of time. There is much evidence of diachronic variation with some studies showing a higher frequency of the reduced perfect form, participle without bound morphemes in Old Persian (Bagheri, 2013).

Given the fact that past research has examined the literature of comparative studies on perfect in Indo-European languages including English, (see for instance, Swart H. (2005), Molsing (2006), Rothstein (2006) and Koenig & Nishiyama (2010), it would be apposite to inquire, at this stage, why Persian speakers seem to use past form for present perfect in many contexts and omit the auxiliary in other occasions, especially in spoken contexts. The response is that

the syntactic and semantic function of perfect in Persian, as the focus of this study, is a breed apart. This abnormality, in comparison to simple past for example, is because of the fact that there is no consensus among linguists in describing aspectuality and temporality. There is consensus, however; where this construction is used to express concepts such as anteriority, resultativity, recent past, indirect information, experiential and current relevance. The category under investigation is characterized by its implications of form-reduction along with some kind of stress-shift pattern of the participle in many cases, if not all. Accordingly the present study aimed to answer the following questions:

- i. Does Persian perfect have temporal or aspectual tendencies?
- ii. Does present perfect bear evidentiality?
- iii. How does Kyparsky's theory of "Event structure and the perfect" adopt Persian present perfect functions?

As far as the arrangement of present paper concerns, it falls into four sections. The first section (the literature review) is committed to a theoretical elucidation of present perfect construction, which includes dealing with the time events, and the categories of tense, aspect and evidentiality. This comprises a scrutiny of the status of the anteriority and resultatives. The second section concentrates on the interpretation of illustrative materials and data, collected from daily conversations in the semi-real setting of talk shows, TV serials and movies, the authors' intuitions to provide confirmatory evidence for the above claims. The third part examines the results of the elucidation in question and lays out a typology of the main semantic function of perfect in Persian. The last section, the conclusion, outlines the significant issues discussed in this paper and proposes some suggestions in the domain of perfect.

II. THEORETICAL PRELIMINARIES

The Functional-Typological Approach served as the theoretical basis of this study. As Halliday (1973) states "a functional approach to language means, first investigating how language is used...but it also means seeking to explain the nature of language in functional terms" (p. 7). Likewise, Givon (2001) believes that the core notions of functionalism, purpose or function, are invisible constructs that defy translation into the physicalist 'language of science'" (p. 5). The functional-typological approach became generally recognized in 1970s with works of Givon (1970, 2001), Hyman, Bybee and Thompson (1979), and Hopper (1985). A functional typologist bases his or her explanation based on priority of functions than form. In this research, aspectual differences and functions of Persian Perfect structures are taken into consideration with an attempt to adapt the theory of Perfect Readings promoted by Kyparsky (2002).

For the point of departure, it is assumed that perfect in general, operates along four distinct, although closely related, dimensions of tense, aspect, modality, and evidentiality.

A. Aspect and Tense

In recent decades, aspect has received considerable attention by linguists, including Comrie (1976), Hopper (1982), Dahl (1985), Givon (2001), Mahmoodi Bakhtiari (2002) and Taleghani (2008) in studying tense, aspect, and mood crosslinguistically. Some linguists including Kurylowicz (1964, p. 90) claimed that no relationship existed between inflection and the type of aspect. He believed that inflections did not denote the type of aspect. In fact, perfect aspect, to Kurylowicz (1964), carried no certain verb inflections. He claimed the pretended opposition tense-aspect, correspond neither to historical nor to contemporaneous facts. He adds tense occurs in all Indo-European languages. What characterizes a language from another, are anteriority, reference of an action, whether present or past to a certain moment, moment of speaking, etc. Perfect is a kind of relative aspect: the verbal form does not denote perfectivity as a feature of action itself, but only the anteriority of the action referred to a moment of time.

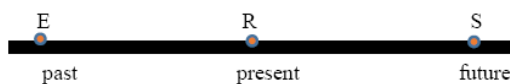
Aspect and tense are manifestations of aspectuality and temporality, respectively. The difference between tense and aspect is, in principle, quite clear. Comrie (1985, p. 6) argues that aspect refers to the grammaticalization of expression of internal temporal constituency. Aspects demonstrate features like perfectivity, imperfectivity, ongoing condition or habitual ones. Some aspectologists treat aspect in terms of a binary opposition between perfective and imperfective. Perfective aspect refers to a verbal form, which considers an event as a single whole and focuses on the completion of the event. (Givon, 2001: 297)

Imperfective aspect on the other hand refers to a verbal form, which is incomplete, has continued for some time and demonstrates the ongoing situation or denotes the repetition of the event. In other words, different ways of viewing the internal temporal constituency of a situation is termed aspect. It is connected with time and locates the situation with reference to the present moment. Some linguists including Vendler (1957) prefer to call this lexical aspect or "aktionsart", while others such as Comrie (1976) call this "aspect" as long as it is marked grammatically, and "aktionsart" when it is a part of a verbal lexeme. He considers aspect as the internal tense of a situation. In a comparison, he considers aspect as situation-internal time, while tense is considered the situation-external time. Moreover, in specifying the distinction between aspect and tense, Comrie (1985) argues that aspect refers to the grammaticalization of expression of internal temporal constituency (p. 6). He exemplifies this distinction using tense and progressive aspect in English, the difference between *Johns was singing* and *John is singing* in English is one of tense, namely a location before the present moment versus a location including the present moment; while the difference between *John was singing* and *John sang* is one of aspect. He argues that since tense locates the time of a situation relative to the situation of the utterance, we may describe tense as "deictic".

Also, Hopper (1982) tried to establish the fundamental notion of aspect as discourse-pragmatic rather than a local semantic one. He argues that it is characterizable as completed event in discourse. In a comparison between aspect and time, Givon (1984) argues that tense, involves primarily, though not exclusively, time as seen in terms of points in sequence, whereas aspect is concerned with the boundedness of spans of time. In *John sang*, the speaker presents the event as one, which occurred within a bounded span of time, while in *John was singing*, the relevant time span is unbounded.

As Jacob (2016) claims, there are at least three different understandings of the term “aspect”: a morphological opposition, whose two poles are usually called “perfective” and “imperfective” e.g. Russian, or Romance, distinguish between “perfect” and “imperfect” and cover quite different functions in different languages. It should be noted that perfectivity indicates the duration of a complete action with a beginning, a middle and an end, while imperfectivity refers to a situation that is not complete and may be ongoing, like the progressive forms. A morphological category denoting the “internal temporal constitution” of an event and a function (expressed grammatically) can be described as “discursive background.” In other words, there is a relational function that always needs a reference point (i.e. another assertion) within the discourse and without expressing anteriority or posteriority.

For the sake of discussion, it should be mentioned that “time in terms of space” or a “timeline” is emphasized as far as tense is concerned. The timeline is a line, which is unlimited from both sides and is divided into three parts: past, present and future. Points located on the line may or may not be contemporary with the events and could be judged separately. As Lyons (1977) states, tense can be a deictic category, which gives information about the event (p. 71). Reichenbach’s (1947) theory of time with three points is shown below in which E, S, and R refer to the event time, the speech time and the reference time, respectively. For perfect structures, the order of the points is as follows: E-S, R, which means that reference time and the speech time overlap and the event time is before these two.



Tenses express two types of temporal relations: (i) between R and S, and (ii) between R and E. It is important to note that relative position of E and S is not specified. (Comrie, 1985, p. 125). Some scholars argue about subcategories of tense and talk about absolute versus relative tenses. Absolute tenses express a relation between S and E. According to Comrie (1985), absolute tenses take the present moment as a deictic center, i.e. the time of utterance (p. 122). In other words, the grammatical relevance of time reference is made relevant to the moment of speech. The three absolute tenses are 'present', 'past' and 'future'. Relative tenses are defined relative to an additional reference point which does not (necessarily) correspond with the moment of utterance.

Also, Bhatt and Pancheva (2005) propose a two-tiered theory for aspect: viewpoint aspect, and lexical aspect. Viewpoint aspect (also called grammatical aspect or outer aspect) locates events in time. Aktionsart concerns the temporal constituency of events. It is related to the internal temporal constituency of events. A traditional view, still endorsed by many, that concerns the “inherent temporal features of the lexical content.” (Klein, 1994).

Among the few Iranian traditional grammarians who distinguished aspect with tense, is Farshidvard (2004) who had plausible views about aspect. He defined aspect or his term *had-e-fel* (the extension of the verb) the features of the verb such as its implication to the beginning, continuity, termination, perfectivity, imperfectivity, and incompleteness. He also classified the verb into five types of absolute or ambiguous, incomplete or continuous, perfect, half perfect, and ingressive. He seemed to confuse the perfect with perfective aspect and stated that perfect aspect, in contrast to progressive, terminated in a specific point of time and supported his idea with the following example:

- 1) *vāqti to āmād-i mān rāfte būd-ān*
 when you come-YOU.PST.2SGGO-PP Copula-P-1SG
 When you came, I had gone.

He claimed that the perfect aspect shows completed action while it was not always true noting that perfect may have some state of perfectivity but not considered perfective in Persian.

B. Modality

Modality, as a semantic category, is simply defined as the speaker’s attitudes and opinions towards an event. Bybee et. al (1994) claim that modality is not so easily defined as tense and aspect. They define it as the grammaticization of speakers' attitudes and opinions; however, they believe it does not fully cover all aspects of this linguistic term. They classify modality as the *agent-oriented modality*, which reports the existence of internal and external conditions on an agent with respect to the completion of the action expressed in the main predicate (p. 177). They claim the agent-oriented modality can be expressed by lexical or grammatical morphemes, for example; strong obligation can be explained with *must* and weak obligation with *should*. They classify *directives* which include commands, demands, requests, and entreaties in *speaker-oriented modality*. The grammatical terms they used in their study for *speaker-oriented modality* are *imperative*: the form used to issue a direct command to a second person; *prohibitive*: a negative command; *optative*: the wish or hope of the speaker expressed in a main clause; *hortative*: the speaker is encouraging or inciting someone to action; *admonitive*: the speaker is issuing a warning; and *permissive*: the speaker is granting

permission. Finally, *Epistemic modality* which applies to assertions and indicates the extent to which the speaker is committed to the truth of the proposition. (p. 179)

C. Perfect

The term perfect is one of the most ambiguous concepts in linguistic terminology for it both refers to the aspect and tense domains. This category is considered as a construction which refers to as a marker of prior events that are included within the overall period of the present.

The point of departure for the review of perfect is Lyons (1968) who considers English perfect as a relative tense, mentions the intersection between tense and aspect. He notes that by taking the “perfect aspect” into consideration, the pieces of evidence can be found so that the English perfect can be regarded as a secondary or relative tense, rather than an aspect. Comrie (1976) considers perfect as an aspect, which is used as a grammatical form for describing an event that happened in the past and may have relationship to the present or a state, which is the result of an event happening in the past. He considers four different functions of resultative, experiential, recent past and present relevance for English perfect. Dahl (1985) claims that perfect is well known in Turkish, Bulgarian, Macedonian, and Georgian and is sometimes regarded as an areal phenomenon. However, Genetti (1986) believes that the same developments also occur in other parts of the world, as in Tibetan languages.

Concerning resultatives or anteriors, terminology of Bybee et al (1994), they are used for evidentials of indirect evidence. Givon (2001: 293) argues that perfect is functionally the most complex and most subtle grammatical aspect. He considers four features of anteriority, perfectivity, counter-sequentiality and lingering relevance in the same form but by no means universal. In his model of perfect readings, Kyparsky (2002) has proposed five different readings with examples for perfect and claims the perfect is truly polysemous for languages (p. 2). He distinguishes morphologically among the five following readings, grouping them in different ways into tense/aspect inflections. In fact he has proposed a modified Reichenbachian theory which allows perfects to be specified for how the event structure by the lexical content of the verb. He claims five different readings of existential, universal, resultative, recent past and stative present for English perfect, therein I adopt for Persian perfect with a modification. Arguably, perfect is considered complex but this complexity should not hinder us to find out their real function and their relationship to tense on the one hand and to aspect on the other. Regarding perfect meaning, Thelin (2016) claims that perfect meaning implies an intimate cooperation with both tense and aspect meanings in a system of hierarchical interrelations. Kotin (2016) believes that in Indo-European reconstructions, perfect is treated as a verbal aspect within the basic categorial opposition of imperfectivity vs. perfectivity in the Proto-Indo-European verbal system, being primarily a grammatical indicator of the so-called “viewpoint aspect”. A similar definition remains for “aspect languages” like Slavonic. On the other hand, the term perfect is used in descriptions of the verbal systems of aspectless languages like Germanic, where it denotes the category of verbal tense. Moreover, aspect or aspectuality often refers to phenomena like the so-called “lexical aspect” (the opposition between telicity and atelicity¹), which is situated on the border between pure lexical categorization “aktionsart” and the viewpoint aspect.

Regarding perfect, Khan (2016), mentions two important functions for the perfect: primary function, which is the resultative² and secondary function that is indirective and expresses an event in the past, with either perfective or imperfective aspect. He adds that the term ‘indirective’ was introduced originally by Lars Johanson to refer to verbs with this function which were widely attested in Iranian and Turkic languages. Khan (2016) claims that English perfect is both a tense and an aspect. It has a temporal meaning, since it involves an event that is prior to the speech time, but it has also aspectual meaning since it involves a particular viewpoint of the event, i.e. a viewpoint of the event from speech time. And finally, findings of Roorick & Lau (2017) in this relation are worth mentioning. They claim that the relation between perfect aspect, indirect evidentiality in hearsay and reference, and mirativity can be best understood as the result of an underlying template, involving event stages or information stages.

D. Perfect versus Preterite

As mentioned above, the perfect is considered as a construction which refers to as a marker of prior events that are included within the overall period of the present whereas the preterit marks events assigned to a past occurrence which is concluded from the present. Concerning the distinction between the English simple past and the present perfect in terms of location in time, (Comrie 1985) argues that the perfect is not distinct from the past” since both state an occurrence in the past” (p. 78).

Perfect with inclusion of the present moment can be the main reason why some linguists including McCoard (1978) considered its semantic meaning as indefinite past, unlike preterite which is taken as definite past, as:

2) She has eaten lunch. (Which implies that perhaps she does not need to eat food at the moment,) versus:

¹This term, taken from Greek, refers to the endpoint or the goal. Basically, it means that a verb or a verb phrase has a goal or endpoint (semantically) in some sense. When we say for instance: *Ali ran the marathon in 2 hours*. The whole sentence is telic because the meaning is that *Ali completed the marathon* i.e., the action has reached its endpoint. In linguistics, telicity is the aspectual property of a verb phrase (or of the sentence as a whole) which indicates that an action or event has a clear endpoint. A verb phrase presented as having an endpoint is said to be telic. In contrast, a verb phrase that is not presented as having an endpoint is said to be atelic:

a) The mechanic finished repairing the roof. (telic verb) b) Maryam studied for 6 hours. (atelic verb)

² Resultative expresses a resultant state arising from a preceding situation that is temporally disjoined from the present.

3) She ate lunch. (Which does not necessarily mean she is not hungry.)

With a typological view, as is well known, and unlike Persian, present perfect in English does not tolerate the presence of any temporal expressions explicitly referring to the past. Such an expression in any Persian past imperfective sentences triggers the use of either simple past tense or present perfect depending on the speaker's intention and verb forms.

Moreover, the choice between present perfect and simple past in English depends too much on how relevant the situation is considered to be for the present moment by a speaker and this is a subjective judgment. But when this intuition of relevance is very clear, especially in the presence of adverbial expressions like "already", the correlation between past imperfective and present perfect is very clear:

4) He has already eaten lunch.

III. PERFECT IN PERSIAN

The perfect is obviously attested in modern Persian as well, however; as far as the authors have studied, they have never been subject to theoretically or typologically oriented research until now, except for some peripheral works by Mahmoodi Bakhtiari (2002) and Taleghani (2008) on general dimensions of tense, aspect and modality. Persian belongs to the family of Indo-European languages. It is somehow between analytic and synthetic languages. If one asks about "the perfect", the individual has to determine what is talked about. In so doing, two choices exist: to speak of a certain paradigm of forms, inherited from Proto-Indo-European, which might have changed functions, leading to many different things in the actual languages, and might even have melted together with other categories, e.g. with aorist, and with indicatives, as in Persian. Or to define "perfect" cross-linguistically via a certain function and call "perfect" any category, one can find cross-linguistically that responds to these functions, even if it combines itself with other functions. It goes without saying that we are dealing with perfect as we find it in a specific language at a specific moment, here Contemporary Persian. We take a strictly onomasiological point of view, i.e., certain form categories we find in Persian. Let's start with the form of the perfects in Persian.

A. Present Perfect Form in Persian

In this part, the form present perfect is explained, however; the point worth mentioning is that according to Shariat (1988) we cannot have past participle from intransitive verbs but what he calls: subjective noun, as in: *xabide*, (slept or one who slept) or *neshaste*, (sat), etc. (p. 151). The present perfect, in Persian, *mazi-e-naqli* literally translated to "Past Narrative", consists of past participle form of the main verb plus present copulas or the enclitic pronouns.

The perfect in contemporary Persian appears to be constructed by so-called "shortened infinitive" (*masdar-e-morakham*), which is the same as the past stem of any Persian verb and an adjectival suffix, which is henceforth called past participle³, as the shared element of all perfect constructions, plus the existential verb form of *astan* (to be), from Early New Persian, reduced to the enclitic present or past copula. It is a verbal suffix that marks person and number so that it makes the omission of the subject possible since the verb forms are finite. For third person singular, however, it can be retrieved especially in the written language because the subject is absent and the verb undergoes zero morpheme. As an example, the conjugation of the verb *kardan* (to do) for present perfect is as follows:

karde-am, (I've done), *karde-i* (you_{SG} have done), *karde ast* (S/he has done), *karde im* (we have done), *karde id* (you_{PL} have done), *karde im* (we have done)

B. A Diachronic Approach to Persian Perfect Stem

Some Iranian Grammmarians investigated the history of verb forms in Persian. Bagheri (2015) claims that for describing past events there are different tools such as types of past tenses. Moreover, using the past participle followed by a nominal in possessive case is another tool for describing the past events. For instance, instead of 10, sentence 11 is used:

5) *in ra man kardam*
this_{D.O.} I do_{P-1SG}
I did this.

6) *in kardeye man ast*
this done I is
This is what I have done.

Based on her claim, the past participle in Old Persian was mostly made from the weak root followed by inflectional ending of "-ta" like the following:

3 Along similar lines, Shariat (1367: 151) argues that with intransitive verbs, we can have subjective noun rather than past participle, and it seems he is right since verb forms such as *xabideh* (slept) and *istadeh* (stood) are considered subjective rather than objective, but the form is still the same as past participle. These forms can usually be judged as either the resultative perfect or experiential one, for instance: *Xabide* (S/he has slept, as a result, now s/he is not awake)

TABLE 1:
OLD PERSIAN VERB STEM

Stem	Past participle	Persian equivalent
\sqrt{kr}	<i>Karta</i>	کرد
\sqrt{br}	<i>Borta</i>	برد
\sqrt{mr}	<i>Morta</i>	مرد

She claims that in the remained scripts from Old Persian, it is obvious that using past participle for events occurred in the past, is preferred than using simple past, since plenty of phrases such as the following can be seen: (p. 95)

7) *ima: tya: manā: katam*

this that I do_{pp}

This is what I have done.

She believes that past stem of Persian verb system is the natural continuous and developed form of Old Persian past participle. Given this form is used very commonly for events happening in the past, in the Middle Persian, it is used as the stem for the past verb. She claims that the only difference between Old Persian PP and the Middle Persian past stem is the phonological development.

Accordingly, the vowel /a/ was deleted from the end of suffixes “-ita” and “-ta”. The following table shows this development: (p. 196)

TABLE 2:
PERSIAN STEM DEVELOPMENT

Stem	PP in Old Persian	Past stem in M.P	Persian Equivalent
\sqrt{di}	Dīta	Dīt	دید
\sqrt{ras}	Rasīta	Rasīt	رسید
\sqrt{dav}	Davīta	Davit	دوید
\sqrt{ja}	Jata	Jat	زد

This diachronic change of the Persian perfect form is accorded with some other languages as well. Scholars who have studied the perfect in English do not believe this category has had the same form and functions in the course of the time but gradually developed and did undergo form and meaning change. Friden (1984) claims that perfect was first extended to the intransitive verbs then to the verbs with objects in genitive or dative cases and finally to the intransitive verbs (p. 217). Also, McCoard (1978) believes that unlike the argument of those scholars claiming modern perfect asserts information about the present only implying the prior event that brought about the present situation, our view is just the reverse (p. 217).

The perfect indicating continuing present relevance of a past situation, expresses a relation between two time-points, time of the state from a prior situation and time of that prior situation:

8) He has bought a car. « *And he still owns it.* »

C. Persian Perfect and Stress Pattern

There is a phonological rule for stress pattern of verb forms in Persian that in positive forms, the stress usually falls on the last syllable of the first constituent. Accordingly, for simple past forms, stress must fall on the last syllable of the past stem. If this rule is violated and stress falls on the last syllable of the whole form, then the construction plays the function of perfect. As an example, /'didəm/ (I saw) is past simple but /did'əm/ (I have seen) is taken as present perfect. This phenomenon is confined to 3rd person singular only. Samei (1995) adopts this rule, restricted it for the two verb forms of /daftəm/, (to have), and /xordəm/ (to eat), only but it cannot be confined to these cases.

IV. FUNCTIONS OF PERSIAN PERFECT

In this article, the idea of ahierarchical structure for Persian perfect functions is proposed where *current relevance* of a *prior event* is the main function of this category and other functions including evidentiality, resultative and experiential readings fall under the hierarchy. In the following section, these different functions are listed and explained.

A. Current Relevance and Resultative Functions

Shariat (1988) defines present perfect as an event that started from the past but the same action or its result can be witnessed at present, for instance:

9) The window has opened. (*and it is still open*)

He claims that present perfect has two meanings of (*soboot*) and (*hodoos*). His terminology is different from what is used in linguistics these days, however, he identifies two important functions for perfect. By “soboot” he means an action that happened in the past but has not finished yet:

10) *Bāāreḥ zire derāxt istāde āst*

Bahareh under tree stand. -_{3SG.PP.Copula}

Bahareh has stood under the tree.

A change of state happens and also she is still there.

By “*hodoos*” he refers to an action that has finished:

11) *Amir sobhāne xorde āst*

Amir breakfast eat-3SG.PP.copula

Amir has eaten breakfast. (As a result, he is now fed up.)

The two functions he identifies remind us of the current relevance function of perfect (*soboot*) together with resultative function (*hodoos*).

B. Relationship of Resultative and the Event Time

The result of an event which started just a few moments before the reference time. For perfect, the reference time overlaps speech time:

12) The police has arrested the suspect.

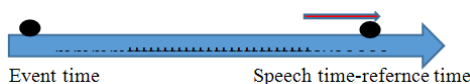


Fig 1. The relationship of the event time, reference time and speech time

C. Relationship between Negation and Resultative

Shafai (2010: 80) is among few traditional grammarians who, like Farshidvard (2004), implies some linguistic views regarding present perfect. From syntactic point of view, he claims that in terms of perfect form in Persian, the past participle refers to the past and the linking verb implies present. Current statement seems to validate Comrei's view on the two time points of perfect, the time of the situation in the past and the speech time. So the structure is a combination of present and past tenses. He, too, divides all Persian verbs into states and activities. He believes that in negative forms attention to the RESULT is more obvious:

13) *Tā be hāl emārāti be in zibāi sāxe nāfode āst*

Until now palace.IND like beautiful buil-PP not-become-PP.PRS.copula

Such a beautiful palace has not been built so far.

(It means that a very beautiful palace has been built and we can see it.)

D. Recent Past or Hot News Function of the Perfect

Some Iranian grammarians have promoted linguistic ideas into Persian Grammar, including perfect. Anvari and Givi (1991) claim this construction is in contrast with simple past:

14) *nāme rā nevešte vā tūje pākāt gozāfte āst*

letter DO.marker write-3SG.PP and inside the pocket put-3SG.PP copula-3SG

He has written the letter and has put it in an envelope.

They claim that present perfect is used for an action that happened in the past and continues to the present. So, they call it “*mazi-e_gharib*” literally translated to “near past.” They apply the same terminology used by linguists with the name of recent past:

15) *bāfē xābide āst*

the baby sleep-3SG.PP copula-3SG

The baby has slept.

They claim this construction can also be used for an action that has not happened yet but it may happen in future:

16) *sāid be mosāferāt rāfte vā hānūz bār nāgāfte*

Saeed to travel go-3SG.PP and yet not return-3SG.PP

Saeed has taken a trip and has not returned yet.

This is an interesting point since they do not refer to the role of the negation adverb of *hanooz* (yet) which is usually used in present perfect and makes negative sentences. Of course, the role of sentence elements in selecting the verb forms can not be neglected. An example of “hot news”, from Iranian newspaper of “19 Dey,, Nov. 7th, 2016 follows:

17) *osūlgārāhā māqrūr fodeānd*

fundamentalists proud become PP-3PL

Foundamentalists have become proud.

It should be noted that hot news function of the Persian perfect does not necessarily refer to the recent events:

18) ... *rezā šāh 3 tā zān gerefte būd. Fāetāli šāh 300 tā zān dāšte.*

...Reza Shah had married 3 women. ..It is said Fathalishah would have had 300 wives!

(*Shahzad Serial, part 4, minute 11*)

In Persian the first form is apparently past perfect, the second form seems to be present perfect but it can not be true since there is no current relevance. Thus, it is could be double perfect, and the third form could be past perfect progressive, because there is no current relevance to consider it present perfect progressive.

E. Perfect Used for Showing Probability

Persian perfect is highly influenced by specific adverbs. We should keep in mind that adverbs always impose some restrictions for selecting specific forms⁴. Perfect can be used instead of past subjunctive while the adverb of “probability,, is included:

- 19) *ehemālān Saeed be xāne rašte ast*
Saeed might have gone home.

The following list of Persian adverbs often restrict the verb forms to perfect:

- /tā hālā/* Until now,
/tāzegihā/ Just,
/hāmūz/ Yet
/tā konūn/ Already

- 20) *tā hālā dārsefo tāmūm kārde*
Till now his/her lesson finish-3SG-PP
S/he has finished her/his lesson until now.

F. Predilection for Using Simple Form Instead of Present Perfect Form with the Same Function

Persian has a tendency towards the use of a reduced *past*-form-like instead of Present perfect, but still contributes the perfect function. A closer look at the data indicates that diachronically perfect has been competing with preterite however this trajectory and marked predilection for the preterite is due to the emphasis on this point that the concentration is mostly on the occurrence of an event in the past, so this function should be presented in some syntactic form which seems simple past in written form, however position of stress is changed to indicate perfect meaning in spoken texts:

- 21) *abbās: āqāje mohebi az be nāmāxjāndegi az sūje hāmsājehā do ta kompūt āvārde.*
Abbas: Mr. mohebi as representative of neighbours two compute for you bring-3SG-PP

Abbas: As the representative of neighbors, Mr. Mohabbi has brought two computers for you. (Iran TV Serial)

The event happened in the past and is still going on; however, this form is used to indicate the current relevance.

What factors lead to the amalgamation of present perfect and simple past form in contemporary Persian?

There can be sociolinguistics, psycholinguistics, therapeutic factors or syntactic, morphological and phonological aspect of Persian which may lead to such development. While Persian has perfect form, it also bears a form that expresses the perfective past. The past form construction probably originated as aspectual, but little by little obtained a past reference temporal value as well, like what has happened to the proto Indo-European perfect in other languages, and of the new compound perfects in modern Romance and Germanic languages. (Luraghi, & Inglese, 2016). This is consistent with well-known paths of language change, whereby resultative constructions develop into anteriors and eventually into past tenses (Bybee, Perkins, & Pagliuca, 1994).

Restrictive adverbs like *hanooz* and the degree of remoteness of the event may be two other reasons for this change. Comrie talks about the concept of remoteness which has been grammatical in some languages, including Paba-Yaguam with five grammatical markers for five degrees of remoteness. We think nearly all researchers who have worked on the English Present Perfect agree that in some sense it includes both the present moment and a situation located in the past. Both time points are crucial. Where they differ is the emphasis placed on each of these. The assumption is that while is talking about near past, Persian speakers use present forms:

- 22) */hašt sāl ašt ke dær opsālā zendegi mikonæm*
Eight years is that in Uppsala life PROG.Do.1SG.
I have been living in Uppsala for 8 months.

Another important point is that in cases where Persian speakers apparently use past “forms,, to indicate present perfect, the 3rd person singular is always an exception. It means that we can never use simple form for third person singular to denote present perfect, there happens a phonological phenomenon in which the glottis blocks and compensatory lengthening happens instead:

- 23) *mæn sobhūnæmo xordæm*
I my breakfast eat. 1SG-P
I have eaten my breakfast.

- 24) *ū sobhūnæfo xorde.*
S/he her/his breakfast eat-3SG-PP
S/he has eaten her/his breakfast.

For the third person singular, this amalgamation does not work. The form must necessarily be perfect from, otherwise; it does indicate past “tense,,.

G. Using Present Perfect for an Action That Happened before Another Action

It is not always the case that, according to the definition stated by traditional grammarians, including Natel Khanlari (1976) about pluperfect that is used for an event happened before another. We can have cases that violates this definition:

4 In Persian “adverb” literally means “condition”!

25) *Zāmmāi ke be mānzal residām motāvāḍge fodām kelidām rā gom kārdeām*

When that to home arrive-1SG.P. learn-1SG.P. key-POSS.1SG. DO.marker lose-1SG.PP

When I arrived home, I learned that I had lost my key.

As it is clear, using such form is in contrast to English language.

H. Perfect Used to Indicate an Action for Future

In some cases perfect is used to indicate a future event. Along similar lines Mahmoodi (2004) argues that sometimes one grammatical form can express more than one category and one category can be expressed by more than one form:

26) *Sāle dige vāḡti be irān miāid mān fāreqotāhsil fodeām*

Year another when to Iran IND.marker.come.3SG.PL. I graduation become.1SG.PP

By the time you travel to Iran next year, I will have graduated.

Tense projection is very common in Persian. It is a phenomenon in which the Persian past tense or present perfect forms are projected into the future to designate events, states, and processes. This phenomenon under consideration is by no means confined to Persian. Examples of Swedish, Turkish and Persian prove this:

27) *kom sa° gick vi.* (Swedish)

come-imp so went we

We are off now.

Det var verkligen synd!

That is (lit. was) a real shame! (Amoozadeh, 2006)

28) *manageddim.* Turkish

I went.1sg

I am about to leave.

29) *bāzi rā fārdā bāxteim*

Game DO.marker tomorrow lose-PP.3PL

*We have lost the game tomorrow.

I. Evidential Function of Persian Perfect

As Aikhenvald (2004) puts forward, evidentiality is a grammatical category with source of information as its primary meaning. If the speaker watches the event happen, it is called visual evidential, if one hears but doesn't see it, she calls it non-visual evidential. If the speaker makes an inference based on general knowledge or visual traces, it is called inferential evidential respectively. She argues that if one is told about a piece of information, it is known as reported, secondhand, or hearsay evidential.

Evidentiality is one of the major functions of perfects in Persian. There are main arguments to be advanced to support the existence of evidentiality in Persian perfect. Among the publications about the expressions of evidentiality in Persian perfects is Jahani (2000) who argues when it comes to eye-witnessed information, both perfect and simple past are used. While, based on the different data in case of the eye-witnessed information, perfect is not used. This form is only used when one infers the information. Rezai (2013) states that concerning the terminology of so called *narrative past* (present perfect) in Persian is due to this fact that this verb phrase is narrating some event (which is not witnessed by the speaker) occurred in the past. An implication of evidentiality is understood from its Persian terminology.

Accordingly, when somebody who is not present to witness an event or an accident for instance, but is informed by somebody else, he MUST use present perfect or present perfect continuous to tell the truth- if he uses past form, one maxim of discourse as Grice explained is violated, he is telling untrue. The following data supports the idea:

30) *Eftāq oftāde xode rānānde poste fēraq qermez ūmāde zāde be fīje gofte xāfe kon ūno! Rānānde dāfte milārzide mige bāndāri gozāftām*

Incident fall PP. that self-driver behind red light come PP.3SG. To glass hit PP.3SG. Said PP.3SG. Asphixiate that. Driver have PP.3SG. PROG. Marker shake PP.3SG. Say PRES.3SG. Bandari put.P.1SG.

It happened once that the driver himself had come behind the traffic red light, had hit the window car had said: "Stop that"! He had said "I am listening to Bandari Music"?

(Mehran Modiri, TV show of "Getting together" **dowrehami**, Nov. 4, 2016)

Farshidvard (1383) believes that in the course of time the different meaning aspects of the verb have been reduced, as a result, the semantic value of the verb is reduced too (p. 272). For example in the past subjunctive was used instead of present perfect and present subjunctive. Perhaps this claim can be applied for the contemporary use of double perfect which seems to be used now as a marker of evidentiality only:

31) *doktor jāzdi nemitūne dorūq gofte būde bāfe*

Doctor Yazidi can not lie say-3rd.PP be-PP be-subjunctive

Doctor Yazdi could not have said lies. (Sadegh Zibakalam, Nov, 3, 2016, University of Sharif, Tehran)

J. Experiential Perfect

The experiential or existential reading of perfect, as Kyparsky (2002) terms it, refers to an event that can be repeated by the agent, so the example of:

32) Ali has visited Shiraz.

implies that it is possible for Ali, who is alive, to visit Shiraz again and that he has visited Shiraz for one or more occasions so far.

V. PRESENT PERFECT, ASPECT OR TENSE?

Many linguists including Bybee, Comrie and Dahl (2016)⁵, have talked about the degree of temporality and aspectuality of perfect. What is important is that how grammatical structures are used in discourse. She adds that linguists invented the categories of tense and aspect and there is no evidence that they are always separable. Indeed, perfective aspect overlaps a great deal with past tense, and perfect (anterior) overlaps with both of them, depending upon how far it has grammaticalized. These days there is greater interest in how grammatical structures such as perfect are used in discourse (conversation or written discourse) and how they change over time than in questions of how they should be categorized.

Nevertheless, the linguists commented on the type of category of perfect. It does have some features of tense, including admission of deictic adverbs like yesterday, last year, at nine o'clock, etc. but it is not deictic, like tenses:

33) *sāwt noh qorsāfo xorde*
clock nine pills-POSS-M/F eat-3SG-PP.

***S/he has eaten her/his pills at nine.

It also has some features of aspect but still is not fully fit with aspects like progressive with the marker of “*mi*” in Persian.

Concerning the category of perfect in English, Khan (2016) thinks that it is both tense and aspect. Mahmoodi Bakhtiari (2002) claims it is tense. Comrie believes it is aspect. Thelin (1999) reports that it is neither tense nor aspect. He calls perfect as a systematically independent category of temporal meanings correlated hierarchically with tense and aspect, namely *taxis*, taken the term from Roman Jakobson. It goes without saying that typologists are looking for universal tendencies, grammatical changes, etc. Furthermore, we have to respect the „right“ of any language to organize itself in an arbitrary manner, or better, we have to recognize the emergence of spontaneous and to some degree contingent usage norms within different language communities. It is these norms which eventually develop in categorial and grammatical rules (Jacob, 2016).

VI. CONSISTENCY OF PRESENT PERFECT WITH PRETERIT ADVERBS

The relationship between tense forms and adverbial expressions seems to be plausible while we contrast at least two of them. Here the closest form, semantically and pragmatically, to present perfect is the simple past form. Some of these adverbials fall accompany both, certain going only with the past form and others with Persian perfect only. It is agreed upon the characteristic of the present perfect that it locates the events somewhere before the moment of speaking, but the particular occasion is not focused on. Hence, the time expressions accompany this form is usually indefinite. On the other hand, since the simple past tense is used to describe events that happens in a particular time in the past, its time expressions are definite. By definiteness, We mean something that is clear to the audience and lacks ambiguity. By comparing “He came” with “the book”, on the one hand and “He has come” with “a book”, McCoard (1978) claims that the former is definite and the latter is considered indefinite. He emphasizes that the focus of the “indefinite past theory” of present perfect lies in the relationship between the tense forms and adverbials accompanying them. He calls the adverbs accompanying simple past “definite” and those with present perfect “indefinite” adverbs. For example, the adverb “yesterday” is considered definite since it refers to relatively particular time in the past but “up to now” is taken indefinite because it refers to an indefinite time in the past:

34) He came yesterday.

35. He has written ten letters up to now.

Some adverbs such as “this morning” may accompany both forms; however, it is worth saying that from a typological point of view, this adverb has some usage limitations in English that is not grammatical to use it after twelve a.m., whereas this limitation is not observed in Persian. We can use the same time expression any time of the day, whether in the morning or in the afternoon. A question arises here that what adverbs must be taken definite and which ones should be considered indefinite. Generally adverbs such as “last night”, “at two o'clock”, “yesterday” and the like are considered definite and time expressions such as “in 2008”, “in October”, “since December” and so on, are taken indefinite adverbs. McCoard claims that if two adverbials are definite, the time during those two must be definite as well, so the past tense can be used for such occasion. This claim works in English but not in Persian. It is an obvious distinction between these two languages:

36) He worked on this project from last Monday until 10 in the morning.

We may use either present perfect or present perfect continuous on such occasions in Persian; however, when this duration is included the moment of speech, the present perfect must be used:

37) From last Friday up until now, I have had nothing but problems.

⁵Personal communication

Unlike English and maybe some other languages, Persian perfects are consistent with preterit adverbs and make grammatical sentences:

38) *difāb opsāla bārf ūmāde.*

Last night Uppsala snow come-3SG.PP

*It has snowed in Uppsala last night.

39) *Elmirā sāʔjek nāhāreʔo xorde*

Elmira clock one her lunch eat-3rd.PP.

*Elmira has eaten her lunch at one o'clock.

VII. TOWARDS THE TYPOLOGY OF PERFECT IN PERSIAN

Our investigation of the illustrative material analyzed so far has shown that not all the semantic properties attributed to the perfect in Persian are assignable to English equivalents. The similarities between Persian and Swedish in terms of Perfect results in similar analysis. This study showed that Persian perfect behaves in several respects like the English perfect: it always links the present moment to a specific time in the past, however, unlike English the present perfect in Persian does accompany with adverbials such as “yesterday” or “last week”. It can also be reduced in form and can be replaced by present verb form.

VIII. HIERARCHICAL MODEL OF PRESENT PERFECT

Based on the Persian perfect functions, and with regard to what Kyparsky has presented for perfect readings, we propose current relevance as the main function for Persian perfect and some other functions which seem to be entailed from it. The following diagram is developed claiming that the functions of perfect structure a hierarchical one in which one main function stands on the top of the hierarchy and others are entailments of it as follows:

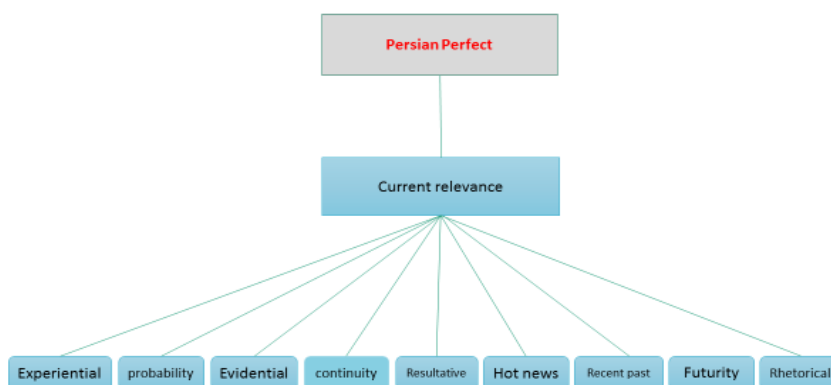


Fig 2: Hierarchical structure of Persian perfect structure

IX. CONCLUSION

We proposed four arguments along with a modified Kyparsky’s theory on English perfect readings to present an explanation for the syntactic and semantic function of perfect in Persian. The function and semantic properties of the Persian present perfect is associated with the anterior or perfect aspect. This category typically expresses features both associated with tense and aspect. It is however difficult to assign Persian present perfect as a tense or as an aspect since it shows both the features of tense on the one hand and the characteristics of an aspect on the other. The data yielded by this study provides convincing evidence that perfect in Persian, as a category for stating the prior event, and in case of stative, depicting a present state usually of the subject, resulting from a change of state, has the tendency towards the amalgamation of preterite and the present perfect with a differentiation of stress shift in some cases but with the same function that perfect provides. It is not limited to perfect forms, but it is manifested by indicative forms specifically when the degree of remoteness of the event is not too much.

The second argument is that the Persian perfect, with two crucial time points of the situation located in the past and the present moment with equal importance, enjoys a hierarchical structure rather than a horizontal pattern adopted by other scholars. We have modified theory of *time event and the perfect* in order to adapt it to Persian perfect with two main features of actual state of relevance to the present time on the one hand, and having reference to a prior event on the other hand, and consider its current relevance, as the main function of on the top of a hierarchical model and resultative, experiential, evidential functions and perfect of recent past as the entailment from the main function which are arranged horizontally. Concerning perfect in Persian, with a common element of participle, we have a principal

function which stands on the top of a hierarchy and there are other subfunctions that fall under this principal. The principal function is “current relevance” since without it we cannot logically have resultative, experiential, hot news functions and so on. We can assume the concept of *entailment* for this situation. Current relevance entails resultative and other functions.

The third argument is that Persian admits using past adverbials such as “yesterday” or “last week” with present perfect forms whereas they do not include the present moment. To some extent, the feature of admission of past adverbials, refers to the behavior of the verb and partly to the orientation of the event structure and its relevance to the present.

The fourth argument is that in Persian perfect bear the feature of evidentiality. Indirect information, usually described under the label of evidentiality in many contexts, is depicted in present perfect.

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