The Influence of Affective Factors and Cognitive Engagement on Students’ English Proficiency

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Abstract—Affective factors are the most important factors that influence SLA and language teaching. However, the author wonders if there are some mediators that help affective factors improve students’ language proficiency. The paper hypothesizes that positive cognitive engagement can be a mediator to enhance language achievement. In doing so, the author attempts to make a survey so as to investigate students’ cognitive engagement. By assessing the result of the survey, it is certain that positive cognitive engagement can improve students’ language proficiency based on their variable affective factors.

Index Terms—affective factors, engagement, language proficiency

I. REVIEW ON AFFECT AND AFFECTIVE FACTORS

Rod Ellis (1994) claims that learners’ affective states vary dynamically and have a major impact on their ability to learn. Anxiety which arises out of inadequate performance, communication apprehension, tests, and fear of negative evaluation is likely to have a debilitating effect on L2 learning, but it can also have a facilitative effect. How anxiety affects learning will base on its strength and the situational context. Stern (1983) argued that learners’ affective variables contribute to cognitive skills or even more to language learning. However, theorists have been rather slow to recognize the vital part that affects plays. It was only after the 1960s that the research on affect and affective factors in education gained importance with the development of humanistic psychology. Some representative studies on the affective factors in SLA/EFL are dealt with this section.

A. Diversity of Learners

Studies on learners’ attitudes and motivation in the late 1950s originally witnessed the learner-focused investigation (Spolsky, 2000). However, affective factors vary from individuals to individuals. Some learners keep a positive attitude to language learning, the outcome reflects that the positive attitude is better than the negative one. Motivation, anxiety, personality, inhibition, self-esteem, etc are all affective factors that can affect the learners’ proficiency. Learners’ different sociocultural and linguistic backgrounds, together with their varied cognitive abilities can result in unique achievements in foreign language learning. Even learners with similar backgrounds vary remarkably in their learning experience, ultimately resulting in different learning outcomes. These different learning outcomes, according to Larsen-Freeman (2001), can be explained with reference to learners’ diverse factors.

The explanation of learners’ diversity in this research is conducted from learners’ various affective factors and their varied active engagement factors, which can contribute to distinctive achievements in English learning.

B. Importance of Affect and Affective Factors in SLA/EFL

For Rogers and Freiberg (1994), the learner-centered approach takes the necessity of appropriate support for learners’ affective development as a prerequisite for effective learning. Damasio (1994) believed that learners’ affective reactions can be often linked to their learning outcomes. Specifically, positive affect increases many types of helping behaviors and task performance, whereas negative affect influences in the opposite way (Baron & Tholmey, 1994; Isen, 1999).


Second or foreign language learning doesn’t only depend on language characteristics and social environment, but also to some extent on individual factors. However, individual factors constitute personal learning strategies as well as affective factors. As a result, there are various academic theories that focus on the importance of affective factors, as well as their significant roles in SLA/EFL.
II. REVIEW ON STUDENT ENGAGEMENT

Engagement can also be called involvement. It mostly studied on the basis of student’s behaviour in the classroom. In the following part, the definition and classification of engagement will be explained entirely.

A. Definition of Student Engagement

In Zone of Proximal Development this book, Vygotsky (1978) proposed that learners would not become engaged in learning until teachers could provide learning opportunities at the appropriate level with the right support. However, it is difficult to define engagement, since engagement involves a combination of many factors that relate to the learners’ efforts when they devote themselves to purposeful learning tasks (Krause & Coates, 2008). Pace (1982) developed the concept of “quality of effort” and emphasized that learners had to exert their investment of time and effort in all kinds of learning and development. Axelson and Flick (2011) maintained that Astin’s student involvement was studied in the 1980s, should be regarded as the benchmark for modern engagement research among historians of education. Astin (1984, p. 518) defined student engagement as “the amount of physical and psychological energy that the student devotes to the academic experience”. Obviously, engagement and involvement are used as synonyms in his theory. Furthermore, Astin (1984) highlighted the behavioral aspect of his engagement theory. According to him, students who devote considerable time and energy to their studies are usually more active in school and have more communication and interactions with their peers and teachers. The more engagement learners are involved in, the higher engagement they have, and the more learning achievement they realize (Astin, 1984).

Based on the observation of students’ classroom participation, Newmann (1992) noticed an interesting situation characterized by numerous students. Newmann (1992, p. 12) defined student engagement as “student’s psychological investment and effort directed toward learning, understanding, or mastering the knowledge, skills or crafts that academic work was intended to promote”. Compared with Astin’s theory of student engagement focusing on time and quality dimensions, Newmann (1992) stressed the importance of the emotional aspect of student engagement, that is, students’ psychological investment in learning. Hu and Kuh (2002) looked at student engagement inside and outside of the classroom. Their levels of participation resulted in a range of measurable outcomes. Subsequently, Kuh et al. (2007) argued that student engagement represented two aspects of meaning. On the one hand, student engagement refers to the time and efforts that students invest in educational activities, which are usually empirically linked to college outcomes. On the other hand, student engagement involves how the school deploys its resources and organizes the curriculum, learning opportunities, and other supports to encourage students to take part in activities related to effective outcomes, such as persistence, satisfaction, and graduation. According to Coates (2007), student engagement is a broad term that takes both academic and non-academic aspects into consideration. “Engagement is seen to comprise active and collaborative learning, participation in challenging academic activities, formative communication with academic staff, involvement in enriching educational experience, and feeling legitimated and supported by university learning communities” (Coates, 2007, p. 122). As Anderson et al. (2004) proposed, student engagement concerned with students’ behaviors in a positive way, which included attendance, attention, participation in class, as well as the psychological experience of identification with school and the feeling of being respected and school belonging.

To sum up, definitions of student engagement mentioned above all contain behavioral components, emotional or psychological components. Current research adopts Astin’s definition of engagement, which takes the physical and psychological aspects of engagement into account totally.

B. Classification of Student Engagement

Appleton et al. (2006) asserts that student engagement is a multidimensional concept. Despite numerous definitions of student engagement mentioned above, researchers have come to the agreement that student engagement ranges from two to four component models (Appleton, Christenson, & Furlong, 2008). Research holds a two-component model that often takes into account the behavioral engagements (e.g., positive conduct, effort, participation) and the emotional engagements (e.g., interest, identification, belonging, and positive attitudes towards learning) (Finn, 1989; Mark, 2000; Newmann, Wehlage, & Lamborn, 1992; Willms, 2003). For Nystrand (1991), the two-component model of student engagement resides at the distinction between procedural engagement and substantive engagement, with the former referring to the behavioral engagement and the latter psychological investment. Skinner and Belmont (1993) analyzed student engagement from two aspects: Behavioral engagement and emotional engagement. Generally speaking, learners who are well engaged in behavioral involvement in learning also show positive traits in emotional engagement. Fredricks et al. (2004) defined the multifaceted nature of student engagement in three ways, and this tripartite conceptualization of engagement takes behaviour, affect, and cognition into consideration (Fredricks et al., 2004; Jimerson, Campos, & Greif, 2003). Likewise, Schaufeli (2013) maintained that the dimension of student engagement at least involved three basic elements: physical, emotional, and cognitive engagement. According to Yazzie-Mintz (2007), those three dimensions of student engagement included academic engagement (i.e., engagement of the mind), social participatory (i.e., engagement in the life of the school), and emotional engagement (i.e., engagement of the heart).

III. REPORTS ON THE ENGAGEMENT INSERTING INTO THE CLASSROOM STUDY

In this study, we present a hypothesis. We want to illustrate that language proficiency can be contributed by affective
factors, such as motivation and self-esteem. However, the writer will focus on the students’ engagement as a mediator in the language study. Without students’ participation, affective factors and learning strategies cannot be implemented into the study. We developed a questionnaire and presented it to the university students at Hei Longjiang Bayi Agricultural University. We only surveyed the cognitive engagements from students. After that, we would make an interview to investigate the relationship among affective factors, engagement and language proficiency.

Cognitive engagement was first proposed by Corno and Mandinach (1983) to examine learners’ learning in relation to the pedagogical process as well as individual’s characteristics. Definition of cognitive engagement generally falls into two different dimensions. One group specifically highlights a psychological investment in learning, whereas the other group targets cognition and emphasizes the strategic learning. Cognitive engagement includes three constituent elements: self-regulation, psychological investment, and motivation. Self-regulation forms in self-control (e.g., endurance and effective resource management), meta-cognitive strategies (e.g., planning, goal setting, and monitoring), and cognitive learning strategies (e.g., surface strategy, deep strategy, and management strategy) (Garcia & Pintrich, 1994; Pintrich & De Groot, 1990). A distinction is drawn between the deep and surface level of strategy use. Learners who use meaningful strategies in learning are more cognitively engaged, as they exert more mental efforts, create more connections among ideas, and thereby achieve greater understanding of ideas (Weinstein & Mayer, 1986). Motivation consists of the expectancy (e.g., self-efficacy and goal value) and achievement goals. The corresponding variables in these three components are usually latent, and they cannot be observed directly. The approach of employing questionnaires can only reflect the use of learning strategies in learners’ learning (Fredericks et al, 2004). Therefore, observation of teacher’s classrooms was also conducted for our in-depth investigation on cognitive engagement in the present study. Two dimensions of cognitive engagement were used in the current research, cognitive engagement referring to the use of learning strategies and a psychological investment in learning.

IV. THE CONTENT AND OUTCOME OF SURVEY

A. Questionnaire on Cognitive Engagement

In order to explore the interrelationships between affective factors and cognitive engagement, two methods are going to be utilized. The first method is a questionnaire whereas the second one is an interview. Both methods represent sub-elements of a survey. In this section a questionnaire is going to be carried out to assess students’ cognitive engagement. Therefore, this particular method shall be examined more closely in the following paragraph.

A questionnaire is composed of a series of questions or items. The purpose of it is to obtain information or data from the participants. A questionnaire can be divided into: a letter-questionnaire, a group-questionnaire and a visit-questionnaire. The data for the former one are collected from the participants who have received it by mail. The Group-questionnaire, on the other hand, requires gathering all the participants in the same place at the same time in order to collect immediate data. This form of a questionnaire is the most popular among all three. Conversely, the least popular one is the visit-questionnaire. It requires the researchers’ physical presence at the participants’ workplaces or actual places of residence. It is thus a combination of the two aforementioned methods. Moreover, it has advantages and disadvantages. Although it improves the overall quality of the questionnaire, the completion of the entire research using this unique method might prove to be less feasible, mainly due to the logistics of it.

Having considered all the above mentioned forms of a questionnaire, we have chosen the group-questionnaire as the means to gather the data for this paper. We have divided the procedure into six steps. Step one was to select the participants by pinpointing the location and the age-group. This research is mainly collecting the data on cognitive engagement from students in Heilongjiang Bayi Agricultural University. They are junior undergraduates. The crucial step two was to design the questionnaire itself. My questionnaire aims mainly at exploring the interrelationships between students’ affective factors and cognitive engagement. The questionnaire consists of twenty items with the criteria to choose from ranging from ‘never’ to ‘always’. Step three, which we were able to accomplish in a timely manner of just two days, was to drift the questionnaire with step four being to correct it. In order to achieve it, a significant amount of the most appreciated assistance from tutors and colleagues was received. Step five was to predict the possible results of the questionnaire. Last but not least was to revise it and arrange the steps in a specific way. We organized the items from the easiest to the most difficult while attempting to include a range of possibilities related to cognitive engagement. In the process of doing the questionnaire, we factored the explanation of the instruction to the students. Later, the questionnaires were distributed to all participants. We mentioned that the participants were all junior university students. There were sixty of them in total, selected from six different departments; three being Engineering Majors; the rest being Art Majors. Finally, we collected all the questionnaires for research.

Based on the review on affective factors in English teaching and the study of cognitive engagement, we hypothesized that affective factors could contribute to students’ English proficiency, with cognitive engagement as a mediator. Therefore, we made a survey in terms of students’ cognitive engagement in English class. The actual content of the survey can be seen below:
Sixty students took part in the research. Based on the above survey, 83% students scored sixty or higher, which means students tend to rather involve themselves in the language study. They declared to be cognitively engaged in the class. Among them, 40% of students’ scores are over 80, which means they concentrate on the importance of the combination of engagement and affective factors in language study. The evidence seems to suggest that the role of engagement can be served as a mediator to link learners’ affective factors with their achievement in English learning. Further, it will yield a more comprehensive understanding of the relationship among all different variables included in these three factors: affect, engagement, and achievement. In effect, the survey has shown that teachers need to raise students’ positive affective factors in order to make them engaged into the language study. With the mixture of positive affective factors and active engagement, language proficiency may have significantly greater chances of improvement.

<table>
<thead>
<tr>
<th>Cognitive Engagement</th>
<th>1=never; 2=seldom; 3=sometimes; 4=frequent; 5=always</th>
</tr>
</thead>
<tbody>
<tr>
<td>I repeat words to remember them.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>I take notes for mistakes that are often made in my English learning.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>I take notes that I hear or read in English.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>I learn English only in classroom.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>I will not enlarge my English knowledge out of the textbook.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>I often give up learning the more complex aspects of English.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>I try to put English knowledge in use.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>I merely learn what the teacher teaches.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>I guess meaning of new words through linguistic or communicative context.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>I make use of my English mistakes to help me do better.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>I often think by myself on whether or not my way of learning English is valid.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>I will keep learning English even if I finish the assignment.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>I remember a new English word by making a mental picture of a situation in which the word might be used.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>Memorizing grammatical structures and vocabulary are the major way for revision before the English exam.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>I surf on the Internet to learn English.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>I rethink the language points in class.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>I often make use of various English learning APP.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>I am willing to join in English role play in class.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>I often make action to force myself to study English.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>I often make comparison between English and Chinese in terms of learning English.</td>
<td>1 2 3 4 5</td>
</tr>
</tbody>
</table>

B. Interview on Students’ Cognitive Engagement

As Dörnyei (2007) suggested, the semi-structured interview is suitable for situations when the researcher has a clear overview of the phenomenon in question and is able to broadly develop questions relating to the topic but does not want to use ready-made response categories that may limit the depth of investigation. Berg (1989, p. 17) claimed that the semi-structured interview is conducted in “a systematic and consistent order, but it allows the interviewers sufficient freedom to digress; that is, the interviewers are permitted (in fact expected) to probe far beyond he answers to their prepared and standardized questions”.

Compared with questionnaire, interview research is more natural, as there the interviewers ask the interviewees questions related to the research face to face. It requires interviewers to comprehend the main research fully and possess vast experience in quality interviewing. In the process of an interview, the interviewees must be selected carefully and cooperate with the interviewers. Similarly, interviewers must increase the motivation of interviewees by answering the questions posed by the interviewees. Meanwhile, interviewers must observe and note the main points, so that a successful interview can be conducted. Generally, the interview procedure consists of six steps which we naturally also adopt into our research. The first one was to make a good initial impression, which we achieved by the correct dress code such as work uniforms. Owing to the fact that the interviewers were teachers and the interviewees were students, the uniforms seemed like a natural means of expressing the importance and formality of the research. Secondly, an interesting and clear introduction of the project was necessary, followed by a detailed ten-minute explanation of the entire project including its purpose. After that, participants were asked the interview questions. There were eight questions, which the students were encouraged to answer truthfully and honestly. Later, a complete report was comprised, based on the collected notes. The final step was to finish the whole interview. On average, the entire interview with a given individual lasted less than ten minutes. We selected six people from six different departments for this interview. We have adopted a holistic approach to the described interview. The questions asked can be seen below in their original order.

1) Do you like learning English? Please describe your ideal English teacher and teaching method. Under what circumstances will you actively engage in English classroom activities?

2) Why do you learn English? Among integrative motivation, instrumental motivation, intrinsic motivation, and
extrinsic motivation, which one is the main factor that affects your engagement and achievement in English learning?

3) Do you feel anxious in English class? (If yes) How does your anxiety affect your engagement and achievement in English learning?

4) How do you evaluate your self-confidence in English learning? To what extent does your self-confidence affect your engagement and achievement in English learning?

5) What are affective factors that promote your engagement in English class? Have you ever had the experience that your positive affective factors facilitate your engagement and achievement in English learning? (If yes) Could you share it with us?

6) Do you always re Rocky your performance in English class?

7) Do you think your personality, such as being an introvert/extrovert, can affect your engagement in English class?

8) Are there any obstacles which affect your engagement in English class? If there are, what are they?

We spent approximately one hour interviewing all the six students. They all agreed on the fact that positive cognitive engagement plays an important role in English achievement. As for question one; six students mentioned that role play or a language debate can make them engaged in the class; integrative motivation and instrumental motivation are the major ones to encourage them to participate in class. In terms of students’ anxiety, four participants admitted they experience it, bilaterally pinpointing the reason for it as the lack of suitable English language level achieved before entering University. This self-doubt seemed to be at the forefront of their minds whilst in class, thus affecting their performance. The following question further explored the concept of confidence. The students suggested self-confidence can be enhanced by either answering questions or a revision before class. All in all, the participants think that a positive attitude can really influence the engagement in English class. More surprisingly, none of them expressed any post-class reflections on their performance. Our explanation is the fact that they are under a lot of pressure and not aware of the importance of self-evaluation. As far as the personality is concerned, the students’ perception was that an introverted personality contributes more to class engagement, their reason being a possible more frequent student-teacher as well as student-student interaction amongst the extroverted learners. As for the last question, four students revealed that listening and speaking skills are their biggest weaknesses while others also admitted that both cultural differences and grammar tend to hinder their English language learning.

The interview results have shown in all certainty that all the participants agree that positive cognitive engagement can enhance students’ English achievement.

V. CONCLUSION

This study set off to find out how great a role Positive Cognitive Engagement plays in an English Language classroom. We assumed that metacognitive methods would play a significant role in students’ language improvement.

In order to gather sufficient results, two methods of data collection have been chosen, the first being a questionnaire whilst the second an interview. Both of them led us to the same anticipated conclusion, that is, cognitive engagement is crucial in language learning. It doesn’t only improve students’ fluency, but also their involvement and self-confidence thus leading to better proficiency.

Although the results show a strong indication, the author of this paper acknowledges that these results should be further confirmed by a survey on a larger scale and deeper insight into the phenomenon.

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