Sources of Chinese Learners' Self-efficacy in Learning English Pronunciation[*]

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Abstract—This study investigated the sources of Chinese learners' self-efficacy in English pronunciation learning to reveal their predicting power in English pronunciation performance by Chinese learners. Unlike some previous studies which found a significant correlationship between the sources of self-efficacy and learners' academic achievement, the findings indicate that of the four sources, social persuasion are not highly correlated with learners' pronunciation performance while mastery experience, vicarious experience, and physiological states are significantly correlated with learners' pronunciation performance with the correlation coefficients at .48, .26 and .29 respectively. However, only mastery experience shows a significant predicting power in Chinese learners' performance of English pronunciation.

Index Terms—sources of self-efficacy, English pronunciation, Chinese learners

I. INTRODUCTION

As an indispensible component of communicative competence, pronunciation contributes a lot to one's linguistic intelligibility and comprehensibility in oral communication and it is especially so in the intercultural communication. However, it has received far less attention than other language skills and knowledge by teachers and learners (Brown, 2014). Pronunciation learning is a cognitive process influenced by external factors such as mother tongue, learning environment, peer performance and internal factors like learning attitude, motivation, learning strategies, etc. As for Chinese learners of English, lacking of opportunities to immerse in the target language and influenced by the traditional Chinese culture, they may be more introverted and feel anxious to practice speaking English in public and therefore they are more likely to experience failure in pronunciation learning and as a vicious circle, end up with "dumb English". In that situation, it is of significance that both the external and internal factors should be considered in English pronunciation teaching and learning to help Chinese learners out of the trap. The social cognitive theory proposed by Bandura (1977) has creatively taken into consideration both the external and internal factors, which broadens our mind in the study of foreign language teaching and learning. The core of the theory is the construct, self-efficacy, which is people's evaluation of their own ability to fulfill a specific task based on their information of what they have experienced in a specific context. It is regarded as a motivational force to mediate learners' affective states and their cognitive behavior in the study of educational area (Schunk, 1991; Bandura, 1997; Pajares, 2003).

Bandura (1977) hypothesized that while developing their belief of their ability to perform a certain task, learners tend to refer to four sources of information: performance achievement, vicarious experience, social persuasion and physiological states. Many studies have claimed the validation of the sources of self-efficacy in academic performance (Bandura, 1997; Usher& Pajares, 2006; Usher& Pajares, 2009; Arslan, 2012). However, these researches mainly focused on the sources of self-efficacy in the area of math, engineering, and physical education. Among the fewer related studies concerning the context of foreign language learning, most studies examined the relationship between self-efficacy and learners' reading, listening and writing performance while few focused on that between self-efficacy and learners' speaking achievement (Raoofi, Tan & Chan, 2012), even fewer on pronunciation learning. Given the importance of self-efficacy in education, this study aims to clarify the sources of Chinese learners' self-efficacy in English pronunciation learning, and to reveal their predicting power in Chinese learners' performance of English pronunciation.

II. LITERATURE REVIEW

A. Self-efficacy in Foreign Language Learning

As the core of social cognitive theory, self-efficacy, refers to "beliefs in one's capabilities to organize and execute the course of action required to produce given attainments" (Bandura, 1997), which functions as a better predictor of learners' performance than their real competence. It has been reported that a student with a higher level of self-efficacy achieved better scores than learners with lower levels of self-efficacy regardless of their real ability (Lent et al, 1984), because self-efficacy can influence people's choices of behavior, the degree and duration of their effort in completing a

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task, and even their emotions. The more highly they evaluate themselves, the greater efforts they will exert, and the better achievements they will make.

Self-efficacy is context-specific, and varies with the specific academic area (Zimmerman, 2008). Therefore, it should be examined in a specific domain, and there has been an increasing interest in self-efficacy in the context of foreign language learning. Mills, Pajares and Herron (2007), Hsieh and Schallert (2008), and Tilfarliogln and Ciftci (2011) pointed out that self-efficacy was the most influential predictor of learners' performance in language learning. Self-efficacy has also been found related with learners' strategy use in foreign language learning: Magogwe and Oliver (2007) showed that learners' strategy use was significantly related with their self-efficacy through a study on 480 Botswana learners of English; Wong's study (2005), which explored the relationship between the language learning strategies used by six Malaysian learners and self-efficacy beliefs, found that the higher the level of the learners' self-efficacy was, the more strategies were used in language learning.

Some researches (Mills, Pajares & Herron, 2006; Rahimi & Abedini, 2009) also indicated the relationship between self-efficacy and learners' performance in a certain aspect of foreign language learning. Mills, Pajares and Herron (2006) found that the learners' reading self-efficacy belief was significantly related with their reading proficiency in a survey of 95 college learners of French in USA. Klassen's study (2002) showed that self-efficacy was an important predictor of students' writing behavior. The research by Rahimi and Abedini (2009) also located the positive correlationship between self-efficacy and listening proficiency in Iranian context.

The problem is that most studies concerned just focused on learners' performance in reading, writing and listening, while the investigation into the speaking area can be hardly found (Raoofi, 2012; Liu, 2013). Since self-efficacy is task-specific and people's self-efficacy varies in different contexts (Bandura, 1977), it is necessary to have a deep insight into the relationship of learners' self-efficacy and speaking performance, especially the basic component of speaking ability, pronunciation.

B. Sources of Self-efficacy in Foreign Language Learning

Bandura (1977, 1986 and 1997) pointed out learners' self-efficacy is formed based on four sources of information: performance achievement, vicarious experience, social persuasion and physiological states. Performance achievement, referring to people's past experience of achievements, plays the most influential role in predicting the level of self-efficacy (Usher & Pajares, 2008). People fulfilling a successful task can easily develop confidence in performing similar tasks, because direct experience of success helps to "raise mastery expectations" (Bandura, 1977). Noticing their peers with a similar ability succeed in performing a task, learners can be positively stimulated to have a higher evaluation of their own ability, and thus the level of their self-efficacy is promoted. This is the second source of self-efficacy, vicarious experience. Teachers' or peers' positive evaluation of their ability can give learners more positive stimulus to work harder, which is the third source of self-efficacy, social persuasion. Physiological states can also function as a source of self-efficacy belief, influencing learners' judgment of their anxiety and vulnerability in performing a specific task. Higher level of anxiety and unease may decrease one's self-efficacy and debilitate their effort in performing a task. Otherwise, when they feel more comfortable and are not beset with aversive emotion, they can achieve better performance.

Regarding the four hypothesized sources of self-efficacy, there are only a few studies related with the specific domain of English learning (Raoofi, 2012). Wang and Pape (2007) found that self-efficacy is correlated with Chinese learners' past experience, social persuasion and interests in English learning. Similar findings were also reported by Cakir and Alici (2009), and Moghari et al (2011). Greta (2009) indicated a relation between learners' self-efficacy and classroom environment, peers interaction and interaction between teachers and learners.

C. Research Statement and Questions

Given the importance of self-efficacy in the foreign language learning, it is worthwhile to investigate its influence on learning a specific language skill. Since fewer studies have focused on speaking, especially pronunciation, it is of value to clarify how much learners' self-efficacy weighs in their pronunciation performance, especially in the case of Chinese learners. Therefore, this study is to figure out the answers to the following two questions:

1. Is there a significant correlationship between the four sources of self-efficacy hypothesized by Bandura and Chinese learners' pronunciation performance in English?

2. To what extent can each of the four sources of self-efficacy predict Chinese learners' pronunciation performance in English?

III. METHODOLOGY

A. Participants

The participants in this investigation were 90 undergraduates aging from 18-20 years old majoring in English education from a normal university in Southwest China. They were chosen because as would-be teachers in primary schools, their pronunciation proficiency would be highly emphasized and evaluated in teaching young learners English after they graduated. After understanding the significance of the research, all of them agreed to participate in the survey voluntarily. Among these participants, 22 were males while 68 females. All of them started to be exposed to English

when they were third-year graders in primary schools at the age of around 9 but began their formal and systematic learning after attending the middle school at the age of around 13. Besides, none of them had experiences of being abroad before.

B.   Instruments

In this research, the scale of sources of pronunciation self-efficacy was used to get the essential data needed. The scale, based on Usher and Pajares' research (2009), included some basic information like the participants' gender, age and length of English learning, and four groups of 24 questions aimed to explore learners' opinions of the four hypothesized sources of self-efficacy in English pronunciation learning. In order to remove the vagueness of the 100-point scale, a 5-point Likert scale (1=never, 2=seldom, 3=sometimes, 4= often, 5=always) was adopted, and the higher score means the higher affirmation of the influence of the factors investigated. All the questions were written in Chinese for clarity. Questions 1-6 were about learners' mastery experience in English pronunciation learning, e.g. "I have made excellent grades on pronunciation; I have always been successful with pronunciation". Questions 7-12 addressed learners' vicarious experience, e.g. "Seeing my classmates do well in English pronunciation pushed me to do better; when I see my classmates communicate with foreigners fluently, I picture myself doing the same thing in the future". Questions 13-18 were used to investigate social persuasion, e.g. "My English teachers have told me that I am good at pronunciation; my classmates like to practice oral English with me because they think I am good at pronunciation." Questions 19-24 intended to reveal learners' physiological states, e.g. "I feel comfortable in the pronunciation class; doing pronunciation work is an easy task". In order to get the consistency confident, we calculated the Cronbar's alpha value, and the number is .89, which proved the validity and consistency of the scale.

In order to evaluate learners' pronunciation performance, a pronunciation test was designed, which included two parts covering the segmental and supersegmental features in English pronunciation. In the first part, a three-hundred-word essay about environmental protection was chosen and the participants needed to read it aloud, while in the second part, participants needed to create a dialogue in groups of two according to the given situation.

C.   Data Collection

Before the survey, learners need know about the significance of the research, and their consent to participate in the survey must be obtained. The survey was conducted at a particular time which was convenient for all of the participants. Before the survey, participants were informed of the procedure of the survey, and the meanings of the 24 questions in the scale were clarified. Participants were required to finish the scale within 30 minutes. With the 90 questionnaires in hand, the writer firstly made a rough analysis of them to remove the uncompleted ones, and after that 86 remained for further analysis.

In order to evaluate these participants' pronunciation performance, an English pronunciation test followed the questionnaire survey. The 86 participants with qualified questionnaires were invited to finish the remaining pronunciation test with their pronunciation recorded. At first, participants were required to read the essay in 5 minutes and then made the dialogue in 3 minutes in groups of two. All of them were required to finish the recording in three different rooms respectively, so that the recording could be clear for grading. After they finished the test, the recordings of 86 participants were graded by two foreign teachers of English. The total score for the test was 100 points, and the final score of each participant was the average score given by the two natives.

D.   Data Analysis

Statistical Packages for Social Science (SPSS) version 18.0 was employed to analyze the quantitative data collected in this research. In order to reveal the relationship between the sources of pronunciation self-efficacy and learners' pronunciation performance, the Pearson's product correlation was used, and for the predictive power of each of the four sources in learners' pronunciation achievement, regression analysis was adopted.

IV.   RESULTS

The descriptive statistics can show us a general picture of the research findings concerned. Therefore, the descriptive statistics of the four sources of self-efficacy are presented in Table 1, including the mean and standard deviation of each of them. It can be found in the table that the mean score for the mastery experience is 3.71, the mean score for vicarious experience 3.62, the mean score for social persuasion 2.8, and that for physiological states 2.67. All the numbers were calculated based on a 5-point Likert scale. Among them, mastery experience and vicarious experience have higher mean scores than the other two, and the scores are close to 4, which implies that most participants agree on the influence of the two factors. Besides, in the table, the mean score of learners' English pronunciation performance is also listed to indicate their pronunciation proficiency. It is 79.6, as is shown in the table.

TABLE 1.
DESCRIPTIVE STATISTICS OF SOURCES OF SELF-EFFICACY AND ENGLISH PRONUNCIATION PERFORMANCE

	N	Mean	Std. Deviation
mastery experience	86	3.71	0.95
vicarious experience	86	3.62	0.94
social persuasion	86	2.80	0.96
physiological states	86	2.67	1.06
pronunciation performance	86	79.6	5.94

In order to investigate the correlation between the four self-efficacy sources, and that between the sources and English pronunciation performance, Pearson's product correlation analysis was adopted, the results of which are listed in Table 2. As is shown in the table, mastery experience, vicarious experience and physiological state are significantly correlated with learners' pronunciation performance at the 0.01 level, with the correlation coefficients of .48, .26 and .29 respectively. However, social persuasion shows no significant correlation with it. Moreover, Table 2 also indicates that all of the four hypothesized sources of self-efficacy in learning English pronunciation are significantly correlated with each other at the 0.01 level, which further proved the internal consistency of the scale.

TABLE 2.
CORRELATIONS OF SELF-EFFICACY SOURCES AND PRONUNCIATION PERFORMANCE

Variables	mastery experience	vicarious experience	social persuasion	physiological states	pronunciation performance
mastery experience	1	$.29^{**}$	$.60^{**}$	$.58^{**}$	$.48^{**}$
vicarious experience	$.29^{**}$	1	$.48^{**}$	$.39^{**}$	$.26^{**}$
social persuasion	$.60^{**}$	$.48^{**}$	1	$.63^{**}$	.11
physiological states	$.58^{**}$	$.39^{**}$	$.63^{**}$	1	$.29^{**}$
pronunciation performance	$.48^{**}$	$.26^{**}$	.11	$.29^{**}$	1

**Correlation is significant at the 0.01 level.

For a deeper understanding of the predicting power of the four self-efficacy sources in English pronunciation achievement, hierarchical linear regression analysis was adopted. Table 3 shows the details of the results investigated: among the four sources, only mastery experience shows a significant predicting power in learners' pronunciation achievement (R^2=.23).

TABLE 3.
HIERARCHICAL LINEAR REGRESSION OF PREDICTING SELF-EFFICACY SOURCES ON PRONUNCIATION PERFORMANCE

Dependent Variables/ Predictor	R^2	R^2 change	F change
pronunciation performance			
mastery experience	.23	$.23^{*}$	54.6^{*}
vicarious experience	.25	.06	2.633
social persuasion	.01	.01	1.6
physiological states	.08	.00	1.5

*Correlation is significant at the 0.01 level.

V. DISCUSSIONS

It has been shown that the sources of self-efficacy hypothesized by Bandura (1997) have a significant correlationship with learners' academic achievement, which can be further supported by the results in this research. Given the concrete context concerned, the relationship between the four sources and learners' pronunciation achievement presents its unique characteristics. That is, unlike some previous studies which claimed a significant correlationship between the sources of self-efficacy and learners' academic achievement, this study indicates that of the four sources, social persuasion are not highly correlated with learners' pronunciation achievement, and only mastery experience has the predicting power in learners' pronunciation performance.

According to learners' responses to the questions surveyed, the mastery experience ranks the first with a mean score of 3.71, followed by vicarious experience, which signifies that learners hold an affirmative belief of the two factors in their English pronunciation learning. Moreover, both of the two factors are significantly correlated with learners' pronunciation performance, indicating that Chinese learners would like to refer to what they have achieved in the past and what others have done while performing English pronunciation tasks. As for the other two factors, learners hold a relatively weaker belief toward them. As mentioned by Cubukcu (2008), the result can be caused by cultural and educational environment, their personalities and the opportunities to express themselves in the foreign language. Compared with social persuasion, physiological states have more influence on learners' performance and their willingness to make a greater effort to achieve better performance. The higher level of anxiety and fear of learners in the public speaking is more likely to cause the negative self-evaluation, and their performance will be highly discounted (Erkan and Saban, 2011).

The results by hierarchical regression analyses further confirm the role played by the mastery experience in predicting learners' pronunciation achievement while the other three show no strong evidence to be significant predictors. In the situation of pronunciation learning, mastery experience functions as a more direct factor in learners' cognitive developing process. Just as pointed out by Cubukcu (2008), learners refer to their past experience to make a self-evaluation of their capability in achieving something, instead of socially taking others' persuasion into consideration. If learners' perception of success results from their own experience rather than from external aids, self-efficacy will be more likely to be promoted (Bandura, 1977). In the situation of Chinese learning English, they may have compared their own pronunciation with others' model like native speakers', teacher' or their peers', but the factor which decides how far a student can go is their belief of their self-image, which originates from what they have experienced. Vicarious experience has a comparatively indirect influence on learners' performance (Bandura, 1977), but it can function as a referential frame for learners in learning. If they are shown others' gains by perseverance, learners are more likely to enhance their own efforts to perform a specific task. Social persuasion is a rather weak factor in predicting learners' pronunciation performance. As is stated by Bandura (1977), only when learners have no enough related information about their past experience can they tend to take the other three factors for reference.

VI. IMPLICATIONS AND LIMITATION

According to constructivism, learners develop their cognitive ability based on their prior knowledge and experience in related areas when they negotiate with the flow of new information and with the external learning environment, therefore, learners' personal experience is a critical factor in deciding learners' cognitive behavior (Bandura, 1977). For teachers in teaching English pronunciation, it is significant to take some measures to enhance learners' self-efficacy. Firstly, the teaching syllable should be designed to stimulate learners to relate the new information with what they have experienced before, and the learning tasks should be based on learners' current level. The similarities between English and Chinese pronunciation should be listed serving as a positive past experience to facilitate learners' learning. Secondly, positive feedback is in need to promote learners' intrinsic motivation when they finish a learning task, and learners feeling progress after experiencing setbacks will show higher levels of self-efficacy (Bandura, 1977). Because Chinese learners are relatively shy to speak out themselves in the public, and the affirmation of their efforts can stimulate them to do more oral practice and achieve more. Thirdly, before the pronunciation teaching, teachers should help learners to form a proper ideal self-image of English pronunciation by analyzing their real self-image and referring to the models around them, which is beyond their current level but within their reach. Others' pronunciation models such as natives', teachers' or peers' can serve as reference for learners, but if learners cannot make an objective evaluation about their current competence, they may be hindered to make further progress in pronunciation practice which in turn weakens their learning enthusiasm and motivation. Moreover, learners can be led to critically think about how they have managed to produce some sounds correctly while failing in others, instead of being pointing out the errors directly by teachers, because learning process is one in which learners should critically reflect on the specific tasks, the strategies they have adopted and the reasons for the strategies so as to obtain true knowledge and promote the development of their cognitive ability (Mezirow, 1996).

Though we have gained some findings, this research still has a few limitations. Firstly, the dynamic influence of the sources of self-efficacy is not ignored, since this is a synchronic study focusing on the learners' current pronunciation status. For the future studies, it might be worthwhile to investigate the predicting power of the four sources in the changes of learners' pronunciation development. Secondly, more proper measurement instruments should be designed to delve into reasons for the low correlation coefficient between social persuasion and learners' pronunciation performance. For example, open-ended response forms can give participants more freedom to express their opinions than the structured questionnaires with questions and choices. Thirdly, the effect of intervening strategies in modeling learners' self-efficacy in English pronunciation is also another aspect worthy of being looked into, and other factors like gender, age, and culture may also be useful variables in the study of learners' pronunciation self-efficacy.

REFERENCES

[1] Arslan, A. (2012). Predictive power of the sources of primary school students' self-efficacy beliefs on their self-efficacy beliefs for learning and performance. *Educational Sciences: Theory and Practice*, 12, 1915–1920.
[2] Brown, A. (2014). Pronunciation and Phonetics: A Practical Guide for English Language Teachers. New York: Routledge.
[3] Bandura, A. (1977). Social Learning Theory. New York: Prentice-Hall, Inc.
[4] Bandura, A. (1986). Social Foundations of Thought and Action: A Social Cognitive Theory. Englewood Cliffs, NJ: Prentice Hall.
[5] Bandura, A. (1997). Self-efficacy: The Exercise of Control. New York: W. H. Freeman and Company.
[6] Cakir, O., & Alici, D. (2009). Seeing self as others see you: Variability in self-efficacy ratings in student teaching. *Teachers and Teaching: Theory and Practice.* 15(5), 541–561.
[7] Cubukcu, F. (2008). A study of correlation between self-efficacy and foreign language learning anxiety. *Journal of Theory and Practice in Education,* 4(1):148-158.
[8] Erkan, Y. D., & Saban, A. I. (2011). Writing performance relative to writing apprehension, self-efficacy in writing and attitudes towards writing: A correlational study in Turkish tertiary-level EFL. *The Asian EFL Journal Quarterly*, 13(1), 163-191.
[9] Greta, G. (2009). Investigating second language learner self-efficacy and future expectancy of second language use for

high-stakes program evaluation. *Foreign Language Annals,* 42(3), 505-540.

[10] Hsieh, P. H. P., & Schallert, D. L. (2008). Implications from self-efficacy and attribution theories for an understanding of undergraduates motivation in a foreign language course. *Contemporary Educational Psychology*, 33, 513–532.

[11] Klassen, R. (2002). Writing in early adolescence: A review of the role of self-efficacy beliefs. *Educational Psychology Review,* 14, 173-203.

[12] Lent, Robert W., Brown, S. D., & Larkin, K. C. (1984). Relation of self-efficacy expectations to academic achievement and persistence. *Journal of Counseling Psychology,* 31, 356–362.

[13] Liu, Mingxu. (2013). English bar as a venue to boost students' speaking self-efficacy at the tertiary level. *English Language Teaching,* 6(12), 27-37.

[14] Magogwe, J. M., & Oliver, R. (2007). The relationship between language learning strategies, proficiency, age and self-efficacy beliefs: A study of language learners in Botswana. *System*, 35, 338-352.

[15] Mezirow, J (1996). Contemporary paradigms of learning. *Adult Education Quarterly*, 46 (3), 158-172.

[16] Mills, N., Pajares, F., & Herron, C. (2006). A reevaluation of the role of anxiety: Self-Efficacy, anxiety, and their relation to reading and listening proficiency. *Foreign Language Annals*, 39(2), 276-294.

[17] Mills, N., Pajares, F., & Herron, C. (2007). Self-efficacy of college intermediate French students: Relation to achievement and motivation. *Language Learning*, 57(3), 417–442.

[18] Moghari, E. H., Lavasani, M. G., Bagherian, V., & Afshari, J. (2011). Relationship between perceived teacher's academic optimism and English achievement: Role of self-efficacy. *Procedia Social and Behavioral Sciences*, 15, 2329–2333.

[19] Pajares, F. (2003). Self-efficacy beliefs, motivation and achievement in writing. *Reading and Writing Quarterly*, 19(2), 139–158.

[20] Raoofi, S., Tan, B.H., & Chan, S.W. (2012). Self-efficacy in second/foreign language learning contexts. *English Language Teaching,* 5(11): 60-73.

[21] Rahimi, A., & Abedini, A. (2009). The interface between EFL learners' self-efficacy concerning listening comprehension and listening proficiency. *Novitas-Royal,* 3(1), 14-28.

[22] Schunk, D. H. (1991). Self-efficacy and academic motivation. *Educational Psychologist*, 26, 207-231.

[23] Tilfarlioğlu, F. T., & Ciftci, F. S. (2011). Supporting self-efficacy and learner autonomy in relation to academic success in EFL classrooms (A case study). *Theory and Practice in Language Studies*, 1(10), 1284-1294.

[24] Usher, E. L., Pajares, S. (2006). Sources of academic and self-regulatory efficacy beliefs of entering middle school students. *Contemporary Educational Psychology*, 31, 125–141.

[25] Usher, E. L., & Pajares, F. (2008). Sources of self-efficacy in school: Critical review of the literature and future directions. *Review of Educational Research*, 78, 751-796.

[26] Usher, E. L., & Pajares, S. (2009). Sources of self-efficacy in mathematics: A validation study. *Contemporary Educational Psychology,* 34, 89–101.

[27] Wang, C., & Pape, S. J. (2007). A probe into three Chinese boys' self-efficacy beliefs learning English as a second language. *Journal of Research in Childhood Education*, 21(4), 364-377.

[28] Wong, S. L. (2005). Language learning strategies and language self-efficacy: Investigating the relationship in Malaysia. *Regional Language Centre Journal*, 36(3), 245-269.

[29] Zimmerman, B. J. (2000). Self-efficacy: An essential motive to learn. *Contemporary Educational Psychology*, 25, 82-91.

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