

The Relationship among Learning Strategy, Autonomy and Language Proficiency of Chinese EFL Learners

Cheng Jianfeng^{*}, Faculty of Arts and Social Science, Universiti Tunku Abdul Rahman, Perak, Malaysia

Billcheng678@163.com

Gerard Sagaya Raj, Assistant Professor, Faculty of Arts and Social Science, Universiti Tunku Abdul Rahman, Perak, Malaysia

gerard@utar.edu.my

Joanna Tan Tjin Ai, Assistant Professor, Faculty of Arts and Social Science, Universiti Tunku Abdul Rahman, Perak, Malaysia

tanta@utar.edu.my

Abstract

This study attempted to investigate the relationship among learning strategy, autonomy and language proficiency of Chinese university EFL students. To achieve this objective, purposive sampling and cluster sampling methods were used to select 422 non-English major students as participants in three universities, Henan province, China. Oxford's (1990) Strategy Inventory for Language Learning (SILL) and Xu's (2004) Learner Autonomy Questionnaire (LAQ) were adopted to investigate the participants' strategy use and learner autonomy, respectively. The participants' language proficiency was measured by their CET-4 scores. Results of the Pearson correlation analysis indicated that there existed interrelationships among the three variables: learning strategy and learner autonomy were significantly and positively correlated with each other, and both of them had significant positive relationships with language proficiency. Multiple Regressions Analysis results suggested that learner autonomy could best predict the variance in language proficiency. Pedagogical suggestions are offered to English language teachers in assisting their students with regards to the improvement of language proficiency.

Keywords: learning strategy, language proficiency, learner autonomy, China, EFL learner

Introduction

In this era of globalization, English language is most frequently used among countries, institutions and individuals all over the world. After recognizing the great importance of English language, Ministry of Education in China has made the corresponding policies to instruct its teaching and learning. For example, College English Curriculum Requirements pointed out that tertiary English language education should focus on cultivating students' competence to use English comprehensively, especially in listening and speaking (Ministry of Education, 2007). However, the acquisition of English language in mainland China, where it is regarded as a foreign language, seems difficult for Chinese EFL learners. To solve this issue, a large number of language practitioners and scholars have summarized features of successful EFL learners for better understanding the external and internal variables that significantly affect language proficiency. Among the mostly recognized influential individual factors in foreign language learning, many experts have listed learner autonomy and learning strategies as effective and workable variables that determine language proficiency to great extent (Tan & Zhang, 2015).

Review of Literature

Since 1970s, numerous researchers (e.g. Oxford, 1990; Ellis, 1994; Abdipoor & Gholami, 2016) began to identify and link effective utilization of learning strategies with the success of

foreign language acquisition. However, researchers have not reached an agreement on the definition of learning strategies. The key issue is that “the definition of learning strategies.....encompasses those actions that are clearly aimed at language learning, as well as those that may well lead to learning but which do not ostensibly have learning as their primary goal” (Cohen, 1998, p. 1). According to Tamada (1997), these definitions can be divided into two schools: the elements and the purposes. The former involves the characteristics of the strategies themselves, while the latter refers to the purposes for which learners are willing to employ those learning strategies. Wenden et al (1987) defined learning strategies as “techniques, tactics, potentially conscious plans, consciously employed operations, learning skills, basic skills, functional skills, cognitive abilities, language processing strategies, problem-solving procedures” (p7), but Ellis (1994) perceived them as “mental or behavioral activity related to some specific stage in the overall process of language acquisition or language use” (p.529). Oxford’s (1990) definition was adopted in the present study, in which learning strategy was “specific actions taken by the learner to make learning easier, faster, more enjoyable, more self-directed, more effective, and more transferable to new situations” (p.8). The appropriate use of these strategies can greatly help EFL learners improve their language proficiency, for learners who have strategic knowledge of language acquisition can “acquire a new language more effectively compared with those without” (Abdipoor & Gholami, 2016, p.108). So far, some empirical studies have been conducted to probe the correlation between learning strategy and language proficiency.

Ali and Paramasivam (2016) examined the correlations between Kurdish pre-university students’ utilization of learning strategy and their English proficiency. There were 124 participants involved in this study. On the basis of their findings, it was concluded that learners tended to employ metacognitive and social strategies most; nevertheless they were reluctant to use affective strategies in their English language acquisition. Moreover, the more proficient learners were likely to utilize learning strategies more appropriately and effectively than those less proficient ones.

Tan and Zhang (2015) investigated the correlations among learning strategies, autonomy and academic achievements. The researchers chose 212 medical university students as subjects to take part in the survey. The subjects’ academic achievements were measured by their CET-4 scores. The data was analyzed by SPSS 11.5 and AMOS 6.0. Their findings revealed that memory, metacognitive, and cognitive strategies were the best predictors of learners’ academic achievements. In addition, learning strategies, autonomy and academic achievements were closely correlated with each other.

Selecting 251 non-English major university students as research subjects, Feng (2013) studied the effectiveness of autonomous learning strategies in improving language proficiency in the web-based context. The results of Independent Samples T-test showed that strategy training in the experimental classes led to the enhancement of students’ academic performance. Also, Multiple Regression analysis results indicated that metacognitive and affective strategy could significantly predict learners’ English language proficiency.

The reverse of the above findings is also true: “learners at different levels of language proficiency tend to use different kinds of strategies” (Green & Oxford, 1995, p.292). For instance, in a study conducted by Radwan (2011) who administrated questionnaires on learning strategy use and English proficiency test to 56 participants, the association between learning strategy and autonomy was explored. Results from this study showed that language proficiency could affect learners’ overall strategy use and also that metacognitive, affective, and cognitive strategies were favored by the more successful language learners.

Learner autonomy emerged when Henry Holec (1980) originally viewed it as the desirable goal of adult education in his project report to the Council of Europe. Since then, it has attracted widespread attention from language educators. Up to now, the most widely accepted definition was “the ability to take charge of one’s own learning” (Holec, 1981, p.3). Holding the belief that learner autonomy was a legal and ultimate target of language education, Benson (2001) defined it as “the capacity to take control over one’s own learning” (p.47). If Holec focused on learners’ ability to know how to learn rather than how to acquire this ability, Benson (2001) stressed “the essentially political and transformative character of autonomy”, because “control over learning necessarily involves actions that have social consequences” (p.49-50). Besides, Morrison (2011) emphasized the importance of collaboration with others “the learner, in conjunction with relevant others, can make the decision necessary to meet the learner’s needs” (p. 31). More and more empirical studies have verified Benson’s (2001) hypothesis that learner autonomy was effective to improve learners’ language proficiency.

Through the use of making presentations, self-monitoring, peer collaboration, project-based learning and out-of-class supervision in the experimental class, Xu (2015) testified the effectiveness of cultivating students’ learning autonomy to improve their academic achievements. The experimental class had 30 students, so did the control class. One Sample T-test results showed that the experimental group got higher average scores than the control group. It was suggested that the promotion of learner autonomy could help improve students’ academic achievements in the course of British and American Literature.

The purpose of Kim’s (2014) experimental study was to investigate the effectiveness of autonomous learning in improving ESL learners’ English oral proficiency. Five participants from City College of San Francisco participated in a video ESL class. The assessment of participants’ oral proficiency was done through the use of telling stories on silent movie clips in four weeks. The results from this study revealed that all the five participants had improved a lot in their language proficiency from the aspect of vocabulary, sentence structure, and pronunciation by utilizing self-learning online resources, recording program, story-telling task, and teachers’ feedback.

Employing questionnaire and interview as research instruments, Mohamadpour (2013) scrutinized the correlations between autonomous learning ability and English language proficiency of 30 Iranian senior high school students with the average of 17 years. The researcher employed paired sample T-test to analyze the quantitative data. The results suggested that autonomous learning ability was strongly and positively correlated with English proficiency. That is, the learners who performed well in their academic achievements would have higher level of learner autonomy, while the low proficient students went to the other way round.

Many educators and thinkers in the field of autonomous learning identified learning strategies as relevant or even crucial factors in the promotion of learner autonomy. For instance, Wenden (1991) pointed out that the key to develop students’ autonomy was to provide them with strategy training, especially in metacognitive strategy. Oxford (2008) claimed that “learning strategies are generally signs of learner autonomy” (p.52), which indicated that learning strategy was closely related to learner autonomy. Abdipoor and Gholami (2016) pointed out that “autonomous learners use language learning strategies more than non-autonomous learners” (p.120), but the significant difference existed regarding the use of learning strategy “autonomous learners used more meta-cognitive strategies, while non-autonomous learners preferred social strategies” (p. 107).

Sedighi and Tamjid (2016) explored how vocabulary learning strategies related to learner autonomy of EFL learners in Iran. To arrive at this aim, 82 year-two and year-three students

whose major was English Language Teaching at Tabriz Azad University were enrolled to participate in the study. Two sets of questionnaires were adopted for data collection. Results of Pearson's Correlation analysis showed that utilization of vocabulary learning strategies were significantly and positively correlated with autonomy among Iranian EFL learners.

Pertaining to learning strategy use of secondary school students, Chen and Pan (2015) studied the correlation between learner autonomy and learning strategies among 130 ninth grade students in Taiwan. The correlation analysis indicated that the learners with higher levels of autonomy were likely to utilize language learning strategies more frequently and attend more learning activities. In addition, memory strategies were utilized most while affective strategies used least by secondary school students.

Habibi and Samaie (2015) attempted to find out how learners' autonomous language learning related to learning strategy use. Quantitative data were collected by inviting 150 Iranian university students to fill in learner autonomy questionnaires. The results indicated that learner autonomy was strongly associated with language learning strategies. Moreover, learning strategy use of male and female learners was statistically different. Compared with males, female learners tended to use learning strategies more often.

Selecting 416 non-English major students in three universities located in different cities to participate the questionnaire survey, Xu and Li (2014) looked at the influence of five learners' individual factors on their learning autonomy. Using SEM (structural equation modeling) to analyze different variable's effect on learning autonomy, it was found that meta-cognitive strategy could best significantly explain the variance in learner autonomy.

From the above literature, it can be seen that learning strategies and learner autonomy are two important variables of learners' individual factors that greatly influenced second/foreign language acquisition. The findings from a large body of empirical studies showed that there existed strong associations between learning strategy and language proficiency, learner autonomy and language proficiency, learning strategy and learner autonomy (Tan & Zhang, 2015). However, few studies have reported the multi-relationships between the three variables in Chinese EFL learning context. This empirical study attempts to fill this void through two research questions as follows:

Q1. To what extent does learning strategy, autonomy and language proficiency correlate with each other?

Q2. Which of the following two variables could best predict the variance in language proficiency: learning strategy or learner autonomy?

Methodology

Participants

In this study, the researcher used purposive sampling and cluster sampling methods to select 450 non-English major students as participants from three universities in Henan province, China. The total number of students in these three universities is about 100, 000. Krejcie and Morgan (1970) suggested that the statistical sample size of 100, 000 respondents was 384, then the number of students to do the survey surpassed the recommended sample size. After identifying and discarding unusable questionnaires, 422 participants (93.8% of 450) were utilized for data analysis with 209 males and 213 females. Their age range was 20 to 23 years with an average of 21.5. They were all year-three students, and had participated in College English Test band Four (CET-4).

Instruments

Data collected from questionnaires can "identify important beliefs and attitudes of individuals" (Creswell, 2012, p376), thus it is widely used in the research field of ESL/EFL. The

questionnaire for this study included three parts. Participants' demographic information such as gender, age, major, CET-4 scores, and name of university were included in part one. It should be noted that the participants' language proficiency was represented by their CET-4 scores. College English Test band Four (CET-4) is a well-recognized nationwide English test organized by Ministry of Education of PRC. The reliability and validity of CET-4 was examined in Zhang and Chen's (2015) study. The two researchers adopted stratified random sampling method to select 3427 CET-4 testers as participants in mainland China. The text types, skills assessment, and quantity and difficulty of items in CET-4 were analyzed whether they met test requirements of Ministry of Education or not. Results from this study showed that CET-4 was scientifically designed, having high reliability and validity, thus can objectively reflect the participants' English language proficiency.

Secondly, the Oxford's (1990) Strategy Inventory for Language Learning (SILL) was utilized to determine learning strategy use. The researcher modified the items and changed them into a 45-item questionnaire appropriate to the context of Chinese EFL learners. The deleted items were: "I physically act out new English words" (item 7); "I start conversation in English" (item 14); "I make up new words if I do not know the right ones in English" (item 26); "I write down my feelings in a language learning diary" (item 43), and "I ask English speakers to correct me when I talk" (item 46), because they were seldom used by Chinese EFL learners. Cronbach alpha was utilized to determine the reliability and internal consistency of this part. The coefficients of six subcategories were memory (.710), cognitive (.808), compensation (.690), metacognitive (.738), affective (.715), and social strategy (.720). Respondents were required to circle the number that best reflect their option, represented by a five-point Likert scale that ranged from "1: never true of me" to "5: always true of me".

The last part was Xu's (2004) Learner Autonomy Questionnaire (LAQ) with 32 items for measuring learner autonomy among Chinese university students. Cronbach alpha was employed to check the reliability and internal consistency of this part. The coefficients of five subcategories were: understanding teaching aims and requirements (.625), learning objectives and study plans (.761), using learning strategies (.715), monitoring learning strategy use (.750), monitoring and evaluating learning process (.784). The participants in this study were asked to circle the number that best reflect their option, represented by a five-point Likert scale that ranged from "1: strongly disagree" to "5: strongly agree".

Procedures

From December, 13th to 24th, 2016, the researcher conducted the survey in three universities, Henan province, China. First of all, the approval letter was gotten from Office of Educational Administration at these universities. Then, the researcher went to each university after contacting the related language teachers. Before the survey was conducted, participants would be asked to sign a consent form, which included information related to the purpose of the study, data collection method, the estimated time for completing questionnaires, assurances of anonymity and confidentiality, potential risks, and the right to withdraw the research. The consent form was written in Chinese for better understanding. With the help of English language teachers, the researcher distributed questionnaires to the participants. For those who were not sure about the terms in the questionnaire, they could ask the researcher immediately. Before collecting questionnaires, the researcher reminded the participants to carefully check whether they had completed all the items or not. After that, the researcher collected the questionnaires with the help of language teachers. The process for distributing and collecting questionnaires lasted about 25 minutes.

N	422	422	422	422	422	422
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****.** $P < 0.01$

The results in Table 2 showed that learner autonomy statistically and positively correlated with language proficiency ($r=.399$, $p=.000$). The highest positive relationship was found between language proficiency and monitoring and evaluating learning process ($r=.356$, $p=.000$). The relationship between language proficiency and understanding teaching aims and requirements ($r=.336$, $p=.000$), using learning strategies ($r=.311$, $p=.000$), monitoring learning strategy use ($r=.305$, $p=.000$), learning objectives and study plans ($r=.289$, $p=.000$) stood in the second, third, fourth and fifth rank respectively.

Table 3. *Pearson Correlations between Learner Autonomy and Learning Strategy*

	Learnin g Strategy	Metacognitiv e Strategy	Cognitiv e Strategy	Social Strateg y	Affectiv e Strategy	Memor y Strateg y	Compensatio n Strategy
Learner Autonom y	.728**	.652**	.641**	.635**	.523**	.410**	.302**
Sig (2- tailed)	.000	.000	.000	.000	.000	.000	.000
N	422	422	422	422	422	422	422

****.** $P < 0.01$

The results in Table 3 revealed that learner autonomy had a significant positive relationship with all categories of learning strategy in a decreasing order, including metacognitive (.652**, $p=.000$), cognitive (.641**, $p=.000$), social (.635**, $p=.000$), affective (.523**, $p=.000$), memory (.410**, $p=.000$), and compensation strategies (.302**, $p=.000$). The relationship between the overall learning strategy and learner autonomy was strong and positive (.728**, $p=.000$).

Predictability of Language Proficiency through Learning Strategy and Autonomy

To offer more insight into the correlations among learning strategy, autonomy and language proficiency, Multiple Regression was utilized to determine the best predictor in the variance of language proficiency. The assumptions test was performed to check the multicollinearity, outliers, normality, and homoscedasticity of the collected data. Tolerance is “an indicator of how much of the variability of the specified independent variable is not explained by the other independent variables in the model” (Pallant, 2013, p. 164). If the Tolerance value is less than .10, there exists the possibility of multicollinearity. VIF (Variance inflation factor) is “the inverse of the Tolerance value”, whose big value (above 10) indicates the possibility of multicollinearity (Pallant, 2013, p. 164). From Table 4, it can be seen that all the tolerance values were bigger than .10, and all the VIF values ranged from 1.00 to 2.00, much smaller than 10. As a result, there was no possibility of multicollinearity.

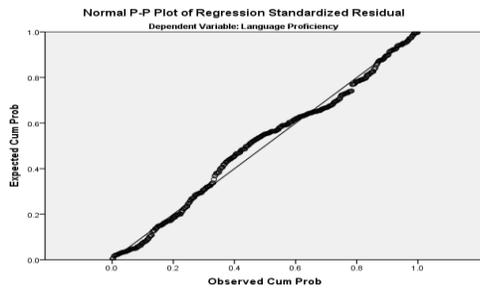


Figure 1. Normal P-P Plot

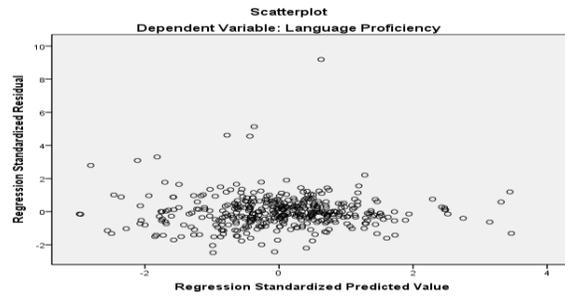


Figure 2. Scatterplot

From the Normal P-P Plot (Fig.1), it can be seen that the points lie in a nearly straight line from bottom left to top right, suggesting the normal distributions of the scores. In the Scatterplot (Fig. 2), it can be found that most scores range from -3.3 to +3.3, only a few scattering out of that range. Based on Pallant (2013), outliers were “cases that have a standardized residual of more than 3.3, or less than -3.3”. Hence, the preliminary analysis showed that the assumptions were not violated.

Table 4. Model Summary

Model	Predictors (Constant)	B	Std. Error	Beta	T	Tolerance	VIF	P
1	Learner Autonomy	.722	.091	.399	8.860	1.000	1.000	.000**
2	Learner Autonomy Learning Strategy	.440 .431	.115 .130	.368 .254	4.053 2.845	.459 .456	2.124 2.122	.000** .005**

Dependent Variable: Language Proficiency

1. $R = .399$; $R^2 = .159$; $F = 78.505$; $P = .000$

2. $R = .424$; $R^2 = .180$; $F = 43.962$; $P = .005$

** $P < 0.01$

In Table 4, it can be seen that learner autonomy ($R = .399$, $R^2 = .159$) explained 15.9 % of the variance in language proficiency. Learning strategy increased the predictive power to 18.0 % ($R = .424$, $R^2 = .180$). As a result, the two predictors could explain 18.0 % of the variance in language proficiency in the second model. The bigger Beta value of learner autonomy (Beta=.368) indicated that it could predict language proficiency better when compared with learning strategy (Beta=.254) as shown in Table 4. In addition, the results of ANOVA test of significance ($F(422) = 78.505$, $P = .000 < .01$) in the first Regression model, ($F(422) = 43.962$, $P = .005 < .01$) in the second Regression model suggested that learner autonomy and learning strategies could significantly predict the variance in language proficiency.

Discussion

This study aimed to explore the relationships among learning strategy, autonomy and language proficiency among Chinese EFL students. The results suggested the existence of a strong positive relationship between learning strategy and language proficiency. That is to say, when students use learning strategies more often, they become more proficient language learners. This result is consistent with findings of Fewell (2010), Tan and Zhang (2015), and Abdipoor and

Gholami (2016). The result that cognitive strategy had the highest significant correlation with language proficiency is in line with that of Tan and Zhang (2015), showing that cognitive strategies which included analyzing, inferring, summarizing, reasoning, organizing and producing new language are useful and workable tools in helping learners achieve good academic results. Nevertheless, this result contradicts with Feng (2013) who found that metacognitive and affective strategies were the best predictors in learners' English language proficiency.

Regarding the correlations between learner autonomy and language proficiency, this study revealed that the two variables were statistically and positively correlated with each other. This matches with findings of some previous studies like Mohamadpour (2013), Kim (2014), Tan and Zhang (2015), and Xu (2015). Furthermore, all subcategories of learner autonomy: monitoring and evaluating learning process, understanding teaching aims and requirements, using learning strategies, monitoring learning strategy use, learning objectives and study plans were also significantly positively correlated with language proficiency are in line with those of Tan and Zhang (2015). Therefore, language teachers need to try various methods to promote learner autonomy to help their students learn better. For example, teachers can assist their students in setting up learning objectives, making study plans, using and monitoring learning strategies, and evaluating learning outcomes.

The findings where there was a positive correlation between learning strategy and learner autonomy are consistent with results from some studies (Xu & Li, 2014; Habibi & Samaie, 2015; Sedighi & Tamjid, 2016), indicating that effective use of learning strategy was the key to implement autonomous learning to English language education. Among different learning strategies, metacognitive strategy had the highest statistically significant correlation with learner autonomy coincides with that of Xu and Li (2014), suggesting that metacognitive strategy which involves making learning plans, self-monitoring, and self-evaluation have the greatest influence on learner autonomy. However, this result conflicts with the findings of Nosratinia et al. (2013) who discovered that social strategy and the memory strategy were the two best predictors of learner autonomy.

The results of multiple Regression analysis that learner autonomy was the best predictor of the variance of language proficiency are in line with Liu's (2012) findings. Similarly, Tan and Zhang (2015) found that three subcategories of learner autonomy: setting up learning objectives, making study plans, monitoring and evaluating learning process could significantly predict the variance of language proficiency. However, with regards to the best predictor of the variance in language proficiency, the result in the present study is contradictory with Tan and Zhang (2015) who discovered that learning strategies could influence language proficiency more when compared with learner autonomy. As a result, more empirical studies need to be conducted to further explore the influence of learning strategy and learner autonomy on English language proficiency.

Results of this study can benefit students who want to improve their language proficiency. However, some limitations still exist. First, the sample size only covered a small number of students in three universities located in Henan province, China. The findings are confined to those universities only. Second, students' language proficiency included listening, reading, translating and writing proficiencies, because CET-4 only covers those aspects. The final limitation is that qualitative data is not collected and analyzed in this study, e.g. data collected from interviews with language teachers and students.

Conclusions

This study was conducted with the purpose of exploring the correlation among learning strategy, autonomy and language proficiency of Chinese EFL learners. The results revealed that

language proficiency was significantly and positively related to all categories of learning strategy in a decreasing order, including cognitive, metacognitive, social, memory, affective and compensation strategy. In addition, the highest positive relationship was found between language proficiency and monitoring and evaluating learning process. Moreover, learner autonomy had the highest significant positive relationship with metacognitive strategies, followed by cognitive, social, affective, memory, and compensation strategies. To conclude, results of the Pearson correlation analysis indicated that interrelationship existed among the three variables: learning strategy and learner autonomy were significantly and positively correlated with each other, and both of them had significant positive relationships with language proficiency. Results from Multiple Regressions analysis suggested that learner autonomy could best predict variance in language proficiency.

Pedagogical suggestions are offered to English language teachers in assisting their students with regards to the improvement of language proficiency. First, it is of great importance to acknowledge that there exist interrelationships among the variables investigated in this study. Second, it is extremely urgent for both EFL learners and teachers to realize the importance of learning strategies in the promotion of learner autonomy and language proficiency. Finally, because learner autonomy can better predict the variance in language proficiency, language teachers should shift their dominant role in the classroom to the organizer and manager in various learning activities. Provided that teachers give enough autonomy to their learners, learners will gradually become autonomous learners who are active, reflective, creative, responsible, disciplinable, confident, and willing to fulfill the learning tasks that negotiated with their teachers.

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