In-Class Online Discussion Activities to Enhance EFL Learners' English Self-Efficacy and Language Learning Strategies

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Abstract:
The study aims to investigate the effect of in-class online discussion on EFL college low-achievers' English self-efficacy and their language learning strategies. It integrates the features of quasi-experimental research to examine whether online discussions would enhance college low-achievers' English self-efficacy and their learning strategy application. Two classes of the college learners from one university were randomly recruited in the study. Two questionnaires (English self-efficacy and language learning strategies) were administered both before and after the intervention. Besides the descriptive analysis of the learners' background information, a series of inferential statistics were conducted to demonstrate findings from the quantitative data. The study results reveal two significant findings. First, the participants applied language learning strategies more frequently. Second, the participants had higher levels of English self-efficacy.
Keywords: *EFL learners, English self-efficacy, language learning strategies, online discussion*

1. Introduction

Students in Taiwan are required to learn English since being a first or third grader of elementary school. English has long been a compulsory or mandatory school subject. Students in Taiwan tend to take learning as memorization; teachers often encourage students to get satisfying scores, rather than process of learning. For most of the students, good memorization refers to good learning. To the students in Taiwan, especially for the low-achievers, English is merely a school subject, not a tool for them to communicate with people from diverse languages and cultures. After taking English courses and getting the credits, they just throw them far away from their sight. They do not appreciate the benefits of or grab chances to learning a second or foreign language. They, gradually, not only have lost their passion for learning a target language but have become less and less confident in their language performance.

Speaking academic performance, self-efficacy is a significant element determining how capable people think they are in terms of dealing with different tasks and how well they would perform in various fields. Self-efficacy, defined by Bandura (1995, p.2), refers to 'the beliefs in one's capabilities to organize and execute the courses of action required to manage prospective situations.' Once people have the confidence in themselves to produce the desired outcomes, they would possibly have the intentions to carry out the action and to continue doing so even when facing any difficulties or adversities. While facing difficult tasks, people with a higher level of self-efficacy take them as challenges and they would do their best to cope with them (Bandura, 1989, 1997; Bandura & Adams, 1977; Cervone & Wood, 1995). Levels of self-efficacy, in other words, could be applied to predict subsequent actions or behaviors related to learning and academic performance. Many studies across different academic domains suggest that there is a positive correlation between self-efficacy and academic achievement (Bandura, Bararanelli, Caprara, & Pastorelli, 1996; Bandura & Schunk, 1981; Collins, 1982; Elliot et al., 2000; Greene, Miller, Crowson, Duke, & Akey, 2004; Honicke & Broadbent, 2016; Hwang, Choi, Lee, Culver, & Hutchison, 2016; Lent et al., 1984; Motlagh, Amrai, Yazdani, Abderahim, & Souri, 2011; Pajares, 1996; Schunk, 1995; Shell & Murphy, 1989; Zimmerman & Bandura, 1994; Zimmerman et al., 1992). Learners with higher levels of self-efficacy would have better academic achievements while the ones with lower levels of self-efficacy, unsatisfying performances.

Apart from self-efficacy, learners' language learning strategies also play a significant role in learning a second or foreign language. Language learning strategies refer to "specific actions or techniques that students use, often intentionally, to improve their progress in developing L2 skills" (Green & Oxford, 1995, p.262). Learning strategies, from the view of educational psychology, refer to "thoughts, emotions, and behaviours that facilitate the acquisition of knowledge and skills, or the reorganisation of one's knowledge base" (Weinstein and Meyer, 1994, p.335). The strategies consist of six major parts, according to Oxford (1990), which are memory, metacognitive, affective, cognitive, compensation, and social strategies. Language strategies provide learners with opportunities to participate

actively in authentic communication, which also encourages the development of communicative competence (Oxford, 1990). Skehan (1989) argued that the application of language learning strategies is one of the most important individual factors in language acquisition. Selinker's model of interlanguage development, as claimed by McLaughlin (1987) and Oxford (1990), also highlights strategy use in the process of language development. Ellis (1985), in a similar vein, suggested that learning strategies are one of the essential processes for language development. Learning strategies, learners' characteristics, and situational variables interact with each other, possibly yielding a significant influence on language development, according to Gardner and MacIntyre (1993).

When learners use language learning strategies, their self-efficacy is often strengthened (Chamot, Barnhardt, El-Dinary, & Robbins, 1996; Zimmerman & Martinez-Pons, 1990). Learners with higher self-efficacy use more cognitive and metacognitive strategies (Pajares, 2008; Zimmerman & Martinez-Pons, 1990). It could be concluded that self-efficacy plays a facilitating role in increasing cognitive and metacognitive strategies (Pintrich & De Groot, 1990). In addition to the abovementioned studies, Chamot, Robbins, and El-Dinary (1993) investigated the effect of strategy instruction on EFL learners' learning strategies and their level of self-efficacy. The findings of the study indicated that there was a positive relationship between the application of learning strategies and perceived self-efficacy, which were in accordance with other study results (Wong, 2005; Yang, 2004).

With the fast-growing popularity of computer-assisted language learning, learners' output does not just happen in a traditional face-to-face context, but on cyberspace. On cyberspace, language learners are provided with a more equitable platform for discussion (Warschauer, 1996); moreover, they interact more with each other (Al-Fadda & Al-Yahya, 2010; Chun, 1994; De Andres Martinez, 2012; Ducate & Lomicka, 2008; Elola, 2010; Goertler, 2009; Huang, 2013; Kern, 1995; Kuzu, 2007; Sharma, Ke, & Xie, 2010; Shih, 2013; Warschauer, 2009; Yang, 2009). Among online educational technology, Modular Object-Oriented Dynamic Learning Environment (Moodle), a course management system, which has been widely applied to different school subjects, levels of institutions, and experimental instruments, stands out as one of the main and primary online platforms for school teachers and students (Suvorov, 2010; Stanley, 2007) because of its easy-to-use layouts and functions (Su, 2005). With its multiple functions, Moodle is served as a virtual classroom in which teachers could share handouts, make announcements, hold tests, calculate scores, hold discussions, and so forth (Al Naddabi, 2007).

However, there are a few studies investigating the relationship among the EFL learners' English proficiency, language learning strategies, and English self-efficacy, let alone for the specific target participants, the low-achievers. Low-achievers, here, are defined as those whose English proficiency is far beyond the standard bar, established by the Language Training and Testing Center in Taiwan. The present study, a two-phase study, first of all, was conducted surveys to investigate Taiwan's college non-English-majored low-achievers' language learning strategies and

English self-efficacy and whether the two constructs have any relationship with their English proficiency. After that, two classes of learners were randomly selected to participate in the experimental study. Thus, the study was guided by the following five questions:

1. Is EFL college low-achievers' English proficiency correlated with their application of language learning strategies?
2. Is EFL college low-achievers' English proficiency correlated with their levels of English self-efficacy?
3. Is EFL college low-achievers' application of language learning strategies with their levels of English self-efficacy?
4. After the in-class online discussion activities, are there differences between the experimental and control group in the number of language strategy application?
5. After the in-class online discussion activities, are there differences between the experimental and control group in the level of English self-efficacy?

2. Research Methodology

2.1 Survey Participants

The participants, randomly selected from two colleges, consist of 161 non-English-majored college freshmen. Both of the colleges are private technological ones located in northern Taiwan. All the participants, informed of the study purposes, agreed to participate in the study and to report their language learning experiences based on real situations. The findings of the background questionnaire (Table 1), developed by Oxford (1990, p.282), show that their average age is 18.55 and they have learned English for 10.16 years. The participants thought their overall proficiency level in English as compared with that of other students in their class was close to 'fair' (M = 1.80) on the scale (excellent = 4; good = 3; fair = 2; poor = 1). When comparing their overall proficiency in English with that of native English speakers, they thought their English proficiency was close to 'poor' (M = 1.13) on the scale (excellent = 4; good = 3; fair = 2; poor = 1). However, when asked about their perceptions of the importance of being proficient in English, they thought English is close to 'very important' (M = 2.65) on the scale (very important=3; important=2; not so important=1). Generally speaking, the participants do not possess high confidence of their English proficiency but they think that being good at English is significant. The mean of their English proficiency tested by the GEPT reading test was 37.88. Compared with the passing score of the test (72), the target learners' English proficiency was far below that of intermediate-level learners.

Table 1: The participants' background information

	N	Min.	Max.	*M*	*SD*
English Proficiency	161	17.60	70.40	37.88	11.93
Age	161	18	28	18.55	1.20
Years of English learning	161	2.0	15.0	10.16	2.56
Q1	161	1	3	1.80	.55
Q2	161	1	2	1.13	.34
Q3	161	1	3	2.65	.53

Note: Q1 = How do you rate your overall proficiency in English as compared with the proficiency of other students in your class?; Q2 = How do you rate your overall proficiency in English as compared with the proficiency of native speakers of English?; Q3 = How important is it for you to become proficient in English?

2.2 Description of the Instruments

Four instruments were used in the study to collect data. They were (a) a background information questionnaire, (b) a General English Proficiency Test (GEPT) reading test, (c) an ESL Reading Self-Efficacy Questionnaire (adapted from Huang & Chang, 1996), and (d) the Strategy Inventory for Language Learning (SILL)(Oxford, 1990). The background questionnaire was adapted from the background questionnaire developed by Oxford (1990, p.282), and all the questions, translated into Chinese by the researcher, answered by all the participants from the two classes. The GEPT reading test chosen from the GEPT tests designed by The Language Training & Testing Center (LTTC) with approved validity and reliability was administered at the beginning of the study in order to examine the learners' general reading ability. For the purpose of examining the learners' reading self-efficacy, Huang and Chang's ESL General Self-Efficacy Questionnaire (1996) was adapted and administered in the study. All the items of the questionnaire was added the word 'English' to emphasize that English was the target language the researcher would like to examine. After modification, the questions were translated into Chinese and back-translated into English by an expert to ensure reliability. Oxford's SILL consists of six strategy types: memory, cognitive, compensation, metacognitive, affective, and social. The 50-item questionnaire with a five-point Likert-type scale, proved to be highly valid and reliable in a vast body of research (Chamot et al., 1993; O'Malley & Chamot, 1990; Oxford, 1986, 1990), was applied to the study as one of the major instruments.

2.3 Research Design

The study, based on Bandura's Social Cognitive Theory (1995), aims to investigate whether the learning environment has a significant effect on language learner's English self-efficacy and their language learning strategy application. Technology-assisted language classrooms are suggested to create a more learner-centered, supportive, and interactive context. Learners in this learning environment would be more autonomous and self-efficacious in their learning (Chou, 2010) and a more equitable platform would enhance more language production (Comas-Quinn & Mardomingo, 2009; Lan, Sung, & Chang, 2007; Lee, 2010; Warschauer, 1996) and better the quality of language output.

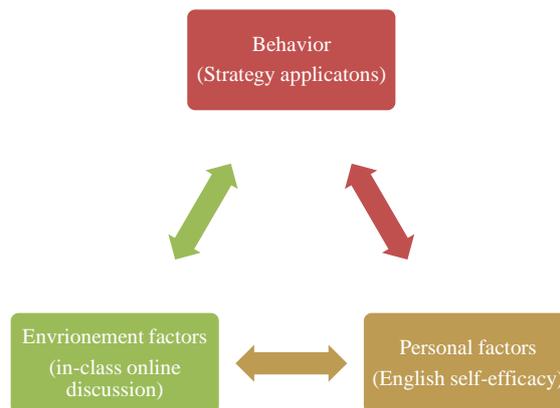Below is the flowchart of the research design (Figure 1).

Figure 1: The study framework

2.4 Data Collection

During the semester, they were required to take part in the in-class online discussion activities for ten times. The activities were designed based on the course book and related to their daily lives. Through the Portal, all the contents were saved online for further analysis. Before and after the study, the students were asked to fill in the English learning self-efficacy scale (Huang & Chang, 1996) and Oxford's the Strategy Inventory for Language Learning (SILL) (1990). The time for completing the scales was about thirty to forty minutes. While the students were filling out the questionnaire, the instructor was also in the presence of the class, guiding them to answer the questions and elaborating the meaning of the questions.

3. Findings

Results (see Table 2) derived from the SILL indicate that the participants applied the strategies to their learning at a medium level (M = 2.99) based on the score interpretation proposed by Oxford (1990). The average scores from high to low frequency were Part C (M = 3.18), Part D (M = 3.08), Part F (M = 3.03), Part B (M = 2.95), Part A (M = 2.92), and Part E (M = 2.84). Among the six types of strategies, specifically speaking, the most frequently-used is compensation strategies, while affective strategies are the least frequently-used by all the participants.

Table 3 presents the participants' use of the language learning strategies, focusing on different levels of English proficiency. All the participants from the two groups were divided into two levels of English proficiency: high and low. Based on the criteria set by LTTC, learners who scored over 72 points on their GEPT reading tests are considered to have intermediate-level English proficiency. Therefore, in the present study, learners who scored 17.6 to 37.4 were grouped as low-level learners and those who scored above 39.6 were high-level learners. According to the results, the high-level participants applied strategies (M = 3.11) more frequently than the low-level learners (M = 2.90).

Table 2: Language Strategies by Different English-level Participants

Descriptive Analysis

	levels	*n*	*M*	*SD*
Part A Strategies	1	93	2.79	.74
	2	68	3.09	.64
	Total	161	2.92	.62
Part B Strategies	1	93	2.81	.56
	2	68	3.14	.71
	Total	161	2.95	.68
Part C Strategies	1	93	3.18	.60
	2	68	3.17	.70
	Total	161	3.18	.71
Part D Strategies	1	93	2.99	.71
	2	68	3.20	.75
	Total	161	3.08	.73
Part E Strategies	1	93	2.79	.78
	2	68	2.92	.74
	Total	161	2.84	.73
Part F Strategies	1	93	2.94	.82
	2	68	3.15	.74
	Total	161	3.03	.74
All Strategies	1	93	2.90	.54
	2	68	3.11	.59
	Total	161	2.99	.57

Table 3: An independent samples t-test of SILL by the two groups
Independent Samples Test

	t	*df*	*Sig.*(2-tailed)
All	-2.44	142.40	.01*
Part A	-3.14	129.70	.002**
Part B	-3.54	145.76	.001**
Part C	.17	142.12	.86
Part D	-1.78	148.13	.08
Part E	-1.00	140.20	.32
Part F	-2.01	151.00	.05

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

Table 4 illustrates the relationship between English proficiency and language learning strategies. The results show that language learning strategies are positively correlated with English proficiency ($r = .13$).

Table 4: Pearson correlation coefficient of language learning strategies and English proficiency

Correlations

		Language Learning Strategies	English Proficiency
Language Learning Strategies	Pearson Correlation	1	
	Sig.(2-tailed)		
English Proficiency	Pearson Correlation	.13	1
	Sig.(2-tailed)	.11	

Table 5 shows the level of English self-efficacy of all participants. On average, their overall English self-efficacy is at a medium level (M = 2.92). The mean scores of English self-efficacy from high to low are Part 2 (M = 3.37), Part 4 (M = 3.06), Part 1 (M = 2.85), and Part 3 (M = 2.38). Apparently, the participants lacked self-confidence in English writing.

Table 5: Level of English Self-Efficacy by All Participants

Descriptive Analysis

	N	*M*	*SD*	Rank
Part 1	161	2.85	.63	3
Part 2	161	3.37	.64	1
Part 3	161	2.38	.78	4
Part 4	161	3.06	.82	2
All	161	2.92	.61	

Note. Part 1: perceived abilities; Part 2: aspiration, persistence, and enjoyment; Part 3: writing affect; Part 4: reading affect.

Table 6 indicates that the overall level of English self-efficacy perceived by high-level learners (M = 3.00, SD = .06) was higher than that of the low-level learners (M = 2.86, SD = .07). The ranking from high to low for the high-level learners was Part 2 (M = 3.43, SD = .61), Part 4 (M = 3.19, SD = .63), Part 1 (M = 2.90, SD = .51), and Part 3 (M = 2.52, SD = .60). In line with the above results, that of the low-level learners was also Part 2 (M = 3.33, SD = .66), Part 4 (M = 2.97, SD = .93), Part 1 (M = 2.82, SD = .70), and Part 3 (M = 2.28, SD = .88).

Table 6: Level of English Self-Efficacy by Learners with Different Levels of English Proficiency

Descriptive Analysis

		n	*M*	*SD*
Part 1	1	93	2.82	.70
	2	68	2.90	.51
	total	161	2.85	.63
Part 2	1	93	3.33	.66
	2	68	3.43	.61
	total	161	3.37	.64
Part 3	1	93	2.28	.88
	2	68	2.52	.60
	total	161	2.38	.78
Part 4	1	93	2.97	.93
	2	468	3.19	.63
	total	161	3.06	.82
All	1	93	2.86	.68
	2	68	3.00	.48
	Total	161	2.92	.29

In order to examine the participants' level of self-efficacy as to how they perceive their English proficiency, a t-test was conducted. The results displayed in Table 7 indicate that there was a slightly significant difference only in Part 3 of the English self-efficacy scale ($p = .05$) for the two groups. However, in the remaining parts of English self-efficacy, there was no statistically significant difference between the two groups of participants. Generally speaking, the two groups did not differ significantly from each other in their level of English self-efficacy.

Table 7: An independent samples t-test of English self-efficacy by the two groups
Independent Samples Test

	t	*df*	*Sig.*(2-tailed)
All	-1.54	158.88	.13
Part 1	-.80	158.998	.43
Part 2	-1.01	150.56	.29
Part 3	-2.01	158.39	.05
Part 4	-1.76	158.06	.08

Note. Part 1: perceived abilities; Part 2: aspiration, persistence, and enjoyment; Part 3: writing affect; Part 4: reading affect.

The results (see Table 8) show that language learning strategies and English self-efficacy were highly significantly correlated with each other. The Pearson correlation coefficient of overall language learning strategies and English self-efficacy was positively correlated ($r = .62$, $p < .001$).

Table 8: Pearson Correlation coefficient of overall language learning strategies and English self-efficacy

Correlations

		Language Learning Strategies	English Self-efficacy
Language Learning Strategies	Pearson Correlation	1	
	Sig. (2-tailed)		
English Self-efficacy	Pearson Correlation	.62[***]	1
	Sig. (2-tailed)	.000	

Note. ***$p < .001$.

4. Conclusions

Given the results, the study reveals two significant findings. First, learners' English proficiency is correlated with their language learning strategy use but not with the levels of English self-efficacy. More proficient learners apply more language learning strategies while less proficient ones adopt fewer strategies. Furthermore, more proficient learners claim themselves to be slightly more self-efficacious than less proficient ones. Second, there is a positive correlation between language learning strategies and English self-efficacy. Learners who apply more strategies in their language learning are possibly those who possess higher levels of self-efficacy. It is also possible that learners with higher levels of self-efficacy tend to apply more strategies to their learning. The study results are consistent with findings from previous strategy and self-efficacy studies (Bremner, 1999; Chamot, 2007; Green & Oxford, 1995; Lai, 2011; O'Malley & Chamot, 1990; Oxford, 1986, 1990; Oxford & Leaver, 1996; Zhang, 2010), which suggest that more proficient learners apply more strategies and have higher levels of self-efficacy.

5. Limitation and Implication

The findings of this current study at least suggest three pedagogical implications. First of all, for language learners, in-class online discussion activities could strengthen their self-confidence in college low-achievers' English proficiency. Moreover, their language learning strategy application could also be enhanced in this technology-assisted context. Secondly, for language teachers, the study presents the possibility of making learners become more involved in English learning activities and feel better about their English abilities. Most importantly, the in-class online discussion activities could be tailored to meet different types of curricula.

The limitation, firstly, is the external validity or generalizability of the study. The participants in the present study were not representative enough of the whole Taiwan

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EFL population, especially all the low-achievers, to make generalizations from this study. Thus, it is suggested that future researchers include participants from diverse colleges from different geographcial parts of Taiwan. Secondly, the study time was not long enough for investigating writing performances; therefore, it would be better to have it at least one academic year long in order to have more satisfying results.

6. Discussions and Implications

The findings of this current study at least suggest two pedagogical implications for the implementation of strategy instruction in an EFL tertiary curriculum. Generally speaking, first of all, EFL low-achievers possess low levels of English self-efficacy and their frequency of strategy application is not high enough; therefore, it is significant to encourage the learners more to build up their own confidence in and to apply more strategies to their English learning. Secondly, for curriculum designers, the input and the awareness of language learning strategies serve as an important role in an EFL context.

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