

Meta-cognitive Strategies in College Students' WeChat Mobile English Learning

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This paper is supported by North China Electric Power University Teaching Research Project (2018).

ABSTRACT

The development of the Internet information technology and the popularization of mobile devices have brought about a new paradigm of learning, Mobile Learning, which is becoming increasingly common in the college English learning. In addition, as a multifunctional messaging and social media application attached to mobile devices, WeChat has enjoyed great popularity among college students and teachers and has been considered as a useful mobile English learning tool, because of its convenient method of operation and its unique features of sending and sharing texts, voices, pictures, videos, web links and so forth. However, the numerous potential distractions have also turned WeChat platform into a double-edged sword for college students when it comes to self-regulated learning. This study investigates the situation of college students' mobile English learning based on WeChat from the perspective of meta-cognitive strategies, which include self-planning, self-monitoring and self-evaluating through questionnaire. Figuring out the current situation of the mobile college students' English learning based on WeChat, this study finds that the college teachers' and students' knowledge of this new paradigm of learning and their awareness of how to apply it are still insufficient. Besides, the levels of students' using meta-cognitive strategies are generally not high enough, and students' gender and major also have an influence on the levels of the three meta-cognitive strategies.

Key words: mobile English learning, college students, WeChat, meta-cognitive strategy, self-regulated learning

INTRODUCTION

Over the past several decades, the development of the Internet information technology and the convenient accessibility to mobile devices, especially the popularization of smart phones, have brought about a new paradigm of learning -- Mobile Learning. It is becoming increasingly common in China's college English teaching and learning. Mobile learning generally refers to the delivery of learning to students anytime and anywhere via the use of wireless Internet and mobile devices, including notebook computers, mobile phones, personal digital assistants (PDAs) (Wang et al 2009). The integration of the mobile technologies and English learning activities significantly arouses college students' interest in the mobile English learning process as it cannot only break the limit of learning time and learning space but also offer more

convenient ways to learn, such as searching rich learning materials, participating in online study group, doing online quizzes and other online learning activities.

Besides, launched by Tencent in January 2011 to provide instant messaging services for smart terminals, WeChat is a multifunctional messaging and social media application attached to mobile devices. As a new kind of instant social messaging application, WeChat has been developing in an incredible speed: the number of WeChat's subscribers has increased year by year. According to Wikipedia, "by 2018 WeChat was one of the world's largest stand alone mobile apps by monthly active users, with over 1 billion monthly active users (902 million daily active users)". Owing to its simplicity of operation and its unique features of sending and sharing texts, voices, pictures, videos, web links and so forth, WeChat has enjoyed great popularity among college students and teachers and has been considered as a useful mobile English learning tool.

However, there are numerous college students and teachers who still know little about mobile English learning based on WeChat. What's more, the numerous potential distractions have also turned WeChat platform into a double-edged sword for college students' mobile English learning when it comes to self-regulated learning. As a consequence, the college students' application of the meta-cognitive strategies in the process of mobile English learning should be taken into account. As is stated by O'Malley and Chamot (1990), language learning strategies should consist of three main categories in terms of level or type of processing involved: meta-cognitive strategies, cognitive strategies and social or affective strategies. And meta-cognitive strategies, which can be further divided into strategies of self-planning, self-monitoring and self-evaluating, were the regulatory measures that the students adopt to succeed in second language learning (O'Malley and Chamot, 1990). When college students learn English with WeChat, the adoption of meta-cognitive strategies can help them control their learning behaviors and learning processes so that it may have a beneficial effect on the enhancement of their self-regulated learning ability.

Although a great number of experts and scholars at home as well as abroad have made considerable researches on mobile learning and meta-cognitive strategies as an assistant with English learning, few of them have focused on college students' mobile English learning based on WeChat, especially from the perspective of meta-cognitive strategy. Through the investigation of mobile English learning based on WeChat, this paper aims to find out how college students in China apply the meta-cognitive strategies in this learning process. It may inspire the researches on educational technology in foreign language teaching. To be more specific, this study will answer the following three research questions:

- (1) In the colleges of China, how are the meta-cognitive strategies used inside and outside the English classrooms?
- (2) Is there a difference between gender and the use of meta-cognitive strategies?
- (3) Is there a difference between the students of Science/Engineering students and the students of Art (except English) in using the meta-cognitive strategies?

METHODS

Participants

The target subjects of this study were Chinese non-English major college students who use WeChat to learn English, their L2. Altogether 682 undergraduate students from all around China were involved in this research, among them 314 were males and 368 were females. Among the 682 participants, freshmen, sophomores, juniors and seniors accounted for 35.19%, 27.86%, 10.85% and 26.1% respectively. With regard to the type of major, 290 students were majors in Art (except English), and the rest 392 students were majors in Science or

Engineering. The samples were selected randomly so as to ensure the objectivity, reliability and representativeness of the collected data.

Instrument

Questionnaire was adopted as an instrument. The whole questionnaire was designed to cover two parts. The first part intended to investigate the basic personal information of participants. And the second part, the main body of this questionnaire, was a structured language meta-cognitive learning strategy questionnaire which was designed based on Oxford's Strategy Inventory for Language Learning (SILL) (Oxford, 1990). This meta-cognitive learning strategy questionnaire covered three different aspects, including two questions on self-planning strategies, three questions on self-monitoring strategies and three questions on self-evaluating strategies. Besides, there was an open question which was designed to collect some useful suggestions about the application of mobile English learning based on WeChat from college students.

Procedure

With the convenience of the Internet, these questionnaires were distributed to target subjects online in the early July, 2018. The students were informed of the significance and objectiveness of this research, and they were ensured that the results of the survey would only be analyzed to accomplish this study and would exert no influence on their academic grades. All they needed to do was to answer those questions carefully on the basis of their own specific circumstances. On July 5th, questionnaires were distributed to subjects by WJX, an online questionnaire survey platform. From July 5th to 15th, 682 valid questionnaires had been submitted.

ANALYSIS AND DISCUSSIONS

Data analyses show that the participants mainly "use WeChat to search, transmit and receive materials for English learning" and "learning English on the WeChat public platform" and "learning English by clocking in on WeChat moments". However, they know little about the way of "using the WeChat mini program to learn English" and "participating in the English study group through WeChat". Among the participants, 60.56% of them admit that they never or just occasionally apply that method for mobile English learning. That is to say, most of the subjects still lack the awareness of applying mobile English learning based on WeChat in their daily life.

In accordance with the collected data, these students think that the ways of "establishing WeChat group for English learning" and "sharing English learning materials through WeChat" are their teachers' relatively familiar ways to use WeChat to assist the English teaching. In other words, college English teachers are aware of the significance of integrating mobile English learning based on WeChat into teaching. What's more, it is recorded that more than half (52.79%) of the subjects think that their English teachers choose the way of "establishing WeChat group for English learning" as the main way to integrate mobile English learning based on WeChat into teaching, which follows the way of "sharing English learning materials through WeChat" accounting for 22.73%. We can come to a conclusion that when it comes to mobile English learning based on WeChat, most of the teachers lack the sufficient knowledge about it and they apply just some rather simple ways to use WeChat to assist their teaching.

Four different degrees of choices which are the same as the previous part are to describe the frequency of college teachers' applying the main way to integrate mobile English learning based on WeChat into classroom. The data suggests that 58.8% of the subjects think that their teachers apply this way "almost every day" or "often" to assist English teaching. In other words,

most of the college English teachers hold a positive attitude towards mobile English learning based on WeChat and they are willing to integrate it into their teaching.

Inspired by Oxford's Strategy Inventory for Language Learning (SILL) (Oxford, 1990), a simple and specific meta-cognitive learning strategy inventory has been distributed to the participants. To investigate the college students' application of meta-cognitive strategies when using WeChat for mobile English learning, meta-cognitive learning strategy questionnaire can be further arranged to investigate the strategies of self-planning, self-monitoring and self-evaluating which is the subtype of meta-cognitive strategies. The subjects are required to choose the best description of themselves according to their actual circumstances. All the choices of question 7 to question 14 are the same: "A. Never acting in this way", "B. Occasionally acting in this way", "C. Half of the time acting in this way", "D. Usually acting in this way" and "E. Always acting in this way". In order to analyze the results conveniently, "A-E" choices stand for score "1-5" respectively.

Levels of meta-cognitive strategy use

After data processing, the mean scores (Mean) and standard deviations (SD) in each of the three categories for all participants can be displayed in table 1.

Table 1 Mean Strategy Use of the three categories (N=682)

Variables	Mean	SD	Rank
Self-planning	2.70	0.949	3
Self-monitoring	2.83	0.886	2
Self-evaluating	2.90	0.891	1

As Oxford & Burry-Stock (1995) stated, a mean of all subjects in the range of 3.5-5.0 on a SILL item is regarded as high use of that strategy; 2.5-3.4 is considered to reflect medium use of that strategy; and 1.0-2.4 is known as low strategy use. This criterion is also suitable for this study. Accordingly, it is not difficult to find that despite the differences in level of use by strategy group, all means for the three strategy categories fall within 2.5-3.4 (medium use). Among the means of three strategy categories, the mean of self-evaluating strategies is relatively the highest while self-planning is the lowest. Generally speaking, the college students' levels of using meta-cognitive strategies when learning English on WeChat are not so high. Relatively, their levels of using self-evaluating strategies are the highest and levels of using self-planning strategies are the lowest. This finding is in contrast with Chamot and Kupper's (1989) study which suggests that most of the meta-cognitive strategies used were for planning.

Gender and meta-cognitive strategy use

In accordance with the collected data, the mean scores (Mean), standard deviations (SD) and rank ordering in each of the three categories for the boy group and the girl group can be listed respectively as Table 2 and Table 3 below.

Table 2 Mean Strategy Use for the boy group (N=314)

Variables	Mean	SD	Rank
Self-planning	2.69	0.994	2
Self-monitoring	2.82	0.939	3
Self-evaluating	2.93	0.943	1

Table 3 Mean Strategy Use for the girl group (N=368)

Variables	Mean	SD	Rank
Self-planning	2.72	0.908	3
Self-monitoring	2.84	0.839	2
Self-evaluating	2.88	0.842	1

As can be seen from the above two tables, though both the boy and girl groups' mean scores in each of the three sub-categories fall within 2.5-3.4 (medium use), in each category there are differences between the boy group and the girl group. Obviously, in comparison with the boy group, the girl group's mean scores on self-planning and self-monitoring strategy use are relatively higher. But when it comes to the mean scores on self-evaluating strategy, the boy group outscores the girl group. So we attempt to make a conclusion that, when learning English on WeChat, the female college students exceed the male college students in using self-planning and self-monitoring strategies, but the females are less capable of using self-evaluating strategy.

Majors and meta-cognitive strategy use

This study was oriented to Chinese non-English major college students who use WeChat to learn English as their second language. So the participants were divided into two rough majors: "Science or Engineering" and "Art (except English)".

Table 4 and Table 5 show the mean scores (Mean), standard deviations (SD) and rank ordering in each of the three categories for the Science or Engineering group and the Art (except English) group respectively.

Table 4 Mean Strategy Use for the Science or Engineering group (N=392)

Variables	Mean	SD	Rank
Self-planning	2.67	0.948	3
Self-monitoring	2.82	0.900	2
Self-evaluating	2.93	0.902	1

Table 5 Mean Strategy Use for the Art (except English) group (N=392)

Variables	Mean	SD	Rank
Self-planning	2.75	0.950	3
Self-monitoring	2.85	0.883	2
Self-evaluating	2.87	0.875	1

According to the above two tables, we can find that despite the differences in levels of use in terms of their majors, all means for the three strategy categories of the two major types fall within 2.5-3.4 (medium use). Comparing the data in Table 4 and Table 5, it is evident that the ranking orders of the two major types for the three strategy categories are the same: the mean scores on self-evaluating strategy are the highest; then it follows self-monitoring strategy; and the mean scores on self-planning strategy are relatively the lowest. Additionally, we can make a conclusion that compared with the students majoring in Art (except English), the students majoring in Science or Engineering are better at using self-evaluating strategy, but their levels of using self-monitoring strategy and self-planning strategy are poorer than that of the Art (except English) students.

CONCLUSIONS AND IMPLICATIONS

Conclusions

In accordance with the data collected from the questions designed to investigate how the meta-cognitive strategies used inside and outside the English classrooms in the colleges of China, the study results have shown that in classroom most college English teachers have already been aware of the significance of integrating mobile English learning based on WeChat into teaching, while most of the college students still lack the awareness of applying this new style of learning in their daily life. Besides, both inside and outside classroom, the applications of mobile English learning based on WeChat by either the teachers or the students, are rather limited. This current situation can be attributed to the teachers' and students' lack of the sufficient knowledge of this new paradigm of learning. So in order to raise their awareness of the new learning style, it is necessary for colleges and even the institutions of higher education administration to attach great importance to mobile English learning based on WeChat.

As for the college students' levels of using meta-cognitive strategies, this study has found that their general levels are not so high, and relatively, their levels of using self-evaluating strategies are the highest and levels of using self-planning strategies are the lowest. As a consequence, it is high time for college teachers to offer proper and efficient instructions of meta-cognitive strategies when college students conducting mobile learning based on WeChat. With specific regard to gender and meta-cognitive strategy use, it has been demonstrated that, when learning English on WeChat, the female college students' levels of using self-planning and self-monitoring strategy exceed the male, but their levels of using self-evaluating strategy are inferior to that of the male college students. In other words, boys need more guidance on self-planning and self-monitoring strategies while girls call for more instructions on self-evaluating strategy.

Last but not least, in terms of majors and meta-cognitive strategy use, it can be concluded that compared with the students majoring in Art (except English), the students majoring in Science or Engineering are better at using self-evaluating strategy, but their levels of using self-monitoring strategy and self-planning strategy are poorer. That is to say, students of different majors need different meta-cognitive strategy instructions: the instructions on the students majoring in Science or Engineering should be attached more significance to self-monitoring strategy and self-planning, while the students majoring in Art (except English) should be guided more on using self-evaluating strategy.

Implications

Based on the above findings, there are several implications for college English teaching. For college teachers, there is no doubt that they should attach great importance to mobile English learning based on WeChat since it has become more and more popular among college students. Besides, sufficient knowledge of mobile learning and meta-cognitive strategy is needed in order to provide better instructions for students. Moreover, as gender and major have an influence on the levels of the three meta-cognitive strategies: self-planning, self-monitoring and self-evaluating, it is necessary for college English teachers to make sure that the instructions should adapt to students of different genders and different majors. Last but not least, when it comes to how teachers should go about proper strategy instructions, the following four things should be concerned. Firstly, teachers should explain different convenient ways of mobile English learning based on WeChat and stress why the meta-cognitive strategy is significant. Secondly, they should model how to apply the meta-cognitive strategy in mobile English learning based on WeChat. Thirdly, after modeling, they should have students practice it immediately either inside or outside classroom. Lastly, having students reflect on their

learning when using WeChat to learn English is a useful way of helping them develop meta-cognitive strategies.

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