

The Relationships among Learners' Backgrounds, Metacognitive Vocabulary Learning Strategy Awareness and Mobile Vocabulary Learning Readiness

Chih-Cheng LIN* & De-Yan WU

English Department, National Taiwan Normal University, Taiwan

*ccclin@ntnu.edu.tw

Abstract: The present study aims to investigate the relationship between the metacognitive vocabulary learning strategy awareness and the mobile vocabulary learning readiness among Taiwanese junior high school EFL students. A total of 372 participants completed a questionnaire which assessed their readiness towards mobile vocabulary learning. They also completed the Metacognitive Vocabulary Learning Strategy Awareness Questionnaire, which evaluated their awareness and perceived use of vocabulary learning strategies. The results indicated that the learners' proficiency levels and ownership duration significantly influenced their readiness towards mobile vocabulary learning and metacognitive vocabulary learning strategy awareness. In addition, a significant correlation between the learners' readiness and awareness was found.

Keywords: m-learning, metacognitive vocabulary learning strategy awareness, mobile vocabulary learning readiness

1. Introduction

Learners, with the help of metacognition knowledge, can choose relevant technological devices for learning and use effective strategies to facilitate achieving learning goals (Bannert, Hildebrand & Mengelkamp, 2009). In such technology-enhanced environments, successful learners especially need metacognition to identify the differences among available technological tools (Antonietti, Colombo & Lozotsev, 2008). The awareness of metacognitive strategy use may also have effects on success of learning with technology; and, metacognitive instruction should be incorporated in e-learning (Kramarski & Zeichner, 2001); and, instructors should evaluate learners' metacognition, analyze their status of metacognitive knowledge and intervene to help them become more aware of their use of metacognitive strategies (Oxford, 2002; Stadtler & Bromme, 2008). As Miangah and Nezarat (2012) point out, vocabulary learning is one of the most commonly discussed areas of mobile-assisted language learning (MALL). In the present study, we intend to first explore whether the various backgrounds of Taiwanese junior high school EFL students would influence their awareness of metacognitive vocabulary learning strategies and their readiness towards mobile-assisted vocabulary learning. The relationship between the aforementioned awareness and readiness was analyzed and discussed.

2. Methods

2.1 Participants

A number of 372 copies of questionnaires completed by the students from the four districts of a metropolitan area in Taiwan were collected and analyzed in the present study.

2.2 The Instruments

The questionnaire comprised three sections. The first section was designed to elicit the demographic information of grades, sex, proficiency levels and duration of ownership. Section two assessed their readiness towards using smartphones to learn English vocabulary and included familiarity, attitude and experience. The awareness and perceived use of metacognitive vocabulary learning strategies, including selective attention, self-initiation and consolidation, were then assessed in the last section.

3. Results and Findings

3.1 Descriptive Statistics

The participants' means, standard deviations and the results of the tests of significance of the readiness in general and the three components (test value = 3) are listed in Table 1 and those of the metacognitive awareness in general and the three components (test value = 3) are listed in Table 2.

Table 1: Descriptive statistics and *t*-tests of readiness and its components (N = 372).

Component	Mean (Average per item)	SD	t	Sig. (2-tailed)
Readiness	3.3343	.57406	11.232	.000
Familiarity	3.1871	.77261	4.671	.000
Attitude	3.3118	.73611	8.170	.000
Experience	3.5040	.49441	19.663	.000

Table 2: Descriptive statistics and *t*-tests of metacognitive awareness and its components (N = 372).

Component	Mean (Average per item)	SD	t	Sig. (2-tailed)
Metacognitive Awareness	3.5367	.90982	11.378	.000
Selective Attention	3.5493	1.08426	9.771	.000
Self-Initiation	3.9151	.91144	19.364	.000
Consolidation	3.1458	1.02877	2.734	.007

3.2 The Relationships among Demographic Variables and Mobile Vocabulary Learning Readiness

In order to investigate the relationships among the demographic variables and the components of mobile readiness, *t*-tests and one-way ANOVA were conducted. According to the results of ANOVA, the differences between the learners' grades in regard to Familiarity and Attitude were not significant. Nevertheless, the learners in 9th grade might have more experiences in mobile vocabulary learning than the 7th graders did. The results of sex revealed that the differences between male and female learners were insignificant. With respect to the levels, the results showed that those who had passed the intermediate level or higher had better readiness than the learners who had only passed the elementary level. In terms of the duration of ownership, the learners owning and using smartphones for more than 1 year surpassed the other learners in all the three components. Those who had been using smartphones less than 6 months fell behind the other two groups of learners in regard to their readiness.

3.3 The Relationships among Demographic Variables and Metacognitive Vocabulary Learning Strategy Awareness

The results of ANOVA showed that the differences among the learners of different current grade levels were insignificant in terms of Selective Attention and Self-Initiation. The 9th graders were more aware of their Consolidation strategy use than 8th graders. As for the learners' sex, the results again were insignificant. In terms of proficiency levels, the learners who had passed the GEPT tests outperformed those who had not passed any of the tests. The results showed that those who had passed the

intermediate level or higher had better awareness than the learners who had only passed the elementary level. When the duration of ownership is concerned, the learners owning and using smartphones for more than 1 year surpassed the other learners in all the three components. Those who had been using smartphones less than 6 months fell behind the other two groups of learners.

3.4 Predictors of Readiness towards Mobile Vocabulary Learning

The inter-correlation of the variables is presented in Table 3.

Table 3: Inter-correlation among variables.

Variables	1. Readiness	2. Selective Attention	3. Self-Initiation	4. Consolidation
1. Readiness	1.000	.827**	.775**	.808**
2. Selective Attention		1.000	.722**	.742**
3. Self-Initiation			1.000	.695**
4. Consolidation				1.000

** Correlation is significant at the 0.01.

The multiple correlation coefficient (R) was found to be .892 and the coefficient of determination (R^2) was .796. The three types of metacognitive vocabulary learning strategy awareness could explain 79.6% of the variance of the criterion variable, meaning the three variables predicted 79.6% of the mobile vocabulary learning readiness. As for the coefficients, it was found that Selective Attention ($t = 9.964$, $p = .000$), Self-Initiation ($t = 7.159$, $p = .000$) and Consolidation ($t = 9.119$, $p = .000$) were significant predictors of readiness towards mobile vocabulary learning. The most significant predictor of the readiness towards mobile vocabulary learning was Selective Attention; the second is Consolidation; and Self-Initiation had the least effect to predict or explain the variance. The equation for the standardized multiple regression model is: Learners' readiness towards mobile vocabulary learning = $.387 \times \text{Selective Attention} + .341 \times \text{Consolidation} + .259 \times \text{Self-Initiation}$.

In sum, the learners' grades, proficiency levels and their ownership duration were found to have significant influences on their awareness of metacognitive strategy use and readiness towards mobile learning. Furthermore, the learners' metacognitive vocabulary learning strategy awareness was found to be positively and significantly related to their mobile vocabulary learning readiness and the three components of metacognitive strategy awareness were strong predictors of the learners' readiness towards mobile vocabulary learning. The present study suggests that educators and instructors take learners' proficiency levels and ownership duration into consideration before designing and integrating mobile technologies into language curricula.

References

- Antonietti, A., Colombo, B., & Lozotsev, Y. (2008). Undergraduates' metacognitive knowledge about the psychological effects of different kinds of computer-supported instructional tools. *Computers in Human Behavior*, 24(5), 2172–2198.
- Bannert, M., Hildebrand, M., & Mengelkamp, C. (2009). Effects of a metacognitive support device in learning environments. *Computers in Human Behavior*, 25(4), 829–835.
- Kramarski, B. & Feldman, Y. (2000) Internet in the Classroom: Effects on Reading Comprehension, Motivation and Metacognitive Awareness, *Educational Media International*, 37:3, 149-155, DOI: 10.1080/09523980050184709.
- Kramarski, B., & Zeichner, O. (2001). Using technology to enhance mathematical reasoning: Effects of feedback and self-regulation learning. *Educational Media International*, 38(2/3), 77-82.
- Miangah, T. M., & Nezarat, A. (2012). Mobile-Assisted Language Learning. *International Journal of Distributed & Parallel Systems*, 3(1).
- Oxford, R. (2002). Language learning strategies. In R. Carter & D. Nunan (Eds.), *The Cambridge guide to teaching English to speakers of other languages* (pp. 166–172). Cambridge: Cambridge University Press.
- Paolucci, R. (1998). Hypermedia and learning.
- Stadtler, M., & Bromme, R. (2008). Effects of the metacognitive computer-tool metaware on the web search of laypersons. *Computers in Human Behavior*, 24(3), 716-737.