

## **EMPLOYING MICROSOFT LIVE@EDU CLOUD PLATFORM TO ASSIST IN TEACHING CHINESE READING FOR JUNIOR HIGH SCHOOL STUDENTS**

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### **ABSTRACT**

This study aimed to investigate junior high school students' learning attitudes and learning effectiveness through administering Microsoft Live@edu to assist in teaching Chinese reading. Quasi-experimental approach was used and a total of 63 eighth grade students were divided into the experimental group (N=32) and control group (N=31). Descriptive statistics, paired t-test, one-sample t-test, multiple regression, and ANCOVA were used to analyze the collected data. The results of the study reveal that the students' reading attitude was enhanced in terms of cognition, affection, behavior, interaction, and reflection through using Microsoft Live@edu to assist in teaching Chinese reading. In terms of the reading learning effectiveness, the scores of the post-test are higher than the pre-test for both groups. The scores of the students in the experimental group are higher than of the control group. Finally, the students in the experimental group show greater progress in discussions and feedback and analysis of Chinese readings.

### **INTRODUCTION**

In early December 2010, the PISA (Programme for International Student Assessment) reading assessment report was released; 15-year-old boys' reading literacy in Taiwan ranked the last among the three Chinese-Mandarin speaking countries and regions. This result not only alerts reading education in Taiwan but also drops a shocker showing the reading education between Taiwan junior high school students and International reading literacy has a massive gap. At the teaching site, the researchers observed that most of the students like surfing the Internet, the computer seems to have become an indispensable tool in the student's life. Thus, the researchers believe that if the Internet can be used to carry out the teaching of reading and enhance students reading motivation, attitude, and effectiveness, Internet will become the key of the auxiliary reading education. In order to explore the influence and effectiveness of implementing the online teaching platform on reading Instruction, the Microsoft Live@edu platform was used to assist in reading instruction, and PISA tests were used as teaching contents. Thus, the purposes of the study are to explore the teaching process of using Microsoft Live@edu platform, to analyze its influence on junior high school students' reading attitude and learning effectiveness and to compare the students' learning effectiveness of Microsoft Live@edu platform instruction and traditional reading instruction, as well as to investigate the relationship between learning attitude and learning effectiveness through using Microsoft Live@edu platform.

### **LITERATURE REVIEW**

In 2006, the International Reading Literacy Study (progress in international reading literacy study, PIRLS) defined reading literacy as cultivating reading understanding and mastering written language ability, being able to construct meanings from a wide range of articles, learning from reading, participating in school reading community activities and obtaining joy from reading. Pan (2008) also proposed culture, creativity, and communication, as the 3 core values for reading. As a result, reading should enable students to read various types of materials, in accordance with the order of reading comprehension process and use their own life experiences to cultivate basic reading literacy and problem-solving skills, thereby enhancing their interest in reading and to build their own reading values.

Regarding studies on exploring reading learning attitudes and reading learning effectiveness, Brown (2011), Burrows (2012) and Rojas-Drummond (2012) found there was a significant increase on students' reading effectiveness through different reading instructions. Chang (2004) pointed out that attitude is an individual holds

a persistent and consistent behavior tendency toward people and things, including behavioral, emotional and cognitive tendency. Wigfield & Guthrie (1997) suggested that there was a link between reading attitude and reading motivation. Students' positive learning attitude can be increased through assisting them to obtain the sense of achievements and satisfaction of reading learning (Hsu, Hsu, & Wang, 2008). Sun & Lin (2007) state that Internet learning is based on learning theory with emphasis on the use of information and communication technology, eliminating the learning time and space constraints, and providing learners situational teaching. Online learning can construct a digital scenario to improve learning motivation and effectiveness through autonomous learning, interactive and innovative learning, simulative learning, and accumulative learning. Therefore, internet-assisted instruction can provide students with vivid teaching contents, shared teaching resources, and various learning styles.

In our study, reading effectiveness refers to students can accurately understand the meanings of the articles and link their prior knowledge to generate additional understanding through reading teaching activities. Some previous studies indicate that students' reading learning effectiveness can be significantly enhanced through internet-assisted learning (Zorigian, 2009; Ismail et al, 2011; Ivory, 2011; Zaid, 2011). Thus, this study aims to explore the effects of integrating Microsoft Live@edu cloud platform with cooperative learning for assisting in teaching Chinese reading for junior high school students.

### RESEARCH METHOD

This study adopts quasi-experimental design with purposive sampling. A total of 63 8th grade students participated in the study and were divided into the experimental group (n=32) and the control group (n=31). The Microsoft Live@edu cloud platform was used in the experimental group and traditional in-class reading instruction was used in the control group. The Reading Attitude Learning Scale contains cognitive, affective, behavioral, and overall domains. The learning satisfaction questionnaire contains teaching method, quality of learning, learning interaction, learning assessment, learning reflection, and overall performance. The 5-point Likert scale was used in both scale and questionnaire. The content validity of the both scale and questionnaire were established by two experts in the related fields. PISA 2006 reading test questions were modified by the researchers and then used as the pre- and post-tests in this study. The content validity of the modified PISA reading tests was also verified by four senior Chinese teachers. Live@edu cloud platform provides learners an online space for storing and retrieving information and data freely through SkyDrive, Office, Messenger, Hotmail, and so on. The SkyDrive of Microsoft@edu cloud platform was used to conduct reading instruction in this study. Figure 1 shows the entry page of SkyDrive of Live@edu cloud platform.



Fig. 1 The entry page of SkyDrive of Live@edu cloud platform

Collected quantitative data were analyzed by descriptive statistics, one-sample t-test, paired sample t-test, multiple regression, and ANCOVA. Qualitative data includes teaching reflection, students' reflections, group discussions, and abstracts of reading assignments.

### RESULTS AND DISCUSSION

The results of the pre-test and post-test scores of the experimental group analyzed by paired-sample t-test

reached the significant level,  $p=.000<.05$ , indicating the students of the experimental group have made significant progress on reading through the Live@edu cloud platform learning and instruction. In addition, the pre-test scores of the PISA reading test questions were treated as covariates, the post-test scores of the PISA reading test questions were treated as the dependent variable, and groups were treated as the independent variables in the ANOCVA. The results of ANCOVA show that the learning effectiveness of the experimental group is better than the control group ( $p=.027<.05$ ), indicating Live@edu cloud platform can effectively provide the experimental group students a communication platform to share and discuss ideas, questions, thoughts, and reflections and thus to enhance their abilities in obtaining useful information to improve their reading effectiveness.

Table 1: Results of one-sample t test of the students’ reading attitude scale

Domain	Test value=3		
	t	df	Sig. (two-tailed)
Cognitive	9.16***	31	.000
Affective	5.73***	31	.000
Behavioral	6.37***	31	.000
Overall	8.31***	31	.000

\*\*\* $p<.001$

Table 1 shows the results of one-sample t test of the students’ reading attitude scale. The four domains of the reading attitude scale obtained  $p=.000<.05$ , indicating the experimental group students have made a significant progress on cognitive, affective, behavioral, and overall performance.

Table 2: Results of one-sample t test of the students’ learning satisfaction

Domain	Test value=3		
	t	df	Sig. (two-tailed)
Teaching Method	10.17***	31	.000
Quality of Learning	8.11***	31	.000
Learning Interaction	6.65***	31	.000
Learning Assessment	5.58***	31	.000
Learning Reflection	6.68***	31	.000
Overall performance	8.45***	31	.000

\*\*\* $p<.001$

Table 2 shows the results of one-sample t test of the experimental group students’ learning satisfaction for the five domains. All the five domains obtained p value of  $.000<.05$ , indicating the students have made a significant progress in areas of teaching method, quality of learning, learning interaction, learning assessment, learning reflection, and overall performance.

Table 3: Results of Pearson product-moment correlation coefficient on the four factors

	Learning Effectiveness of Reading	Reading Attitude
Reading Attitude	.473**	-
Learning Satisfaction	.435*	.649***

\* $p<.05$  \*\* $p<.01$  \*\*\* $p<.001$

Table 3 shows the results of Pearson product-moment correlation coefficient on the four factors of reading, including learning satisfaction, learning effectiveness of reading, and reading attitude. The results show that there are significantly positive correlations among reading attitude, learning satisfaction, and learning effectiveness of reading, suggesting that the higher the students' reading attitude, learning, the higher the learning effectiveness. Also, the results of multiple regression analysis show that reading attitude obtained positive value of  $\beta$ , indicating learning effectiveness of reading can be positively predicted by the reading attitude.

Additionally, the results of teaching reflections show that there are more errors on the abstracts and contents of reflection writing in the early stage of the experiment. After providing writing guidance to the students, the students have made significant progress on both the abstract and content of reflection writing. After the three rounds of experimental teaching, the students’ reading comprehension ability and effectiveness are significantly progressed through online reading learning. Finally, compared to the tradition reading instruction, the results of

Live@edu cloud platform learning show the students have learned more and learned efficiently through student-teacher discussions and interactions and peer feedback on the platform. The students also pointed out that their reading ability has been improved and the frequencies of interacting with classmates have been increased as well, indicating implementing the Live@edu cloud platform to reading instruction is interesting and successful.

## CONCLUSIONS AND SUGGESTIONS

### (1) Conclusion

The results of this study show that the students had significant progress on their reading scores through Live@edu cloud platform assisted learning, which is in accordance with findings of studies by Zorigian, 2009, Ismail, 2011, Ivory, 2011, and Zaid, 2011. Compared with the traditional instruction of Chinese reading, the students' learning effectiveness of the Live@edu cloud platform group is significantly higher than the traditional reading instruction group. In terms of reading learning attitude, the experimental group students show significant positive reading attitude and learning satisfaction after the experimental teaching. That is, Live@edu cloud platform assisted Chinese reading learning can effectively enhance the students' reading attitude and learning satisfaction. Additionally, the experimental group students show a significantly positive correlation between reading learning attitude and reading achievement, indicating the more positive the learning attitude, the higher the reading learning outcomes. Finally, the contents of the reading summaries of the students in the Live@edu cloud platform-assisted group are more substantial than the traditional teaching group.

### (2) Suggestions

In order to reduce the instructor's teaching load, a reading teaching social network can be established to provide a forum for teaching related subjects discussion, modification, and thus to construct an ideal reading teaching model to enhance students' learning interest in Chinese reading. In addition, the instructor should strengthen the group discussions and feedback, so that the students can obtain feedback and suggestions to increase their reading comprehension. Finally, when errors of the Live@edu cloud platform occur, the instructor should make a quick report to Microsoft in Taiwan, so that network administrators can provide immediate assistance and to improve the function of the platform and thus the students can obtain better learning outcomes.

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