

Creative the Electronic Media Instructional Innovative Management Approach for Developing Chinese Vocabulary Memorization Skills of Educated Students in the Chinese Language

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Received: June 20, 2023 Accepted: August 22, 2023 Online Published: September 17, 2023
doi:10.5539/jel.v12n6p132 URL: <https://doi.org/10.5539/jel.v12n6p132>

Abstract

Designing the Electronic Media instructional innovative management approach on Chinese Language Elementary Level 1 course (CLELC-1) was developed Chinese vocabulary memorization skills of 21 freshly educated students in the Chinese Language Teaching Program, Faculty of Education, Rajabhat Mahasarakham University, Thailand. Using the 10 Electronic Media Instructional Innovative Management (EMIIM) Lesson Plans were administered. Creative the Electronic Media Memorizing Chinese Vocabulary Skills (EMDVS) with the PowerPoint Canva and Captivate that 300 words/characters in Chinese were strategized. The effectiveness of the 10 EMIIM lesson plans is completed, using the E1/E2 approach for process and product-based developmental testing of instructional media is usually set at 80/80. Students' learning achievement was tested by creating and analysing the 40 items Pre-and-Post-Learning Achievement Performance Assessment Tests (LAPAT) to design. Students' perceptions of their satisfaction were described with the 20 items Questionnaire on Student Satisfaction Inventory (QSSI). Most EMIIM, EMDVS, LAPAT, and QSSI instruments are valid and reliable. Students' responses of their understanding about 86.14% to their memorizing Chinese vocabulary skills, the E1/E2 evidence of 91.07/87.02 over the threshold setting is 80/80, significantly. The p-value reported from a t-test is 51.990 and more excellent than .001, and the result was difference significantly. The scale means ranged from 4.438 to 4.648. Interpretation of students' perceptions on all four scales indicates that the Strongly Satisfied Level using the QSSI was assessed.

Keywords: Chinese vocabulary skills, E-learning management approach, developing Chinese language, instructional innovative lesson plan, undergraduate educated students

1. Introduction

Chinese: 汉语; 漢語; pinyin: Hànyǔ or also 中文; Zhōngwén, especially for the written language, is a group of languages that form the Sinitic branch of the Sino-Tibetan languages family, spoken by the ethnic Han Chinese majority and many minority ethnic groups in Greater China. Chinese is now another international language, with more than one billion or three billion people, or about one-fifth of the world's population, or approximately 16% speaking a variety of Chinese as the first language of the world's population. It is one of the official languages used at UN conferences. Especially Thailand and the People's Republic of China have had trade and diplomatic ties for more than 30 years, so the Chinese language is essential in terms of politics, economy, society, education, and culture (Baxter, 1992).

Therefore, the Thai government has set a policy to create an economic society based on the Chinese language as a communication tool, promoting and developing Chinese language teaching materials in Thailand to raise the quality and standards of education. Have the ability to communicate by using language to convey ideas, knowledge, and understanding to exchange information and experiences that are beneficial to one and society. An essential tool in Chinese learners' learning is vocabulary. "Vocabulary" can be regarded as an indispensable heart in language learning because communication, whether listening, speaking, reading, or writing, can only occur when word meanings are known (Wuttiphan & Yang, 2013).

Instructional design (ID), also known as instructional systems design (ISD), is the practice of systematically designing, developing, and delivering instructional materials and experiences, both digital and physical,

consistently and reliably toward an efficient, effective, appealing, engaging and inspiring acquisition of knowledge (Merrill et al., 2012). An instructional innovative management approach for developing Chinese vocabulary memorization skills of students (Kurt, 2017).

A positive consequence of utilizing media is that instructors must keep their materials and examples up-to-date for creating learning environments that extend the possibilities of one-way communication media, such as movies, documentaries, television shows, and music, into new areas (Bransford, Brown, & Cocking, 1999). Students can see the ideas, visions, and concepts in action of electronic media in the classroom environment with friends. (Buckingham, 2007). Designing the electronic media for undergraduate students' Chinese vocabulary memorization skills was developed.

The Concept of the E1/E2 Approach must be developmentally tested to determine its quality in three aspects: the progress of student's learning achievement, its efficiency according to the set standard or criterion from the instructional innovative lesson plans. E1 is the percentage of the average or means of all scores the students earn from their activities or assignments, such as drills, exercises, project works, or other types of formative evaluation. E2 is the percentage of the average or means of all scores the students earn from their post-test, final examinations, and additional summative evaluation. The criterion for E1/E2 is usually set at 90/90 or 85/85 for the cognitive domain and 80/80 or 75/75 for the affective domain and psychomotor skills. If either falls below or higher than 2.5%, the instructional media needs to be improved, modified, or revised (Brahmawong, 2012).

Competitive memorizers claim that practicing visualization techniques and memory tricks enables them to remember large chunks of information quickly. These techniques can also enable instructors to remember some concepts for years or even life that will help instructor in RMU University for this research study. In terms of vocabulary, the fundamental factor necessary for mastering a language skills: listening, reading, speaking, and writing. Meanwhile, vocabulary knowledge is actually to them. One can only understand a sentence without knowing what most words mean. Learners readily admit that their experience considerable difficulty with vocabulary and most learners identify the acquisition of vocabulary as their most significant single source of problems (Meara, 1980). Strategies involving learning and using Chinese vocabulary words in an authentic context are essential for students to develop higher language proficiency. Focusing on contextualized memorization of vocabulary words had a negative and statistically significant association with students' listening scores (Wang, 2018).

The problem mentioned above, the researcher is interested in improving the skills of memorizing Chinese words using electronic media. Educated students have memorized the words by using electronic media to teach Chinese vocabulary learning to induce interest in vocabulary and to make fun to make students enthusiastic as a result, learners are curious and happy, which may result in increased academic achievement.

2. Literature Review

Instructional design (ID) created by Benjamin Bloom (1956), Bloom's framework comprises six categories: Evaluation: Involves assessing theories, comparing ideas, and evaluating outcomes; Synthesis: Refers to coming up with new ideas based on old concepts; Analysis: Identifying and understanding patterns and trends; Application: Involves the problem-solving skills and applying knowledge; Comprehension: Involves understanding, discussing, summarizing, and demonstrating; and Knowledge: Learners recall information and make observations. In Piaget's theory, he proposed four major stages of cognitive development, and called them (1) sensor motor intelligence, (2) preoperational thinking, (3) concrete operational thinking, and (4) formal operational thinking. Each stage is correlated with an age period of childhood, but only approximately (Zimmerman, 1982).

These frameworks place significant emphasis on the customization of instructional tactics to suit various developmental phases, aligning with the overarching study objective of enhancing memory abilities.

Media offers both cognitive and affective experiences. It can provoke discussion, an assessment of one's values, and an assessment of self if the scenes have strong emotional content (Willingham, 2009). Electronic media relates to materials, equipment, and processes that utilize electronic technology to pass on information, knowledge, and ideas to students living in society. Students gain access to significant educational, creative, artistic, communication, and recreational opportunities that they would not otherwise have. For example, access to online books, pictures, blogs, documentary films and music enables them to learn about different cultures around the world (Cowen, 1984).

Incorporating media into language instruction can increase motivation and retention of what is learned, which has potential benefits for the research objective of improving memory for Chinese words.

In Bloom's Taxonomy, students feel like they do not have strong memory skills. Memorization skills enhance students' ability to quickly recall basic facts and help develop foundational knowledge of a topic. Memorization is good for learning, and some of the benefits of practicing regular memorization (Oxford University, 2021). Currently, the vocabulary of Chinese language uses two classic characters worldwide: Traditional Chinese characters and Simplified Chinese characters. Standard Chinese (English: Standard Chinese) or Pu Tong Hua (Chinese: 普通话/普通話; Pinyin: Pǔtōnghuà; "Common language") is the standard language, which is the only official language of the whole of China. Traditional Chinese is pronounced according to the Beijing accent (北京話), using the vocabulary according to the central accent and language based on Chinese written in everyday life (Liang, 2014).

Incorporating effective memorization techniques into language learning is consistent with the objective of research to improve learners' memory skills and their enjoyment of the process.

Therefore, the researcher sought to improve the skills of memorizing Chinese words to stimulate learners to develop memory skills and have fun while learning online. The statistical significance at the 0.05 level with E1/E2 efficiency was 81.2/83.4, which was higher than 80% of the specified criteria, consistent with Thidarat Kunnattarawong (2018), who reported that the efficiency was 80.52, which met 80 percent of the set standards, and the post-school achievements were compared.

The collective findings from these studies reveal a synergy between instructional design, cognitive development, media use, and language learning. The recognition of the importance of tailoring instructional strategies to different cognitive stages is consistent with improving learners' memory performance. The potential of media to evoke emotion and expand educational opportunities is consistent with the intent of the research to make learning enjoyable. The complexity of language learning also underscores the value of innovative techniques such as memorization to support vocabulary acquisition.

3. Method

3.1 Research Objectives

- 1) To assess the skills of memorizing Chinese words of students in the Chinese Language Teaching Program of the Electronic Media-Based learning management to be effective according to the 80/80 standardized criteria.
- 2) To compare between pre- and post-students' learning achievements through the Electronic Media-Based learning management approach.
- 3) To assess students' perceptions of their satisfaction in the Chinese Language classroom learning environment according to their Electronic Media-Based learning management approach.

3.2 Sample Size

A sample size consists of 21 freshly undergraduate educated students who enrolled in the Chinese Language Course at Elementary Level 1 for the academic year 2020 by purposive random sampling in Rajabhat Mahasarakham University.

3.3 Research Procedures

Subject Title: Chinese Language Course, Elementary Level 1 (CLELC-1): Credit/hours: 3(2-2-5)

Course Syllabus: Strategies Mandarin Chinese Sounds, Vocabulary, Phrases, and Basic Sentence Structures used in daily life, and learning knowledge to memorization skills at least 300 words.

The 10-Electronic Media-Based Learning Management (EMLM) Approach in Chinese Language Course in 15 weeks' ideas carry them out were built.

A research instrument can include interviews, tests, observations, or checklists in five steps are analyzed. The research study was invented on four research instruments that followed the research objectives.

Pretest-posttest designs are the methods of testing the effectiveness of an intervention. Creative the treatment was given to determine whether the intervention had a significant effect.

3.4 Research Instruments

- 1) Electronic Media Memorizing Chinese Vocabulary Skills (EMDVS)
- 2) The 10-Electronic Media Instructional Innovative Management (EMIIM) Lesson Plans
- 3) The 40-items Pre-and Post-Learning Achievement Performance Assessment Tests (LAPAT)
- 4) The 20-item Questionnaire on Student Satisfaction Inventory (QSSI)in five options with Likert's rating scales

on Strongly Satisfied, Satisfied, Uncertain, Dissatisfied, and Strongly Dissatisfied levels (Likert, 1932).

4. Data Collection

Creating electronic materials using PowerPoint Canva and Captivate using all 10 lesson vocabulary words was checked by professional experts to verify the correctness and consider the suitability of Electronic Media and the content used. The 40-item LAPAT using the Kuder-Richardson Formula 20, often abbreviated KR-20, is used to measure the internal consistency reliability of a test in which each question only has two answers: right or wrong. Likert's rating scales on Strongly Satisfied, Satisfied, Uncertain, Dissatisfied, and Strongly Dissatisfied levels. Three professional experts verified content validity and determined the index of item-objective congruence (IOC) to quantitatively measure content experts' judgments of items to evaluate the fit between test items and the table of specifications.

5. Data Analysis

The efficiency according to the standardized criterion for E1/E2 is set at 80/80. Pre-and Post-Learning Achievement Performance Assessment Tests (LAPAT) were presented to 3 experts to verify content validity with the Index of Item Objective Congruence (IOC), the level difficulty (p) and the discrimination index (r), and a t-test analysis. The KR-20 value turns out to provide explanations of terms commonly used when assessing the validity of tests and questionnaires. The Questionnaire on Student Satisfaction Inventory (QSSI) was assessed with mean average scores, standard deviation, and internal consistency (Cronbach alpha reliability) coefficient. Two variables were associated with correlations.

6. Results

6.1 Validity of the EMDVS, EMIIM, LAPAT, and the QSSI Research Instruments

Electronic Media Memorizing Chinese Vocabulary Skills (EMDVS), memorizing Chinese vocabulary, students remember of their Memorizing Chinese Vocabulary Skills indicate that of 86.14% with the Electronic Media-based Learning Management Approach. The Electronic Media Instructional Innovative Management (EMIIM) Lesson Plans have a confidence validity value of 0.88.

All 40-item Pre-and Post-Learning Achievement Performance Assessment Tests (LAPAT) tests had a confidence value of 0.88 was sentimental analysis. The LAPAT has a level of difficulty (p) between 0.40–0.60 and indexing discrimination (r) higher than 0.40.

The validity of Questionnaire on Student Satisfaction Inventory (QSSI) is valid and reliable with the IOC of 0.91 by three professional experts, and the consistency index was analyzed.

6.2 The Effectiveness of the iInnovative Instructional Lesson Plans

To analyze the effectiveness of the EMIIM on Chinese Language Course, Elementary Level 1 class for developing the freshly educational students in the Chinese language to their memorizing Chinese vocabulary skills with the E1/E2. Table 1 reported the efficacy of the innovative instructional lesson plans.

Table 1. Score total, mean, standard deviation, and percentage for the effectiveness of innovative instructional lesson plans for the Electronic Media instructional innovative management approach

Efficiency Type	Total score	\bar{x}	S.D.	Percentage
Efficiency Performance Processes (E1)	100	91.071	4.014	91.07
Efficiency Performance Results (E2)	40	34.812	2.659	87.02
The Lessoning Effectiveness (E1/E2) = 91.07/87.02				

Note. N = 21.

Table 1 shows the result of the effectiveness of the innovative instructional lesson plans based on the model of learning management in the EM-based instructional innovative lesson plans based on the model of learning management approach in the Chinese Language Course. Effectiveness of lessons during the learning process (E1) reveals 91.07, and the performance effectiveness (E2) indicate that of 87.02, so the lessoning point (E1/E2) evidence 91.07/87.02 over the threshold setting is 80/80.

6.3 Comparisons Between Pre- and Post-Students' Learning Achievements for the Learning Achievement Performance Assessment Tests (LAPAT)

Assessing students pre- and post-students' learning achievements in a Chinese language class using the LAPAT were compared. A t-test was analyzed and compared available assessments for the CLELC-1 class. The results

as reported in Table 2.

Table 2. Total score, Mean, Standard Deviation, t-test, Correlation (r), t-test value, and Interpretation Significant for the LAPAT

Assessment	Total Score	Mean	S.D.	Correlation (r)	t-test	p-value
Pre-test	40	17.143	2.088	0.815***	51.900	.000***
Post-test	40	34.809	2.659			

Note. N = 21, *p < .05, **p < .01, ***p < .001.

As reported in Table 2, the effect of testing on student achievement as found in Chinese Language Course, Elementary Level 1 source class ($r = 0.815$, $p < .001$), Among quantitative study, mean score indicates 17.143, S.D. = 2.088 for the student's achievement outcomes, and 34.809, S.D. = 2.659 for the student's achievement outcomes, *p-value* reported from a *t-test* is 51.990, more excellent than .001, and the result is insignificant.

6.4 Students' Perceptions of their Satisfaction with Their Electronic Media Instructional Innovative Management Approach in the CLELC-1 Class with the QSSI Questionnaire.

Assessing students' perceptions of their satisfaction was created in the CLELC-1 Class using the Questionnaire on Student Satisfaction Inventory (QSSI) in four scales, namely: Instructional Activity, Instructional Enthusiasm, Memorizing Chinese Word Ability, and Gaining Knowledge Application scales. Each scale consisted of five items, and the totalized QSSI questionnaire consisted of 20 items described.

Table 3. Internal consistency (Cronbach alpha reliability) coefficient, variance, mean, standard deviation, and interpretation with average mean scores for the QSSI.

Scale	α -Reliability	Valiance	Mean	S.D.	Interpretation
Instructional Activity	0.812	1.890	4.648	0.828	Strongly
Instructional Enthusiasm	0.776	1.767	4.438	0.776	Strongly
Memorizing Chinese Word Ability	0.815	2.118	4.524	0.836	Strongly
Gaining Knowledge Application	0.821	2.346	4.476	0.864	Strongly
Totalized Data	0.913	10.501	4.521	1.279	Strongly

Note. N = 21.

As reports in Table 3, the results on eight scales of the 20-item QSSI on Instructional Activity, Instructional Enthusiasm, Memorizing Chinese Word Ability, and Gaining Knowledge are assessed. Application scales are valid and reliable ($0.776 < \alpha < 0.821$: acceptable). The scale means ranged from 4.438 to 4.648, and interpretation of students' perceptions on all four scales indicated that the Strongly Satisfied Level using the 20-item QSSI was assessed.

7. Discussion

This research study shows that by memorizing Chinese words using the Electronic Media Instructional Innovative approach, the researcher analyzed the effects of E1/E2 of 91.07/87.02, which was higher than the specified threshold of 80/80 level, were determined. The method of checking the quality of an instructional lesson plan to determine its efficiency and ability to make students learn the provided knowledge and experience as stated in the objectives (Brahmawong, 2012).

Developing Chinese language education is quite challenging due to the unique nature of the Chinese language requires a lot of learning memory and the vocabulary in Chinese is diverse and extensive, and the speech in Chinese is complicated. Most Chinese words are words that have their meaning, requiring learners to put in the effort to memorize them or to think of different methods to memorize the words of students' meta-cognitive strategies the (Lam & Kuan, 2019).

The most popular vocabulary included taking notes, studying the sound and stroke order of a word, asking classmates, and reviewing vocabulary regularly. Teachers could make use of the learning strategy preferred by learners through the provision of appropriate language activities and assignments to support more effective learning (Hsu, 2012), vocabulary capability is an important indicator and a stepping stone toward Chinese proficiency (Lam & Hoe, 2013). Many researchers in the field of Mandarin teaching also have discovered that a lot of learners were eager to study the language at the initial stage but became demotivated after one or two semesters on account of the difficulties faced (Shan, 2018).

Assessing students' perceptions also determined that student satisfaction was a significant predictor of learning outcomes. Students with high overall perceptions of social presence scored high in perceived learning and perceived satisfaction with the instructor. This should explore the significance of the results of the work, not repeat them. This research paper's final paragraph should identify important outcomes and their implication for the area of study or recommendations for further research.

8. Conclusion and Recommendation

Most of the time, a Chinese instructor will be created electronic media to memorize Chinese vocabulary skills based on ten lessons are prevalent Chinese words/characters will allow students to understand about 86.14% of their Memorizing Chinese Vocabulary Skills with the Electronic Media-based Learning Management Approach, would be permitted students to memorize.

The effectiveness of the ten instructional innovative lesson plans is completed using the E1/E2 approach for process and product-based developmental testing of instructional media, usually set at 80/00. The E1/E2 evidence of 91.07/87.02 over the threshold setting is 80/80, significantly.

Additionally, the achievement was tested before and after the classroom learning environment. Creation and analysis of the 40 items Pre-and-Post-Learning Achievement Performance Assessment Tests (LAPAT) instrument, using t-test analysis with mean scores of the pre-test and post-test learning achievements, were compared. The p-value reported from a t-test is 51.990 and more excellent than .001, and the result was significantly different.

Students' perceptions of the Questionnaire on Student Satisfaction Inventory (QSSI) had an IOC compliance validity index of 0.91 by three professional experts. The consistency index was analyzed in four scales: Instructional Activity, Instructional Enthusiasm, Memorizing Chinese Word Ability, and Gaining Knowledge. Application scales are valid and reliable, showing off $0.776 < \alpha < 0.821$, meaning acceptable. The scale means ranged from 4.438 to 4.648; interpretation of students' perceptions on all four scales indicates that the *Strongly Satisfied* Level using the 20-item QSSI was assessed.

Acknowledgments

I would like to thank 21 freshly educational students, Rajabhat Maharakham University, Thailand, which is a sample size to participate in giving information and expressing perceptions independently under the knowledge of basic research regulations for undergraduate students affects this research project with complete details to research effectively and achieve the objectives of the research project effectively.

Thank you to the President of the RMU, Director of the Research and Development Institute, Dean of Faculty of Education, and the Head and my colleagues in Rajabhat Maharakham University, for supporting the research funding of this research project until the goal is ultimately achieved.

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