

Methodology of Curriculum Trail Improvement for Chinese Intensive Course: A Case of Thai Students of High Vocational Certificate in Railway Transportation

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Abstract

The purpose of this research was to evaluate the Chinese language learning achievement and attitude towards Chinese language before and after the curriculum trial. The sample group was High Vocational Diploma students from Khon Kaen Vocational College. The research was carried out as a qualitative action research process using the curriculum and quantitative quasi-experimental research on evaluating Chinese language learning achievement and attitude toward Chinese language before and after using the curriculum. The research tools were the 108-hour Intensive Program for preparing Chinese Language Proficiency for Diploma Students, Chinese learning achievement test and the attitude towards Chinese language. Descriptive statistics, mean, standard deviation, and the t-test were used to analyse the data.

The results showed that the achievement of learning Chinese language and the attitude toward learning Chinese language of Diploma students majoring in Railway transport system were both positive. The mean achievement score after using the curriculum trial was significantly higher than the mean achievement score before using the curriculum trial at 0.05. The students' attitude toward learning Chinese was very positive ($\bar{x} = 4.68$, S.D.=0.09).

KEYWORDS: Chinese Language, Intensive course, High Vocational certificate

1 INTRODUCTION

Thailand has an important strategic landscape. It is also a hub for transport links in the ASEAN region, both by land and by sea. The land is the connecting point of rail and road transport infrastructure between China and ASEAN. By sea, Thailand serves as a hub and link between the Indian and Pacific Oceans. And more importantly, it is the Maritime Silk Road that is in line with the Chinese government's One Belt One Road Initiative. The State Railway of Thailand has therefore received a policy that is in line with international cooperation and national policies and plans to develop operational and maintenance powers. This is in line with the government's policy and accelerates the production of manpower and transportation workers who are skilled in the field of rail transportation. The Office

of the Vocational Education Commission has been assigned to produce premium vocational courses that are high vocational certificate courses. The curriculum focuses mainly on the main industry subjects that are the country's urgent goals.

The Rail Transport Program is one of the premium vocational courses. Programs that have signed a memorandum of cooperation between the Office of Vocational Education Commission and Wuhan Railway College of Technology and Vocational Education People's Republic of China. The Ban Phai Vocational College, Wapi Pathum Technical College, Surat Thani Technical College, and Chonburi Technical College are pilot colleges in teaching and learning management. There are also academic exchanges, lecturers, and short-term and long-term training of personnel and students. Thus, the Chinese language has become an important tool that is no less important than the knowledge that will be gained for teachers, personnel, and students to understand both sides of learning. However, the report on the progress in education management to produce vocational personnel under the policy to support the targeted industries addressed the most problematic operational barriers. The problematic issue is that students have insufficient knowledge and skills in Chinese, which has had a wide impact on teaching and learning both domestically and internationally. This caused the teaching to be delayed longer than expected, and the conditions for sending students to study in the People's Republic of China were not met. From the problems mentioned above, the researcher has found that the teaching and learning of Chinese language is still unable to meet the needs of students and society. Although policies and guidelines for teaching and learning Chinese have been in place since the academic year 2014, they are insufficient and slow to meet the needs or responses of learners and society because the teaching and learning of Chinese at the vocational level is broad. It does not focus on a specific field, so it does not meet the needs of students in Thailand's urgently targeted fields of study.

Therefore, it is important to develop an intensive curriculum to prepare for proficiency in Chinese before studying in the People's Republic of China. This curriculum aims to educate learners on specific knowledge for High Vocational Certificate students in Railway transport major. This intensive curriculum was created using the integrated curriculum development approach based on Saylor and Alexander's concept of intensive program combined with teaching and learning that emphasizes constructivism, learning that considers Individualized learning, and was created using the concept of intensive program combined with teaching and learning that emphasizes constructivism, learning that considers Individualized learning. The curriculum begins with basic information and analyzes all necessary needs, leading to a systematic design and drafting process and careful planning of the curriculum's implementation or use. By bringing the curriculum developed to trial according to the process of action research to determine the effectiveness of the curriculum, it will lead to curriculum improvements and plans to continuously expand the use of the curriculum, causing delays in teaching and unable to meet the conditions for sending students to study in the People's Republic of China. (Ministry of education, 2001)

2 RESEARCH OBJECTIVES

To study the factor effects on the achievement and attitude for Chinese Intensive curriculum for high vocational certificate in railway transportation before studying in the People's

Republic of China

3 LITERATURE REVIEW

3.1 Intensive curriculum development: it is a curriculum based on supplementary curriculum and is designed for a specific purpose with a short duration. The curriculum places a strong emphasis on improving work performance and developing individual learning potential. The process of teaching and learning in content is the addition of learning content that is not normally available in the curriculum to make it more difficult, broader, and deeper, or the expansion of teaching strategies to be different from the traditional method. This intensive curriculum will consider the learners' needs and will increase other learning, both the same and different processes, to be compact or appropriate for the learners. This is a type of method that will help learners use their time to study in the most cost-effective way for them to have the knowledge and ability in such content with limited time conditions. (Taba, 1962; Lightbown & Staba, 1987; Adisa, 2007; Liu Xun, 2007)

3.2 Individualized Instruction: it is a student-centered learning management system that focuses on responding to students' needs by considering differences in people's abilities, intelligence, needs, interests, physical, emotional, and social aspects. This method encourages learners to learn in a variety of ways based on their abilities and prior experience, where learners can learn and practice skills on their own until they reach their goals at the end of each learning unit and are ready to move on to the next unit of study. When the learners have their specific skills, the teaching and learning in this manner will be used as a guideline for assessing the basic skills of the learners, both convenient for evaluation and progress of each learner. Furthermore, it can help learners learn according to their abilities, as learners must take a pre-test before they begin learning to determine how much basic knowledge of the meat the learner has. The learner then participates in the teaching and learning process, and if the learner scores according to the set criteria, it demonstrates that the learner has knowledge in that unit. However, if the learners do not meet the criteria, they will have to repeat the teaching process, which is thought to increase the learning rate. Finally, once the learning process has been completed, there will be a post-test to test the knowledge gained and to assess the learners' knowledge. (Gagne & Briggs, 1974; Novak & Tyler, 1997 Bruce, Marsha & Emily, 2008)

3.3 Constructivism Theory: There is an important principle that learning will focus on learning to create or learning, which is believed to be a process of creation rather than perception. It is believed that learning is a process of creation rather than perception, in which learners actively create new knowledge rather than listening to and absorbing knowledge from teachers. Learners will be innovators of their own ideas by fusing new ideas or information received with original ideas, which is simple, and learners will then be able to adapt to new knowledge. This will assist learners in practicing complex thinking and originating in thought during the process of creating new knowledge. With appropriate encouragement from teachers, students can develop critical insights into what they invent and study in detail and depth. Instructors have prepared a process for learning through 1) Introduction to the lesson; 2) Review of previous knowledge; 3) Understanding and creation of knowledge; 4) Practice using skills; and 5) Review of previous knowledge. The goal of teaching and learning is to encourage students to do more than simply learn. Learners will

bring their own experiences to connect with their prior knowledge and develop their own understanding. Individuals may generate different meanings based on their prior knowledge and understanding, with the instructor's assistance. (Von, 1989; Bransford, Brown & Cooking, 2000; Khammanee, 2013; Kowatrakul, 2013)

4 RESEARCH METHODOLOGY

4.1 Participation:

Twelve Thai students (n=12) were used to evaluate the tools of this research, they have age range between 18-22 years from Khon Kaen Industrial and Community Education College.

4.2 Procedure

The evaluation tools were isolated into 2 parts consisting of 1.) Chinese intensive curriculum and 2.) Practical Chinese course for evaluated achievement and attitude test. All participants were asked to evaluate both parts since testing the pre-test by using the question sets, the three criteria evaluations were determined consist of listening, reading, and writing test which had total score as 300 points), after that they were designed to learn the deeper detail of both parts for 108 hours (14 Chapters). The curriculum development process was adapted from (Autranan, 1989) curriculum development model which had seven development steps as the main intensive curriculum development under this research, as seen below:

Process 1: Studying the current situation, problems, and necessary needs.

Process 2: Draft an intensive curriculum, learning plans, and learning materials.

Process 3: Presenting the curriculum to experts to consider the suitability of the curriculum.

Process 4: Revising the curriculum according to the advice of experts.

Process 5: Applying the curriculum that has already been reviewed by experts and has been updated to a trial.

Process 6: Applying the results from the trial.

Process 7: Applying the curriculum that has been revised and is ready to be used in practice.

Finally, they were evaluated by using the post-test, the criteria evaluation and the total score were used the same as pre-test.

4.3 Data analysis

T-Test method were applied to find the results between pre-testing and post-testing of both tools. The significance of differences among the scores in terms of pre-testing and post-testing was determined at $P \leq 0.05$. Analysis was performed using the Statistical Package for Social Science package (SPSS 28.0 for Windows, SPSS, Inc., Chicago, IL).

Table 1: Demographic information

Demographic information	Participants	%
Gender		
Male	9	75
Female	3	25
Educational level		
High Vocational Certificate	12	100%
Screening Criteria	Passed	Failed
1. Location	12 (100%)	0 (0%)
2. Special curriculum of vocational	12 (100%)	0 (0%)
3. Environment	12 (100%)	0 (0%)
4. Having plan to study at China for second year.	12 (100%)	0 (0%)
5. Organization of curriculum based on core curriculum of vocational education commission.	12 (100%)	0 (0%)

5 RESULTS

5.1 Demographic information

The demographic data for 12 participations covered their gender, educational level, and screening criteria. Table 1 displays the results, which had 3 females (25.00%) and 9 males (75.00%). The educational level was high vocational certificate for all. Before their attended curriculum, screening criteria were used to screen the participants. It was discovered that all students passed all criteria at 100% which they came from the same location and environment, they already enrolled the special curriculum of vocational and the core curriculum of vocational education commission. In addition, they have plan to study at China for second year.

5.2 Comparison of average Chinese language learning achievement scores before and after the curriculum trial to prepare students for Chinese language proficiency.

All Thai students (n=12) were asked to test the tools for Chinese language learning achievement, there was found that the students' Chinese language learning achievement before testing the curriculum to prepare Chinese language proficiency had an average of $\bar{x} = 91.18$ (S.D.= 0.85), a score out of a full score of 300 or it can be calculated as 30.33%. After studying the intensive program, the average achievement in Chinese language learning after the curriculum trial to prepare Chinese proficiency was $\bar{x} = 201.04$ (S.D.=11.25), a score out of a possible 300 or it can be calculated as 67.01%. When the difference was tested, it was discovered that the students' Chinese learning achievement after the curriculum trial was higher than before the

Table 2: The result of pre-test and post-test Chinese language learning achievement scores

Trial/ Test	Quantity (n)	Score ¹	t-value	p-value
Pre-test (300 scores)	12	91.18 \pm 8.64 ^b	26.829	<.001
Post-test (300 scores)	12	201.04 \pm 11.25 ^a		

¹Mean \pm SD from 12 participants.

²Difference letter in the same column indicate significant difference by T- test ($p < 0.05$)

5.3 A comparison of students' attitudes toward learning Chinese before and after using the intensive curriculum to prepare them for Chinese proficiency.

Table 3: The result of pre-test and post-test of students' attitudes toward learning Chinese

Trial/ Test	Quantity (n)	Mean	S.D.	Attitude levels	t-value	p-value
Pre-test	12	2.20 ^b	0.12	1.5 - 2.5 points (Low)	19.08	<.001
Post-test	12	4.63 ^a	0.09	4.5 - 5 points (High)		

¹Mean \pm SD from 12 participants.

²Difference letter in the same column indicate significant difference by T- test ($p < 0.05$)

curriculum trial at 36.68%, with a statistical significance of 0.05, as shown in Table 2.

The students' attitude toward learning Chinese before using the intensive curriculum to prepare for Chinese proficiency had a low mean score ($\bar{x} = 2.20$, S.D.=0.12). The students' attitude toward learning Chinese after using the intensive curriculum for preparing Chinese proficiency had the highest mean score ($\bar{x} = 4.63$, S.D.=0.09). When the differences in the students' attitudes toward Chinese language learning before and after the curriculum trial were tested, it was discovered that the students' attitudes toward Chinese language learning in the intensive program for preparing Chinese language proficiency after the trial were high. Table 3 shows that using the curriculum improved performance with a statistical significance of 0.05.

6 DISCUSSION AND CONCLUSIONS

This curriculum development model is featured in the educational process with basic information. Curriculum direction based on context, beginning at the grade level. There is also a process to verify the suitability of the course. Implementation of the curriculum in real educational institutions before making complete improvements to the curriculum before the actual implementation of the curriculum combined with learning management that recognizes the problem conditions and individual differences of the learners who will attend the intensive course. Students entering this accelerated course are required to pass a pre and post learning

test for their proficiency in the Chinese language to assess the skills, knowledge, and ability of the Chinese language. From the historical information and several researchers mention about the teaching and learning process are independent to achieve student's goals which based on their needs (Prasad et al., 2016), and unity can benefit learners by responding to their needs according to individual differences (Sukpredee, 1976). The curriculum focuses on students acting in creating knowledge or learning, students can create new knowledge and absorb knowledge from teachers. The learners must assimilate the knowledge from the new material they have received with the previous knowledge from their own understanding. This course is an intensive curriculum developed by the researcher to prepare diploma students in railway transportation for Chinese language proficiency before studying in the People's Republic of China. It is a knowledge-building curriculum designed to be structured in a hierarchical manner with content consistency in teaching and learning to be concise and suitable for learners and enable learners to have knowledge and competence in content, skills of the Chinese language with limited time. The learning process is one in which the teacher arranges a situation for students to create a new thing of knowledge (Chukampang, 1972)(Canale & Swain, 1980)(Bull's, William E., 1995)

From the teacher's stimulation of learners to develop new perspectives to achieve learning, contextual arrangements, situations, environments, skills, and content are stimulating interest or curiosity that learners want to learn about the new content. There is continuous learning management and skill practice through perceptual, visual, listening, and reading, then understanding through analytical thinking and making connections between new knowledge gained and existing knowledge to enable learners to gain real knowledge and apply the knowledge gained to real practice. The curriculum trials have shown that the developed curriculum is effective in building and preparing students' Chinese proficiency, allowing students to improve their learning in each level of Chinese language learning, and has increased learning achievements in Chinese. The students' positive attitude toward the Chinese language also increased.

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