

The Development of a Training Curriculum to Enhance the 21st Century Skills of Reading Instruction Competence and Reading Diagnostics for Lower Primary School Teachers

Mathuroth Paprachan*, Marut Patphol and Wichai Wongyai

Curriculum Research and Development Department Srinakharinwirot University, Thailand

*Corresponding author, e-mail: poom1972@gmail.com

Abstract

The purposes of this research were 1) to develop a training curriculum to enhance the 21st century skills of Thai language reading instruction competence and reading diagnostics for lower primary school teachers and 2) to evaluate effectiveness of a training curriculum to enhance the 21st century skills of Thai language reading instruction competence and reading diagnostics for lower primary school teachers. The training curriculum was believed to be key to those skills of their reading instruction competence and reading diagnostics. The processes of the research conducted under a research and development consisted of four stages: (1) studying fundamental data, (2) developing the draft of the training curriculum, (3) implementing the curriculum and (4) evaluating and developing it. The instruments of this research consisted of reading instruction and diagnostic competence evaluating forms, reading instruction competence and diagnostics behavioral observation forms, semi-constructed interview forms, and lesson learned forms. Statistics items for data analysis were mean, standard deviation, Sign test, content analysis and descriptive analysis. The findings of this research revealed that the training course should consist of: (1) principles (2) purposes (3) contents within 5 units to the total of 39 hours (4) training process (5) training activity (6) training material and (7) evaluation. It indicated that after training, all of the teachers earned higher scores and gradual higher scores on the reading instruction and diagnostic competence and they also received higher scores and gradual higher scores on the reading instruction and diagnostic behavior at the end of each training unit at a level of .05.

Keywords: *training curriculum, reading instruction competence, reading diagnostics, lower primary school teachers*

1. Introduction

Reading is an essential skill for learning and improving people's lives. Therefore, teachers need to find a way to teach oral reading that will enable all students in the basic education system, especially in elementary school, to read Thai language fluently and understand what they read correctly. This is the heart of basic education. The Office of the Basic Education Commission announced a policy that the year 2015 was the year of free illiterate students (Thai Language Institute, Office of Basic & Education, 2015).

Teacher's reading methods are factors that influence students' reading ability. Teachers must have a good understanding of each method in order to select a suitable method with the content and skills that students need to develop. In addition, teachers must understand how to integrate reading instruction to ensure that the reading is complete.

From literature review, it was found that reading instruction at the lower primary school level using consonant and vowel spelling distributions, rating the content from easy to difficult, resulted in learners' progressing development. This is in line with Gagne's theory that says learning must start from simple to complex skills, in which the more complex skills require learners to have a good foundation to help them achieve academic results. Teaching consonant and vowel spelling is as a fishing hook, which is a tool to effective reading. When students see a word, they are able to read. Teaching consonant and vowel spelling is the most important step that teachers must provide most of the time to teaching and teach learners step-by-step strictly. Teachers should not rush to teach otherwise learners would not be able to catch up, which eventually leads to illiteracy (Jach ChomMani, based on the Academic Affairs and Educational Standards Bureau, 2015)

In addition to reinforcing spelling reading techniques to the teachers, reading diagnostics is also an innovation that helps to solve the problem of inaccurate reading. Teachers must develop reading ability for lower primary school learners, which is a crucial cornerstone, by using reading instruction competence

and reading diagnostics simultaneously. In addition, in diagnosing learners' reading ability, teachers must execute it alongside teaching reading and reading activities. Continuous evaluation and assessment are needed, and the obtained results are used to develop learners' reading ability.

From the above literature, the researchers decided to concentrate on the reinforcement of the reading instruction competence and diagnostics reading for teachers to use in their classroom in primary schools. A training curriculum was then developed to enhance the ability to teach reading and the reading diagnostics for lower primary school teachers through the use of on-the-job training in an outreach program using school-based development.

2. Objectives

1. to develop a training curriculum to enhance the 21st century skills of reading instruction competence and reading diagnostics for lower primary school teachers
2. to evaluate effectiveness of a training curriculum to enhance the 21st century skills of reading instruction competence and reading diagnostics for lower primary school teachers

3. Methodology

The objectives of this research were to (1) develop a training curriculum to enhance the 21st Century skills of reading instruction competence and reading diagnostics for lower primary school teachers and (2) evaluate effectiveness of a training curriculum. The target group of this research consisted of six lower primary school teachers teaching Thai language from Grade 1 to Grade 3 from Sriwariya School and Wat Hua Khao School, which are under the jurisdiction of the Office of Samutprakan Primary Educational Service Area Office 2. The research lasted for four months from November 2015 to March 2016. A mixed-method approach using exploratory design was used and conducted in two stages. It started with qualitative approach and followed by the quantitative one. This research was the research and development type which was set into two cycles consisting of four stages as follows:

Stage 1 (R1): A study, analysis and synthesis of primary data

- 1) Studying theoretical concepts from related articles and research. The data were analyzed and synthesized in order to provide information for the development of the training curriculum that helped enhance the ability of lower primary school teachers to teach reading and diagnosing reading
- 2) Studying the needs for the development of assessment skills for Thai reading comprehension of Primary Thai teachers by using an in-depth interview
- 3) An in-depth study of teaching methods of Thai language used by the lower primary school teachers. Two Thai-language books, namely Darun Suksa and Mana Mani were analyzed. An in-depth interview was also conducted.

Stage 2 (D1): The development of a draft for the training curriculum and pilot study with the 3 Thai teachers who was not from the research target group.

The draft was assessed for appropriateness and relevance by five experts in the fields of curriculum development, assessment and evaluation, and teaching reading in the Thai language. A pilot study of the training curriculum was then conducted. The purposes of the pilot study were to study the feasibility of bringing the curriculum into practice which best fit the current state of education and the context of society. The study was conducted with three lower primary school teachers teaching Thai language, one of each level from Grade 1 to Grade 3. This group of teachers was not from the research target group.

The results of the pilot study revealed that the training curriculum was at the highest level, with the mean score between 4.20 and 4.80 and the standard deviation was 0.75. It was also found that the training curriculum most appropriate with the mean score between 4.20 and 5.00, and the standard deviation was 0.85. In addition, the researchers conducted a feedback workshop with teachers, trainees, and students in the classroom. It was found that the training program was feasible with the actual situation. No problems and obstacles were found from using the curriculum.

Stage 3 (R2): The experimental stage of the training curriculum to enhance the 21st Century skills of reading instruction competence and reading diagnostics for lower primary school teachers

After making adjustments to the training curriculum (Draft), it was conducted with the target group of this research, which were six lower primary school teachers teaching Thai language from Grade 1 to Grade 3 from Sriwariya School and Wat Hua Khao School, which are under the jurisdiction of the Office of Samutprakan Primary Educational Service Area Office 2. There were five steps involved in this stage, namely 1) Objectives, 2) Methods, 3) Research instruments, 4) Data collection methods, and 5) Data analysis.

Stage 4 (D2): Evaluation of the effectiveness of the training curriculum and revision

It examined the effectiveness of the curriculum. Then, it was revised for the completion of the study.

In this study, five research instruments were used, which included (1) a teaching behavior form for reading instruction competence using analytic scoring rubrics, (2) an evaluation form for reading diagnostics using analytic scoring rubrics, (3) an observation form (journal and checklist) for reading instruction and reading analytics for Thai language, (4) a semi-structured interview for teachers and students, and (5) a record of obtained knowledge in the form of an open-ended questionnaire.

In terms of data analysis, content analysis was used for the qualitative data derived from documents, in-depth interviews, a teaching behavior form, an evaluation form for reading diagnostics, and a record of obtained knowledge. For quantitative analysis, parameter statistics by means of Mean and Standard Deviation and Non Parameters by Marked Test Method (Sigh Test) were used.

4. Results and Discussion

The research results can be explained in stages as follows:

Stage 1 (R1): A study, analysis and synthesis of primary data

1.1 The results of literature review related to teaching reading and diagnostic reading, and the development of the training curriculum is as follows:

1.1.1 Teaching methods for reading in lower primary school using

Consonant and vowel spelling distributions instruction, sorting the content from easy to difficult. This method helped the learners to develop the learning process, which is in line with Gagne's theory which states that teaching begins with simple skills and complex skills. Higher skills requires background factors of the students in order to achieve learning outcome.

1.1.2 Consonant and vowel spelling distributions is a practice that is built in harmony with the nature of Thai language. It is a skill that requires repetition, so learners must practice this spelling method more often (Chulalak, Nil Sakha, 2011). Consonant and vowel spelling practice is divided into many subsections. It gives the learners the opportunity to practice regularly and continuously, which is in accordance with Thorndike's learning theory, which addresses that learning is effective only when it is practiced repeatedly and continuously in the situations that encourage learners to respond.

1.1.3 Reading diagnostics is one of the innovations that help with reading inaccuracy because it is a process of searching, analyzing, and criticizing why learners are having reading inaccuracy. The teacher must check for misconception, find causes of such problems and examine the sufficiency of knowledge that is essential to the reading, as well as finding the cause of the problems in learning reading of the learners and use the findings to solve the problem (Educational Testing Bureau, 2013).

1.2 The results of the needs analysis for the development of assessment skills for reading comprehension of lower primary Thai teachers revealed that most teachers still lacked knowledge, understanding and applying reading diagnostic techniques to teaching students in class. It also showed that there was a need to generate a standard diagnostic tool to be used for individual learners.

1.3 Based on an in-depth study of Thai language teaching methods for lower primary teachers, the researchers decided to develop a training curriculum to enhance the ability to teach reading and diagnose students' reading ability by using on-job training in the outreach program, using school-based development.

Stage 2 (D1): Development of training curriculum (Draft) and assessment for appropriateness and consistency by experts, and pilot testing

There were several components involved in the development of the training curriculum (Draft), namely course principles, course objectives, and unit contents. The contents of the training curriculum to

enhance the ability to teach reading and diagnose students' reading ability for lower primary school teachers consisted of 5 units with the total of 39 hours.

There were four main steps in the training process, namely review, enrich, act, and reflect (AAR: After action review) which was used to help improve the quality of teaching reading and diagnostic reading.

The training activities included lecture and discussion, practice in the classroom, coaching, exchanging knowledge through presentation and feedback. Learning resources included training curriculum, work sheet, VDO, action plan and evaluation form for effectiveness

Results of the evaluation of the research instruments by five experts revealed that the curriculum was relevant and appropriate at the highest level.

The pilot testing of the training curriculum revealed that it was feasible to apply to the actual situation with no problems and obstacles.

Stage 3 (R2): The experimental stage of the training curriculum to enhance the 21st century skills of reading instruction competence and reading diagnostics for lower primary school teachers

The training curriculum using the 4-step REAR approach was able to enhance the reading instruction competence and reading diagnostics for lower primary school teachers.

Stage 4 (D2): Evaluation of the effectiveness of the training curriculum and revision

Based on the results, the effectiveness of the training curriculum for enhancing the 21st century skills of reading instruction competence and reading diagnostics for lower primary school teachers was found to be in line with all the performance criteria. The results derived from teachers were training to learn and work in the targeted learning environment; thus it was meaningful to the teachers. In addition, the teachers were involved in the training process, as they focused on the practical implementation. They had the chance to exchange knowledge and practice, solving problems from the actual work, and reflected on them. They used the results of the training in classroom practice (Montree, 2011).

Discussions

In this research, the researchers aim to describe it into two main issues as follows:

1. Results of training curriculum development

The training curriculum was able to enhance the ability to teach reading and diagnostic reading for lower primary school teachers effectively and could be applied to the actual context. This is due to the systematic research and development process that the researchers decided in four steps, namely 1) basic information analysis, 2) development of the draft training curriculum, 3) study on the effectiveness of the training curriculum, and 4) the training curriculum improvement and development. The curriculum followed a systematic process through the 4-step REAR in every unit, which corresponded to the concept of Taba's curriculum development (Wongyai, 2011, cited in Taba.). The use of School-based Development also helped to train the teachers to make the learning and working meaningfully. The teachers realized the benefits of learning new techniques, which resulted in effective activities for teaching reading.

2. Results of the pilot training curriculum

The pilot training curriculum was able to enhance the ability to teach reading and diagnostic reading for lower primary school teachers. Its effectiveness can be explained as follows:

2.1 The teachers who were trained in the training curriculum had a significantly higher level ability to teach Thai language than prior to taking the training curriculum.

2.2 The teachers were able to diagnose students' reading comprehension after post-training at the .05 level of significance.

2.3 The teachers had developed their teaching behaviors in teaching and diagnosing Thai reading after completing the training curriculum at the 0.05 level of significance.

2.4 The teachers had improved their ability to read Thai before, during and after the training statistically significant at the .05 level.

2.5 The teachers had developed their ability to diagnose reading before, during and after the training statistically significant at the .05 level.

2.6 The teachers had improved their teaching behaviors of teaching reading and diagnosing Thai reading before, during and after the training statistically significant at the .05 level.

5. Conclusion

The findings of this research revealed that the training course through the use of on-the-job training in an outreach program using school-based development should consist of: (1) principles (2) purposes (3) contents within 5 units which followed a systematic process through the 4-step REAR in every units, to the total of 39 hours (4) training process (5) training activity (6) training material and (7) evaluation. It indicated that after training, all of the teachers earned higher scores and gradual higher scores on the reading instruction and diagnostic competence and they also received higher scores and gradual higher scores on the reading instruction and diagnostic behavior at the end of each training unit at a level of .05.

Based on research findings, recommendations provided by the researchers are as follows:

Recommendation for teachers

1. To maximize the effectiveness of the training curriculum used in educational institutions, teachers should follow the recommendations below.

1.1 Study and apply the reading technique of consonant and vowel spelling distributions to their classroom from easy to more complex order through the use of coaching technique. The use of empowerment to read and questions to motivate learners to learn are suggested.

1.2 Study and apply informal reading techniques such as observation, inquiry, examination, portfolio and exercise to the classroom learning process along with formal teaching reading by having teacher to observe students' reading comprehension, correct misunderstanding to the learners before teaching more complex concepts.

1.3 The duration of training should be flexible and appropriate to the context of each institution. In addition, teachers should have enough time to attend a continuous training.

2. In learning management and problem solving in Thai reading for students at the lower primary school level, it requires collaboration among school personnel from the executive level, teachers and students by providing feedback for development.

3. There should be a teaching material development for teaching reading both Thai and English. More books and reading supplementary in each period of the study time should be implemented by introducing students to consonant and vowel spelling of words or sentences which are relevant to everyday life. The materials need to be structured and process focused starting from simple word structure to complex word formation. The use of colorful and interesting reading materials helped promote brain development.

4. A learning environment in the classroom that encourages students to learn is encouraged and created. Through various empowerment, compliments, appreciation, and encouragement, learners become confident that they can learn to read. Reading complex and high level texts and structure continuously is suggested.

5. School administrators and those who are involved can use the training curriculum to strengthen lower primary school teachers' ability to teach reading and diagnostic reading.

Recommendation for further studies

1. There should be a study and development of a training model that strengthens the ability to teach reading and diagnose reading ability for lower primary school teachers in the long-term and collect data in time series. This is to learn about the development of the ability to teach reading and diagnose reading ability and the results for the learners in the future.

2. Teacher training activities should be introduced, using outreach training techniques with school-based development to suit with the learning management for ultimate effectiveness.

3. There should be a study and development of a training curriculum that enhances the reading instruction competence and reading diagnostics of lower primary school teachers. It can be conducted by incorporating the concept of learner diagnosis into other subjects.

4. The training curriculum should be implemented to strengthen the reading instruction competence and reading diagnostics of lower primary school teachers to use in schools. In addition, it is

suggested to study the appropriateness and restrictions of a training curriculum and compare the use of such program with schools under the project of expanding opportunities for education.

6. Acknowledgements

The researcher wishes to thank Dr. Praiwan Pitaksalee, Dr. Booncho Charasatiean, Dr. Sompong Panhoon, Dr. Chawarit PooNa-korn, Dr. Chanathip Tuipae, Dr. Pornpimon Prasongporn who inspected the quality and the effectiveness of the training curriculum and the research tools. Moreover, study the needs for the development of assessment skills for Thai reading comprehension of primary Thai teachers by using an in-depth interview of expert Thai teaching teachers. Furthermore, the six lower primary school teachers who taught Thai language from Grade 1 to Grade 3 from Sriwariya School and Wat Hua Khao School, which are under the jurisdiction of the Office of Samutprakan Primary Educational Service Area Office 2.

7. References

- Anastasi, A. (1968). *Psychological testing* (3rd Ed.). London: Macmillan.
- Bandura, A. (1986). *Social foundations of thought and action: a social cognitive theory*. Englewood Cliffs, New Jersey: Prentice-Hall.
- Beebe, S. A., Mottet, T. P., & Roach, K. D. (2004). *Training and development: enhancing communication and leadership skills*. New York: Pearson and AB.
- Bloom, B. S. & others. (1971). *Handbook on formative and summative evaluation of student learning*. New York: McGraw-Hill.
- Bloom, B. S. (1971). *Handbook on formative and summative evaluation of student learning*. New York: McGraw-Hill Book co.
- Brookhart, S. M. (2008). *How to give effective feedback to your students*. Alexandria, VA: ASCD.
- Bruner, J. S. (1969). *The process of education*. New York: Harvard University Press.
- Butler, D. & Clay, M. (1983). *Reading begins at home*. New Hampshire: Heinemann Educational Books.
- Gronlund, N. E. (1990). *Measurement and evaluation in teaching* (6th Ed.). New York: Macmillan Publishing Co.
- Gullickson, R. & Stufflebeam, D. (2015). *Evaluation checklists project, and feedback*. From the Workshop www.wmich.edu/evalctr/checklists
- Jach ChomMani (2015). The Academic Affairs and Educational Standards Bureau
- Rupp, A. A. & others. (2010). *Diagnostic measurement -theory, method and applications*. The Guilford Press; New York, London.
- Spiller, D. (2012). *Assessment matters: self- assessment action plan*. Alexandria, VA: ASCD.