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Teachers' Difficulties in Implementing Thematic Teaching and Learning in Elementary Schools

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Abstract

The objective of this study was to identify teachers' difficulties in implementing thematic learning in elementary schools. The study was phenomenology-type qualitative research. Data were collected through interviews followed by focus group discussion; the focus group discussion involved 15 elementary school teachers from eight provinces that had implemented Curriculum 2013. The data were analyzed by means of Creswell's steps. The results of the study showed that teachers encountered obstacles in selecting appropriate problems and themes within thematic, scientific and problem-based learning and in managing time for project-based learning. The availability of learning facilities was still limited. The problems found at the assessment stage was the teachers' capacity in selecting appropriate techniques, in creating good instruments and in formulating clear assessment criteria.

Keywords: teachers' difficulties, thematic learning, elementary schools

Introduction

The change of learning paradigm in the 21st century brings about changes in the curriculum. Chen (2012) explains that the traditional learning activities with their teacher-centered paradigm always follow the material sequence in textbooks. The paradigm is considered less relevant to the demands of the 21st century. Therefore, Harris & Rooks (2010) state that the new learning paradigm urges teachers to help

students develop their expertise and capacity in locating and linking concepts in discovery or invention activities, which is known as the student-centered approach.

The curriculum change is also confirmed by Liu & Wang (2010), who claim that in accordance with the definition of integrated curriculum, learning materials should be arranged in such a way that they will be able to provide better learning impacts. Multiple changes in the learning activities and the competences that students should master are gradually introduced to schools. The significant matter that changed in Curriculum 2013 is the new approach that should be applied, namely the thematic approach. This approach contains scientific learning, problem-based learning (PBL) and project-based learning (PjBL).

Thematic learning is one of the learning strategies that have been proposed by many researchers and psychologists (Mirjalili, Jabbari & Rezai, 2012). The reason for implementing the thematic learning, as suggested by Min, Rashid & Nazri (2012), is that students will learn better because learning activities are initiated by problems that have been presented under selected themes. Davis & Shankar-Brown (2011) claim that thematic learning is an approach that is suitable for learners' development in the 21st century. The reason is that the steps enable teachers to provide students with challenges in order for them to reflect on a theme. Then, they should learn to link it with the science that becomes their interest. The importance of thematic learning is emphasized by Mirjalili, Jabbari & Rezai (2012), who state that in thematic learning there is a process of associating. It is in accordance with the mandate of Curriculum 2013 in relation to scientific learning.

A thematic curriculum is a set of organized learning experiences that provide students with the opportunity to explore widely the main learning theme (Finch, Frantz, Mooney & Aneke, 1997). Min, Rashid & Nazri (2012) and Chen (2012) state that thematic learning has been one of the effective strategies for contextual learning that is related to students' daily experiences. In addition, professional teachers should support students in creating a connection among multiple problem solving methods. In thematic learning, teachers should design learning curricula, learning methods, and assessments and also associate materials with multiple domains of science within one theme. It emphasizes not only the multiple domains of science but also the multiple cognitive capacities such as reading, mathematics, science, writing and society (John, 2015; Finch, Frantz, Mooney & Aneke, 1997).

In other words, thematic teaching and learning involve the use of themes as the starting point of teaching and learning that will consolidate students' knowledge. Krey (1994) states that there are many kinds of themes that might be used in thematic teaching and learning in order to improve students' learning experiences. Another learning approach in Curriculum 2013 is scientific learn-

ing, problem-based learning (PBL) and project-based learning (PjBL). Scientific learning is a learning process that has steps, namely observing, questioning, gathering information, associating and communicating. On the other hand, PBL is a learning model that starts with an introduction toward relevant problems in the learning cycle to motivate students in their learning processes (Prince, 2004). PBL provides students with the opportunity to be active, cooperative and collaborative. Thematic integrative learning might be used by elementary school pupils by creating projects as materials for establishing connections with multiple domains of science or of subjects for the sake of achieving the learning objectives that have been embedded in students' minds (Bradbury, 2008). Therefore, PjBL also increases students' knowledge about the projects that will be assigned, which are interdisciplinary.

Related to thematic learning in Curriculum 2013, many studies display the effectiveness of thematic learning. According to a study by Liu & Wang (2010), web-based thematic learning has positive impacts on students' concept learning. The results of another study by Ardianti, Prasetyo & Susanti (2014) show that thematic learning by means of discovery-based modules has impacts on students' learning results. Min, Rashid & Nazri (2012) have also found that there is a significant relationship between teachers' understanding of the thematic approach and teachers' learning practices. Their results reveal that the length of teachers' experience does not show significant differences in thematic learning practice. Another study by John (2015) has also found that the teachers who understand the thematic curriculum and students' needs should be more effective in implementing the new thematic curriculum and the integrated curriculum.

Recalling the importance of integrated and connected learning, the development of higher order thinking skills is heavily demanded with the increasing global competition. In addition, Davies & Shankar-Brown (2011) state the importance of preparing a generation of educators in order to develop teachers' competences in planning and implementing thematic learning. Each curriculum change in school will heavily depend on teachers' competence and expertise (Darling-Hammond, 2010). Therefore, the researchers through this study want to investigate teachers' difficulty in implementing thematic learning at elementary schools.

Research Methodology

This study is phenomenology-type qualitative research. The data were gathered by means of FGD followed by in-depth interviews in order to study elementary

school teachers' difficulties in implementing thematic learning. The participants were 15 elementary school teachers (T1-T15) from eight provinces in Indonesia, consisting of eight male teachers and seven female teachers. There were five teachers (T1, T2, T9, T10 and T11) that had not attended the training of Curriculum 2013, while the remaining 10 teachers had attended the training. Three teachers had attended the training or the socialization of Curriculum 2013 in their school (T5, T6 and T8), T7 was a national instructor of Curriculum 2013 and the others had attended the training or the socialization of Curriculum 2013 at the regency level. At the beginning of data gathering, the researchers held the FGD; and then, the researchers followed up the FGD by means of in-depth interviews. The data were analyzed by referring to Creswell's steps (2014) namely: defining and preparing data, reading overall data, encoding data in order to define the theme and to create description, establishing the inter-theme connection, and interpreting the theme or the description.

Research Results

The results of data analysis are categorized in terms of the teachers' understanding, teaching and learning implementation, teaching and learning facilities and assessment conducted in order to find the elementary school teachers' difficulties in implementing thematic teaching and learning.

Teachers' understanding

The results of the teachers' understanding of thematic learning are presented in Table 1.

Table 1. Teachers' understanding of the thematic teaching and learning

Description	Difficulty and Cause	Strategy
The teachers' understanding of the curriculum, including the competence standard	Many teachers responded negatively to the process of curriculum transition.	<ol style="list-style-type: none"> 1. Continuous training and mentoring 2. Curriculum socialization and training that would not only be limited to theoretical review 3. Trained teachers who should share their knowledge and insights with their colleagues
	Many teachers did not want to change their mindset.	
	The teachers were not prepared to deal with the curriculum change.	
	Many teachers had not understood the new curriculum completely.	

Description	Difficulty and Cause	Strategy
The teachers' understanding of the thematic teaching and learning	The teachers had already understood the definition of thematic teaching and learning.	4. The providence of mentoring program that involved the core schools as the center of information and the impacted schools by the government 5. The process of pursuing in-depth curriculum understanding independently.
The teachers' understanding of the PBL	The teachers were relatively familiar with the term PBL.	
The teachers' understanding of the PjBL	Teachers were not familiar with PjBL	
The teachers' understanding of the assessment	The teachers in general understood the assessment aspects within Curriculum 2013 The teachers had not understood the details of assessment process.	

The obstacle in changing the teachers' understanding of the curriculum was the teachers' negative stigma and individual factors, such as that they still had not opened their minds to the change and they still had low spirit of independent learning. Massive multiple steps that the government had taken in disseminating the curriculum had brought about positive impacts. However, in practice not all teachers had completely understood it. Overall, the teachers' understanding of Curriculum 2013 was not sufficient. They were familiar with these approaches but did not understand the essence or the steps of teaching and learning activities.

Learning implementation

The results of the teachers' difficulties in implementing thematic teaching and learning activities are presented in Table 2.

Table 2. Teachers' Difficulties in thematic teaching and learning implementation

Description	Cause	Strategy
The teachers' difficulty in implementing thematic teaching and learning	The learning plan and preparation was relatively difficult.	1. It required creativity to perform inter-item associations within one theme. 2. There should be optimization of the role of school principal as a supervisor.
	The difficulties were overcome by returning to the partial learning process.	
	It was difficult to implement the scientific learning path.	
	It frequently occurred that the contexts had not been contextual.	

Description	Cause	Strategy
The teachers' difficulty in implementing problem-based learning	The PBL model had been rarely implemented because it was considered difficult and complicated.	The school principal should control the learning process through correction of the learning sets and their implementation. The school principal should provide teachers with multiple education through his/her role as a supervisor.
	It was difficult to determine the appropriate problem base. The teachers were still confident with the teacher-centered approach.	
The teachers' difficulty in implementing project-based learning	It was difficult to manage the time in the PjBL approach.	
	It was difficult to select the appropriate project.	
	The teachers were still confident with the teachers-centered approach.	
The teachers' difficulty in exercising the HOTS	There were many teachers who had not understood the HOTS and its development.	
	The students had not been accustomed to the HOTS and its development.	

In the study, the teaching and learning and scientific concepts had not been totally implemented. The teachers were trapped in the process of 5M. Problem-based learning and project-based learning had also been less implemented because they had been considered difficult and complicated. Therefore, most of the teachers believed that it would be more convenient to implement the teacher-centered teaching method. The challenges and the demands for developing the higher-order thinking skill (HOTS) capacity had not appeared, either. The difficulties included the process implementation that had not developed the HOTS capacity.

Learning Facilities

The results of the difficulties that the elementary school teachers encountered in terms of learning facilities are shown in Table 3. There is a problem in the distribution and quantity of books. Teachers are required to be more creative in order that the learning process can run well according to the curriculum requirements.

Table 3. Teachers' difficulties in terms of learning facilities

Description	Cause	Strategy
Book availability	There were delays in book distribution in the schools.	1. The school advised the teachers and students to download the books from the Internet. 2. The school suggested the teachers should design lesson plans according to the new curriculum independently, including the topic composition.
	The book number was not balanced to the number of students.	
	The library quality was less sufficient.	
Learning media/supporting display	The teachers rarely used learning media.	The teachers were required to be creative in providing the learning media independently
	The differences among schools in terms of school facilities were high.	
	The learning media availability was limited.	

Assessment

The results of the teachers' difficulty in implementing the assessment through thematic learning are presented in Table 4. In general, the difficulties were the teachers' capacity in selecting the appropriate technique, the design of a good instrument and the design of clear score description especially in the attitude assessment. Then, another obstacle was the rubric design. Another difficulty was that the teachers were not accustomed to presenting scores in a descriptive way, clearly and briefly.

Table 4. Teachers' difficulties in terms of assessment

Description	Cause	Strategy
Spiritual attitude assessment	The class size is very big	The score output was designed in two versions, namely in description and in number
	The assessment frequency is high	
	There are no similar learning results among the teachers.	
Social attitude assessment	The teachers cannot select or implement the effective and efficient attitude assessment technique.	

Description	Cause	Strategy
Knowledge assessment	The determination of test item composition is difficult. The teachers have difficulties especially with regards to the mapping of students' capacity.	
Skills assessment	It is difficult to design an assessment rubric.	
Should assessment involve the HOTS?	The assessment does not reach the HOTS	
School report writing	The teachers have difficulties in creating description.	

Discussion

Teachers' understanding

One of the dynamics aspects that can be seen in the process of curriculum change in Indonesia is the teachers' response. Several facts show that there are many teachers who show negative responses. As a result, many teachers refuse to change their mindset in teaching and learning. It is certainly contrary to the statement that teachers should have sufficient capability to increase their students' academic achievement so that the learning process is successful and allows for accommodating students' needs (Martel, 2009). According to Kalelioğlu & Gülbahar (2014, p.248), in the 21st century an individual should have the capability of critical thinking, problem solving and creative thinking.

Therefore, it is the government's duty to disseminate the new curriculum. However, many teachers admitted that they had not obtained an in-depth understanding of Curriculum 2013. It has become even worse because training is still oriented toward theoretical matters. In addition, teachers also complain of the short training period. Training cannot explain real situations in the teaching and learning processes. Teachers should realize that training is a process of preliminary introduction and multiple processes toward understanding the curriculum should be conducted personally. Chen (2012) states that teachers should have strong and powerful materials, they should realize ideas and topics that will be implemented in the teaching and learning processes and they should understand how well they teach concepts to their students.

The demand of elementary school curriculum is to implement PBL and PjBL. In general, teachers are more familiar with PBL. Through in-depth investigations, it has been found that teachers do not understand both models profoundly. Most teachers admitted that the teaching and learning process might be in accordance with the suggested models but they did not plan the model syntax. As a result, they could not categorize to which model their teaching process belonged.

The government held mentoring programs that involved core schools and impacted schools. The term core schools refers to the schools that are appointed as the centers of information. The programs are called ON, namely the mentoring of targeted teachers that would be conducted by the regency-level instructors, IN namely the discussion around multiple findings during the ON program and solutions.

Thematic learning implementation

Many teachers' problems lead to many problems in the teaching and learning implementation. One of the problems is that many teachers complained of the difficulty in combining multiple lessons into a single theme. The results of the study confirm those of the previous one by Finch, Frantz, Mooney & Aneke (1997), who found that teachers had difficulties in understanding and implementing thematic curricula.

Besides those multiple cases presented by the teachers as an introduction rarely encourage students to reason successfully in the scientific approach. Unfortunately, reasoning has been a process that might be students' gate to perform an in-depth understanding and teachers' identification of their students' thinking level. Then, PBL and PjBL models have seldom been relatively implemented by the teachers. In general, the teachers admitted that they often included appropriate problems in the PBL process. In relation to PjBL, the teachers' complaint is the difficulty in selecting an appropriate project and time management. Such problems were caused by unpreparedness of the teachers for implementation. One of the reasons that most teachers stated was the demand for completing the learning materials. It shows that there is a focus on the development of the cognitive domain solely. It is very possible that the learning process might run very fast and might even encompass extensive and intensive materials if the learning materials were well-designed.

The skills that should be developed in Curriculum 2013 are the Higher Order Thinking Skills (HOTS). It is a response to the demand of the century that students should be able not only to explain and implement theories but also to solve problems through analysis-, evaluation- and creation-level thinking. However, the data showed that elementary school teachers hardly understood the HOTS.

One of the strategies to improve teachers' performance is by extending the school principal's role. The data showed that an elementary school whose principal was attentive had good administration and more professional teachers. A school principal plays a strategic role in correcting the suitability of lesson plans and curriculum and in providing multiple explanations at the same time.

Learning facilities

Facilities are another important factor within the implementation of the teaching and learning process. The facilities which are anticipated are the student's and the teacher's books. However, many delays of the distribution of Curriculum 2013 books were often found. Another problem is the mismatch in the number of books and students. Therefore, most schools implemented a policy that one book should be used by two students, the teachers and the students are supposed to download books from the Internet and the downloaded books might be turned into guidance for the teaching and learning process. Unfortunately, the library facilities in most of elementary schools are limited. The alternative would be making teachers design a teaching and learning process that will be in accordance to the new curriculum independently and this would include the theme design.

The teaching and learning process in the classroom should be supported by multimedia. Typically, elementary schools have basic display tools. However, not many schools have other media such as geometrical build models, human skeleton models, animal digestive system models, computers and the Internet connection. Consequently, many teachers admitted that they rarely used the teaching and learning media due to the limited support provided by the school.

Assessment implementation

The attitude assessment is what most teachers often complain about. The teachers cannot design a good instrument from the formulation of the conceptual definition from the formulation of the operational definition to the formulation of indicators and test items. In general, the process is perceived to be very difficult and the results of this process might be biased. The second problem is the assessment process. Many teachers often complain about the big class size. Consequently, the process is very difficult. The problem in cognitive assessment is the determination of test item construction in terms of both theme mastery and lesson mastery. The teachers are relatively familiar with the remaining part and relatively understand the knowledge.

The difficulty in the skills assessment is designing an assessment rubric. The description is considered the most difficult process. It is not well designed, which

causes them to have difficulties in maintaining the objectives. This result confirms the research by Retnawati, Hadi, & Nugraha (2016), stating that teachers had difficulty in developing the instrument of attitude assessment, formulating the indicators, and designing the assessment rubric.

The final stage within the assessment process is writing the school report card. Basically, the score contains the achievement of student competences so that the students focus on comparing not only their achievement to their peers' but also their own achievement. The scores are presented in a descriptive way and it is considered difficult by the teachers. The teachers are not accustomed to writing the description. Consequently, it was the teachers' main complaint.

Conclusions

The greatest challenge in the curriculum process has been the teachers' negative stigma. Massive multiple efforts that have been taken by the government have provided positive impacts. However, the research found that many teachers have not completely understood Curriculum 2013. The reason is that they are confused, afraid and do not open their minds to the change; as a result, the efforts to understand the curriculum are not maximal. The teaching and learning process has not been fully conducted due to the teachers' multiple difficulties. It includes the implementation and the learning contents that have not developed the HOTS. The teaching facilities in the form of learning resources and learning media are limited; as a result, the teachers are supposed to be creative so that the teaching and learning process can be well conducted. The problems at the assessment stage are the teachers' capacity in selecting appropriate techniques, in designing good instruments and in designing a clear assessment description.

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