

Teacher Development Through Implementation of Thematic Teaching Material in Project-Based Learning Setting on Primary School

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Abstract: Thematic learning is one of the effective learning models (highly effective teaching model). thematic learning is a fun learning because it departs from the interests and needs of students, learning outcomes will last longer because learning is more memorable and meaningful. However, there are some obstacles in its implementation of thematic learning model. One of the problems is related to the teachers' capability in teaching materials and implementing teaching material in setting project based learning. Furthermore, the study was aimed to investigate some issues that related with teachers' development and teaching materials in setting project based learning. The study involved two teachers and 30 students. Thus, experimental research was applied in the study that started with the development of teaching materials for the students. The result of the study shows that teachers' development of thematic teaching materials is increased. Referring to the result, it also increases students' achievement in the teaching and learning process.

1 INTRODUCTION

The effectiveness of integrated thematic learning model can be seen from its ability to accommodate and integrally touch emotional, physical and academic parts in the classroom or in school environment. Empirically, this thematic learning model has also been proved capable and successful to trigger acceleration and increase long-term memory capacity of learners (enhanced learning and long-term memory capabilities of learners). The main premise of thematic learning is that students need additional opportunities to utilize their gifts and talents, providing time with others to rapidly conceptualize and synthesize a particular knowledge. On the other hand, thematic learning is suitable to accommodate qualitative differences regarding the learning environment around students (Samsuri, 2013).

However, along with the development of the learning process in primary schools, the implementation of thematic learning encountered several obstacles including: (1) The limited knowledge and ability of teachers in teaching according to the theme; (2) The available teaching materials that still use the subject approach making it difficult for teachers to integrate material according

to the theme; (3) Thematic teaching materials are still national so that some of the materials are less appropriate with the condition of student learning environment; (4) Team teaching model is appropriate for school conditions that apply the subject teacher system. However, this model requires high coordination and commitment for each teacher; (5) Schedule using subjects makes it difficult for teachers to integrate subjects flexibly; (6) The use of theme schedules is more flexible in the delivery of thematic learning, but requires careful planning in terms of the weight of presentation between subjects (Fitriani et al., 2014; Pudjiastuti, 2010; Sukini, 2012).

Based on this study, several important things that become the basis of the implementation of this coaching activities are matters relating to (1) the limited knowledge and ability of teachers in teaching according to the theme; (2) the available teaching materials that still use the subject approach making it difficult for teachers to integrate the material according to the theme; (3) thematic materials that are still national so that some of the materials are less appropriate with the local conditions and student learning environment; (4) schedules that based on subjects make it difficult for teachers to integrate subjects flexibly; And (5) the use of theme schedules

is more flexible in the delivery of thematic lessons, but requires careful planning in terms of weighting of presentation between subjects.

In general, the identified issues from the results of preliminary observation and discussion of problems with teachers in target schools are related to the process of adaptation of the new curriculum (in this case is the 2013 curriculum) in classroom learning. These problems can be grouped into several categories including teacher creativity, student independence and evaluation of process and learning outcomes.

In the teacher's creativity point of view, some expressed obstacles for example: (1) difficulty in determining the Basic Competence in accordance with the recommended theme; (2) In making the lesson plan (RPP), teachers have difficulty in determining activities that combine several subjects in one theme; (3) In the thematic learning activities, teachers have difficulty in developing teaching materials to integrate several subjects in one theme; (4) The learning process emphasizes the cognitive aspect rather than the affective and psychomotor aspects so that it is less intriguing to the students; (5) Thematic teaching materials are still national so some materials are less appropriate with the condition of student learning environment

In terms of student independence, ideally thematic learning is a fun learning because it departs from the interests and needs of students, learning outcomes will last longer because learning is more memorable and meaningful. In addition, thematic learning ideally can foster social skills, such as cooperation, tolerance, communication, and responsiveness to other people's ideas. But in its implementation, it is difficult to develop students' independence in executing the results of a thematic learning process, so in the implementation, the teacher is encouraged to intervene in the process by giving an explanation. As the impact, the process of learning comes back on teacher-dominated learning activities in constructing student knowledge.

Meanwhile, the problems related to process evaluation and learning outcomes are (1) Learning trend is implemented using integrated thematic approach but evaluation process is done in the form of separate subjects. The unavailability of the assessment guidelines that accommodate the assessment pattern in integrated thematic learning is why the evaluation is still relying on the pattern per subject. (2) Teachers' tendency not to conduct process assessments in organized learning, due to the concentration of thematic instruction. (3) Many teachers do not carry out final assessments because

they feel that the group assignments that have been given to students in the form of LKS are final assessments.

2 THEMATIC TEACHING MATERIALS

The fundamental problem is the lack of teaching materials that are thematic. Teaching materials can be interpreted materials or learning materials are prepared in a complete and systematic based on the principles of learning used by teachers and students in the learning process. The teaching materials are systematic, unique and specific (Sungkono, 2009). Meanwhile, the principles of developing teaching materials, among others (PusKur, 2008): flexible and adaptive, functional and meaningful, based on the environment, educative, effective and efficient, and alignment.

Thematic learning is an approach in learning a process to link and integrate teaching materials in a subject or inter subjects with all aspects of child development, as well as the needs and demands of the family's social environment (John, 2015). Another definition of a thematic approach is the holistic approach, which combines aspects of epistemology, social, psychology, and pedagogic approaches to educate children, that are connecting between brain and body, between person and person, between individuals and communities, and between knowledge domains (Udin et al., 2006). The strengths of thematic learning materials are (1) these learning materials are based on the use of meaningful topics for social life; (2) students are given the opportunity to give input to the process and learning materials; (3) possible variations of activities, not just learning to read and write; And (4) students can see and reflect on, and discuss the various problems of life they experience (Sujarwo, 2008). Preparation of teaching materials is an effort to formulate or design the materials and tools that will be presented in the learning process based on predefined themes.

3 PROJECT BASED LEARNING

One of the approaches that is applied is Project Based Learning. Project Based Learning is an innovative learning approach, which emphasizes contextual learning through complex activities (Kamdi, 2008). The projects here are complex, based on question or challenging tasks, involving students actively starting

from the project planning stage, up to the project evaluation stage. A project in Project Based Learning focuses on questions or problems, which encourage students to undergo (by hard work) the core concepts and principles of discipline or learning materials (Kamdi, 2008).

Project Based Learning focuses on the key concepts and principles of a discipline, engages students in problem-solving activities and other meaningful assignments, provides students with opportunities to study at a given time, and finishes in products that are valuable, realistic and can be presented (Rais, 2010). As a model of learning, Project Based Learning has several principles as follows (Wena, 2012; Blumenfeld et al., 1991; Bereiter and Scardamalia, 1999; Dryden and Vos, 2001): Autonomy Principles, Centrality Principles, Driving Question Principles, Constructive Investigation Principles, Realistic Principles (Realism).

4 RESULTS AND DISCUSSION

This study used paired t-test and Analysis Tools menu on the Microsoft Excel 2010. The result showed that significance (α) 0.05 (see Table I). Moreover, students' average scores pre-treatment is lower than post-treatment. The calculation by using normalized gain Hake (1999) shows that the highest average comes from the students in the high group, which is 0.84 (the high category). Meanwhile, the middle group and below group are in the score of 0.64 and 0.61 which belong to the middle categories. According to the Table I, it could be stated that the changes of thematic teaching materials in setting project based learning give positive feedback towards the students' improvement to the learning material.

Table 1: The comparison between before and after treatment.

	Variable 1	Variable 2
Mean	37.4673219	52.6741902
Variance	185.753081	98.590283
Observations	30	30
Df	29	
t Stat	8.554080	
P(T<=t) one-tail	1.0538E-13	
t Critical one-tail	1.08467032	
P(T<=t) two-tail	2.29630E-13	
t Critical two-tail	2.0009824	

t-Test: Paired Two Sample for Means

Furthermore, the findings show that teachers' development helps them to select the most suitable learning content, project, process, product, and

environment. The teachers applied project based learning method to relate some topical themes with some object in students' daily life. Thematic teaching materials can facilitate students in learning concept and facilitate students in learning. However, even though still difficulties in the preparation of the project, but the teachers showed improvement in the ability to arrange teaching materials. It is also evident from the student increased abilities after applying the lessons using project based thematic materials.

5 CONCLUSIONS AND FUTURE WORK

This study shows that project based learning gives positive impact in the teachers' development and ability towards some thematic teaching materials. The teachers' development towards thematic content knowledge will influence the improvement of the teaching and learning quality in the classroom. Through thematic materials in the project based learning, students understanding increasing, because through the project and thematic makes it easier for students to understand a concept. Thematic learning can be developed with the characteristic of each region.

REFERENCES

Bereiter. Scardamalia, 1999. *Process and Product in PBL Research*, Ontario Institutes for Studies in Education University of Toronto. Toronto, 1st edition.

Blumenfeld, 1991. Motivating Project Based Learning: Sustaining the Doing, Supporting the Learning. *Journal Educational Psychology*. Vol 26, 1991 issue 3-4.

Dryden, G., Vos, J., 2001. *The learning revolution: To change the way the world learns*, Network Educational Press in Association with Learning Web. Stafford.

Fitriani, A. D., Mulyasari, E., Prabawa, H. W., 2014. *Pengembangan Bahan Ajar Tematik dan Implementasinya dalam Pembelajaran Berbasis Proyek di Sekolah Dasar*, Laporan Penelitian UTU UPI. Bandung.

Hake, R. R., 1999. Analyzing Change Gain Scores Department of Physics Indiana University Bloomington [Online] <http://www.physics.indiana.edu/~sdi.AnalyzingChange-Gain.pdf>.

John, Y. J., 2015. A New Thematic, Integrated Curriculum for Primary School of Trinidad and Tobago: A Paradigm Shift. *International Journal of Higher Education*. vol 4, no 3, pp 172-187.

Kamdi, W., 2008. *Project-Based Learning: Pendekatan Pembelajaran Inovatif*, Pelatihan Penyusunan Bahan

- Ajar Guru SMP dan SMA Kota Tarakan Universitas Negeri Malang. Malang.
- Pudjiastuti, A., 2010. *Permasalahan Penerapan Pembelajaran Tematik di Kelas Awal Sekolah Dasar*, Disertasi Program Pascasarjana Universitas Negeri Malang. Malang.
- PusKur, 2008. *Model Bahan Ajar-Paket A*, Departemen Pendidikan Nasional-Badan Penelitian dan Pengembangan. Jakarta.
- Rais, M., 2010. *Project-Based Learning: Inovasi Pembelajaran yang Berorientasi Soft Skills*, Seminar Nasional Pendidikan Teknologi dan Kejuruan FT UNESA. Surabaya.
- Samsuri, 2013. *Kebijakan Pembelajaran Tematik Terpadu Kurikulum 2013*, Pengantar Kuliah Umum Program Studi Pendidikan Dasar Program Pascasarjana Universitas Medan. Medan.
- Sujarwo, 2008. *Penyusunan Bahan Ajar Tematik*, Bahan TOT Tutor Paket A BPKB Provinsi DIY. Yogyakarta.
- Sukini, 2012. Pembelajaran Tematik di Sekolah Dasar Kelas Rendah dan Pelaksanaannya. *Magistra*. No.82 Th.XXIV, 59 - 69.
- Sungkono, 2009. Pengembangan dan Pemanfaatan Bahan Ajar Modul dalam Proses Pembelajaran. *Majalah Ilmiah Pembelajaran*. No.1 Vol.5.
- Udin, S., 2006. *Pembelajaran Terpadu*, UPI Press. Bandung.
- Wena, M., 2012. *Strategi Pembelajaran Inovatif Kontemporer (Suatu Tinjauan Konseptual Operasional)*, Bumi Aksara. Jakarta.

