F-11: The role of reflective thinking in learning, teaching, and teacher development

Abstract ID: B0130

Reflective Lesson Study: Professional development of pre-service and in-service teachers

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This presentation aims to show that how pre-service teachers and in-service teachers develop their professional development through reflective lesson study in Fukui, Japan. Students in Fukui has maintained top level of scholastic abilities nationwide. Lesson study is said to be one of the main reasons to the achievement. The significance of reflection in professional development of teachers has been recently addressed by a collection of researches in teacher education. There have been attempts to incorporate reflection in lesson study to enhance pre- and in-service teachers’ capacity to understand teaching and learning in a deeper way. However, there appear to be few studies of reflective lesson study.

This presentation provides case studies of pre-service and in-service teachers, who are enrolled in a master course on professional development of teachers, at the graduate school of education in a national university. Their reflective practices are documented and their reflective writings are also taken into consideration. Unfolding their process of reflective practices, the findings also reveal what kinds of support teachers need for reflective lesson study.

Keywords: reflective lesson study, teacher education, professional development
Abstract ID: B0146

Studying reflection discussions in Lesson Study: How do danish teachers reflect on their observations?

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In Danish contexts, lesson studies constitute a completely new and challenging approach to teachers’ professional development and not all teachers see its potentials at the outset. Therefore, we strive to identify decisive factors that are necessary for the participating teachers to experience taking advantage of their participation. Of the three basic features of lesson studies: planning, observation and reflection, it is in the reflection that teachers must experience in-depth discussions based on planning and observations thus gaining new understandings of their teaching practices and student learning. According to Myers (2013) lesson study is “the seemingly ideal for nurturing reflectivity [among teachers]” (p.1). However, only a relatively limited number of studies have looked into specific ways that teachers talk together about their observations of students’ actions and how they link to their practical understanding of teaching and learning when they reflect together in lesson study (Myers, 2013; Warwick, Vriikki, Vermunt, Mercer & van Halem, 2016). Especially, we see a need for studies, which look into how teachers from school cultures newly involved in lesson study learn to reflect more fruitful.

Of this follows our research questions: What characterize developments in teachers’ reflection discussions in mathematics and Danish? Which kinds of reflections promote in particular teachers’ professional development?

We are inspired by Meyer’s (2013) investigation of lesson study as a way to promote preservice teachers’ reflectivity, and aiming to compare novice and more experienced teachers in lesson study, we draw on Suzuki’s (2012) exploration of Japanese teachers’ reflection discussions and his discourse model based on Schön’s (1983) distinction between a technical and reflective practitioner. Skott, Kristiansen & Rønn (in press) have supplemented Suzuki’s model with new forms of reflection in order to characterise the depth and breadth of mathematics teachers’ reflection discussions in a Danish content. With the aim of digging deeper into the development of teachers’ reflections, we take this extended reflection model as our theoretical point of departure, however, with the intention to elaborate it by drawing on a sociocultural perspective (Holland et al. 1998) and especially the concept of the reflective practitioner.

We conducted an ethnographical case study by participating as facilitators (Yin, 2003) in all the lesson study activities with the teachers at a school in the Copenhagen area, while we simultaneously collected data and took field notes as researchers. During one year, we collaborated with all the mathematics and Danish teachers at the school. In each subject, we did 12 lesson studies, which comprises our two cases. Our primary data are two thoroughly selected reflection discussions in each subject, whereas our secondary data are interviews with selected teachers and an evaluating interview with the school management.

We contribute an elaborated reflection model, which can characterize development in teachers’ reflection discussions.
Literature


Skott, Kristiansen & Rønn (in press). Hvordan kan matematiklæreres refleksionssamtaler om undervisningspraksis karakteriseres?


Keywords: reflection discussions, teacher development, reflective practitioners
Abstract ID: B0611

Using socratic questions for the development of functional literacy of the secondary school students

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Preparation of Kazakhstani teachers for the implementation of Lesson Study method begins at the republican professional development courses for teachers. The ideas of this approach were regarded as effective "ways of peer-teaching" in secondary schools, "improving the methodology of planning and teaching" (Lewis and Tsuchida, 1998) in the framework of updating the content of secondary education in the Republic of Kazakhstan. Therefore, knowledge of Lesson Study implementation features is very important for Kazakhstani teachers. The second priority objective of this research is the development of functional literacy.

The task of increasing students functional literacy is determined in the State Program for the Development of Education of the Republic of Kazakhstan for 2011-2020 (the State Program for the Development of Education of the Republic of Kazakhstan, 2010), and in accordance with the requirements of the teacher professional development program on methods of developing students functional literacy in the context of an International Study PISA program "Reading literacy" by Autonomous Education Organization Nazarbayev Intellectual schools.

Participants of the study on the topic "Using Socratic Questions for the Development of Functional Literacy of the Secondary School Students" are teachers of several secondary schools of the region and coaches of the Center for Pedagogical Excellence in Kokshetau. To collect data during the academic year, an online survey of teachers was conducted, studied lessons were transcribed, lesson plans, comparative data tables, lesson observation sheets and teacher feedback sheets were analysed. Functional literacy is defined as "...the ability of a person to function normally in the system of social relations on the basis of knowledge, skills and habits, to adapt as quickly as possible to a specific cultural environment".

One of the solutions to develop functional literacy, in our opinion, is the application of Socratic questions. The development of functional literacy, study and effective application of Socratic questions in the format of active learning are the basic issues of the proposed study. At the preliminary stage of the lesson study, a workshop on the development of Socratic questions was held. After the co-planning of the lesson, it was observed, which is necessary to study the practice of colleagues. It was important to understand how to adjust the subsequent co-planning session (Kuno, 2015) in order to teach students to think critically, develop problem-solving skills, to help create knowledge about the subject.

The reflexive thinking of a student depends on the level and quality of the teacher's reflective thinking (Ermeling, 2014). The study shows that the development of Socratic questions is considered as a certain challenge for teachers. A student, responding to Socratic questions, had the opportunity to improve reflexive thinking skills (Pedagogy in action), and "motivation to study the subject" has increased (Davis, 1994). Transcription data showed a significant difference in the expression of students opinion and their use of arguments. Also, the results of the research work provided an opportunity to demonstrate examples of a structured questionnaire held within the framework of the methodology of setting up Socratic questions and aimed at the development of functional literacy.

Keywords: Lesson Study, teacher professional development, reflective thinking, secondary schools, functional literacy