

Abstract Number: 20353

Lesson study as an international pedagogic transfer: implementation of student-centered learning examined from the case of a Javanese middle school

Kanako N. Kusanagi, *The University of Tokyo*

Under globalization, international pedagogic transfer ‘an effort to transfer’ best practices’ from one context to another has become ever more active. Pedagogic transfer is no longer a phenomenon at the national level or implemented by large institutions but happens at the local/institution level or even at the level of individuals. Since the 1990s, lesson study has been implemented in foreign settings in various forms and by different stakeholders. It is considered an effective approach in professional development that is student-centered, bottom-up, collaborative, and sustainable. In the case of developing countries, the Japan International Cooperation Agency (JICA) has been supporting lesson study in over 27 countries in Asia, Latin America, and Africa (Matachi & Kikuchi, 2015). In developing countries, lesson study is used as part of ongoing efforts to improve the quality of education, especially to provide a better learning experience for students. However, the implementation of student-centered pedagogy requires a dramatic shift in teaching practice including a reconceptualization of learning and redefinition of the roles of both teachers and learners. In this presentation, by presenting ethnographic data from a Javanese middle school, and comparing it with the Japanese setting, I will discuss a central issue in pedagogic transfer: how pedagogic practice is always reinterpreted in line with the existing sociocultural contexts rather than transforming them. I will present the issue by discussing the following three points.

1. Role and scope of teacher responsibilities: While the image of ‘food teachers’ is shared across contexts, how teachers work with students differs in Java and Japan. For instance, the difference in how the teachers work with ability gaps among students reflects the institutional settings in Java and Japan. The practice of the Javanese teachers indicated the minimum requirement in teaching was the delivery of the curriculum which did not extend their responsibility to support the process of learning or individual students.

2. Nature of teacher cooperation: Lesson study in Japan is motivated by the teachers’ shared interest in improving their practice by learning from the practice of other teachers and by reflecting on their own experiences. On the other hand, the internal and external accountabilities of Javanese teachers were placed on their alignment to bureaucratic standards and had less to do with their ability to work with individual students.

3. Meaning of student learning: Reflecting the two points mentioned above, the choice of teaching approaches differed between Java and Japan. Secondly, there was a difference in how students’ activities are structured depending on whether teachers see students as active learners or passive learners. Thirdly, while lesson study was intended for teachers to exchange practice in order to understand how students learn, the implementation in the Javanese school indicated that there was little motivation to investigate student learning due to the different emphasis on teaching.

I will extend the analysis beyond the implementation of lesson study, and examine the pedagogic transfer as continuity/discontinuity from the daily practice of teachers. Contextual differences hold Javanese teachers accountable to different sets of responsibilities from those of Japan. This led to a different interpretation of student-centered learning from that of Japan where teachers reflect and discuss lessons centered on how student learn. In so doing, I am by no means generalizing the situations in Java or Japan; the data is presented simply to point out issues in pedagogic transfer attributable to the social nature of teaching practice.

Abstract Number: 20422

Cooperative Learning of the Natural Number at the Multi Grade School of the State of Hidalgo, Mexico

Lorena Trejo, *National Pedagogical University- Hidalgo*

In this report we analyze the problem of teaching mathematics in rural public primary school in the State of Hidalgo, as well as collaborative learning in multi grade schools, recognizing social conditions and educational policy. Experience as teachers and researchers in primary education allows us to recognize the conditions that the school context offers children in rural areas, their level of learning and the impact of teaching work in the area of mathematics in schools where teachers work with two Or more degrees at a time.

We designed a didactic situation to work the notion of natural number with a group of 1st, 2nd and 3rd. Degrees in which the two teams that were formed were integrated by the students of the three participating grades in order to observe collaboration between students of different levels of knowledge of natural numbers. The content we addressed was the sum of natural numbers, in order to provide experiences that allow students to assign meanings to the sum of natural numbers and the different relationships that can be established between them in various combinations, to apply certain skills in games where We appreciate the collaboration of the members of the participating teams to help students develop a deep understanding of mathematical concepts.

The didactic strategy designed consisted of a game called "The costalitos" was drawn in the yard a white shot, which consists of 5 concentric circles of different diameter, inside which were placed natural numbers in different ways (even, odd, (1 to 5) majors (6 to 9) in different combinations, 8 steps away marked the firing point, from where the students calculated the strength to be able to reach the highest number and to add more points to his team; Elaborated two small costalitos of seeds with an approximate weight of 300 gms, each one.

The subjects of the investigation: 5 students of 1er. Grade, 4 students of 2nd grade and 3 students of 3rd. grade. Two teams of 6 students with students from the three participating grades were formed. The winning team was the one who accumulated more points. The record of the rounds of shots and the sum of points of each team was recorded in a systematic way in a table where they placed their names according to the corresponding equipment, all the children registered in their notebook and at the end of the game they rectified the sum Of the total score of each round to compare the highest score and designate the winning team of the game.

Different games were made combining the team members with the numbers placed differently so that the students could appreciate the meanings obtained by adding different combinations of natural numbers.

The study of these classes was very productive for the teacher and very pleasant for the students. The teacher was able to observe the relationships of the numbers in planning the different combinations proposed and to predict the possible difficulties that his students could find; Also could appreciate the personal relationships for the collaborative learning of the students when playing, estimating, recording and adding up the accumulated points.

Abstract Number: 20381

Developing In-service Teachers' Understanding of Applying Context in Mathematics Classroom Teaching: A Case Study from Shanghai Teaching Research Group

Yudong Yang, *Shanghai Academy of Educational Sciences*

Jiaping Yan, *Shanghai Academy of Educational Sciences*

In Chinese Teaching Research Group (TRG) activities, there is a kind of research lesson activity, called Mo Ke, which is similar to well-known Japanese Lesson Studies. In the paper, how Chinese teachers improved classroom teaching and deepen their understanding of task context in TRG activities will be focused. A case study method was employed to choose a typical mathematics TRG in suburb region of Shanghai, China. The Area of a Parallelogram is the mathematical content topic, and the effectiveness of task context is the research topic in the TRG activities. The data was collected from lesson plans, lesson videos, field-notes of post-lesson discussion and interview of the research teacher. An analytical framework of Task Context Analysis (Yang & Chen, 2016) was adapted to judge the context level in each lesson. By the results of each lesson and TRG activities, where the lesson has been improved and what has been deeper understood, were revealed, discussed and concluded.