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CROSSING THE BOUNDARIES: SWEDISH TEACHERS’ INTERPLAY WITH FINNISH CURRICULUM MATERIALS

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Crossing the cultural boundaries provides a fruitful setting for investigating the dynamic interplay between teachers and the applied curriculum materials. In this paper, we report on the initial analysis of interviews and meetings with eight Swedish primary teachers regarding using translated Finnish curriculum materials, i.e. a textbook and teacher guide, for the first year. All teachers had chosen to use the materials voluntarily. Our analysis shows that despite some consistent experiences concerning using the materials, their ways of designing lessons vary greatly in terms of selecting ideas from the materials to be realized in the classroom. Most of the teachers seem to rely on the Finnish teacher guides more than the Swedish ones. We elaborate on both similarities and differences in relation to the teachers’ experiences and the specific features of the current school context.

Keywords: mathematics curriculum materials, primary teacher, cross-cultural study

INTRODUCTION

A teacher does not work in a vacuum but rather in interaction with students and various kinds of resources, such as curriculum materials. The use of mathematics textbooks has been a controversial topic in many countries, in both teacher education and public debate over school systems. On the one hand, for example in Sweden, for a few decades now teachers have been criticized for their dependence on curriculum materials. This has resulted in a movement discouraging the use of ready-made materials and instead composing one’s own. Furthermore, the use of curriculum materials has been associated with an uncreative teaching method (Ball & Cohen, 1996). On the other hand, several researchers have recognized the potential that using curriculum materials has for teachers’ professional development and even for improving education (e.g. Ball & Cohen, 1996; Remillard & Bryans, 2004). Studies on the use of curriculum materials have pointed at the complex relationship between teachers and these materials (e.g. Brown, 2009), and furthermore, paid attention to the complex impact on student learning (Van Steenbrugge, Valcke, & Desoete, 2013). For instance, teachers assimilate new materials into their current ways of teaching in different manners that do not necessarily follow the curriculum developers’ intentions (e.g. Remillard & Bryans, 2004).

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1 The term curriculum materials refers to the printed or digitally published resources designed to be used by teachers and students before, during and after mathematics instruction. This includes the textbooks to be used by the students as well as the teacher guides and the additional materials like software or concrete material.
Since sociocultural dimensions play out in the complexity of the teaching context, we aim to contribute to a better understanding of the teacher–curriculum interplay in a special setting, with Swedish teachers working with Finnish curriculum materials. Our study sheds light particularly on the impact of the cultural context of the interplay between a teacher and curriculum materials. We follow the idea that the interplay is an essential contextual cross-cutting pattern (Herbel-Eisenmann, Lubienski & Id-Deen, 2006), and furthermore, bring up the relevance of regarding curriculum materials as cultural tools (e.g. Brown, 2009). These tools can be seen as both shaping and being shaped by human action (Wertsch, 1998).

There are many similarities between the school systems in Finland and Sweden, for example an inclusive compulsory basic education with no special tracking. Teachers in both countries are to follow quite general national curriculum guidelines. Furthermore, curriculum materials are produced by commercial publishers and there is no national inspection of school materials. However, there are also several differences, for example the way teachers view the curriculum materials. According to Pehkonen (2004), Finnish teachers perceive the available Finnish curriculum materials as support for teaching in a new way. Swedish teachers mostly use only student textbooks, whereas teacher guides are seldom used (Jablonka & Johansson, 2010). There are indications that Finnish teachers often organize whole-class instruction, with all pupils engaged in the same mathematical area, while ‘speed individualization’ and individualized teaching in different mathematical areas are common forms in Swedish mathematics classrooms (e.g., Jablonka & Johansson, 2010). All Finnish teacher guides seem to follow a rather homogeneous cultural script concerning the suggested activities and the focus on designing specific lessons. On the contrary, the Swedish curriculum materials vary greatly, with no focus on designing certain kinds of mathematics lessons (Hemmi et al., 2013).

There has been a growing interest in applying Finnish curriculum materials in Swedish schools. The Finnish materials have been translated into Swedish, and lately some minor changes have also been made to adjust them to suit the Swedish national guidelines, which are quite general. The curriculum materials are always influenced by the norms and traditions of the context in which they have been written. Thus, the study design provides a special setting, where the interplay between a teacher and curriculum materials is embedded in the cultural context (Stigler & Hiebert, 1999). This highlights special features of the educational context of the dynamic interplay. The aim of this study is to develop further conceptual understanding of the interplay between teachers and mathematics curriculum materials by investigating the case of Swedish teachers working with the Finnish materials.

**METHOD**

The data was gathered during 2009–2014 from Swedish primary teachers with various teaching experience. The teachers took part in development projects financed by the Swedish Agency for Education or the municipality. The common feature of the teachers participating in the study was that they had started using the translated Finnish curriculum materials, i.e. a textbook and teacher guide, in their work. All teachers had chosen to use the materials voluntarily in order to improve their mathematics teaching, and received some background information about the ideas behind the materials. On the whole, the data of our longitudinal...
study following the teachers’ development process consist of their responses to questionnaires about their work manners and relation to curriculum materials; interviews with them; classroom observations and video recordings of the mathematics lessons; and documentation of collegial meetings and seminars about teaching mathematics, which the teachers attended during the project. In this paper, we report on the initial results based on the analysis of the data from interviews and meetings with eight participating teachers. The teachers’ teaching experience in our sample varied from one to 40 years at the time they started using the new materials. We used an open iterative approach when analysing the data in order to find recurrent items and themes.

RESULTS

We approach the interplay between teacher and curriculum materials through two aspects. We illuminate, on the one hand, how curriculum materials influence teachers’ views and practice, and on the other, how teachers apply the materials in their work. The interplay is presented through three themes that the teachers mentioned in the interviews.

Teachers as users of curriculum materials

The most striking result is that all the teachers started using the Finnish materials intensively by reading and following the teacher guide, which differs from their previous practice with Swedish materials. Most of the teachers stated that they rely on the Finnish teacher guides more than the Swedish ones:

Teacher 1: I’ve never used a teacher guide as much as now… earlier I just ‘shut’ it [the guide], no I won’t look at this.

Several teachers wanted to follow the materials in detail in order to become familiar with them and understand their ideas for designing mathematics instruction. Despite some consistent experiences concerning using the materials, the ways of designing lessons vary greatly in terms of selecting ideas from it to be realized in the classroom:

Teacher 3: I think it’s [the guide] good, there’re even suggestions about what to write on the board.

Teacher 4: I think that the book itself, the central content and the lesson plans, I take everything as suggested and it’s super. I want to follow this carefully … I feel so…It’s a way also to get to know the materials, next time there might be more variation, you learn all the time.

The teachers expected that their individual needs as a teacher could be addressed by the curriculum materials, which were perceived as a sort of manual mediating norms and highlighting the importance of certain aspects of mathematics education. The teachers mentioned their needs related to planning and implementing mathematics classes, and also stated that both the teacher guides and a student textbook are more extensive than they are accustomed to. This seemed to become a problem if a teacher wants to implement everything suggested in the teacher guide, or if the pupils are to complete all the tasks included in the textbook:
There’s so much to choose from, and there’s a danger that we talk too much, I think, as I lose them [the pupils] if we have an introduction, problem-solving and so on, then you lose them, we can’t have overly long introductions, it’s impossible to do so much.

Most of the teachers considered the Finnish materials to be easy to follow and clearly structured, but still they perceived this differently. Some experienced it as a support for professional development and for improving their mathematics teaching in individual ways, whereas some experienced its structure as inhibiting their creativity as a teacher (cf. Ball & Cohen, 1996). Some teachers with long teaching careers considered a possibility to incorporate their own ideas into the lesson plans of the materials as the most important aspect. These teachers viewed the materials as particularly suiting novice teachers, who might need extra support.

Presentation of the mathematical content

All teachers with further experience teaching mathematics paid attention to the way mathematical content is presented as well as descriptions of the progress students are expected to make during a certain time period, such as a single lesson or a teaching sequence. They also paid attention to the emphasis on different mathematical topics. For example, the Grade 1 teachers discussed the notion of presenting the number line (0-20) already at the beginning of the first year, which is contradictory to their previous experience. According to the teachers, the Swedish tradition has been to focus only on numbers 0-10 during the first school term. Similarly, they said, ten transitions are traditionally not included in the content of Grade 1 in Sweden like they are in Finland, which is another example of the differences teachers were confronted with when using the materials. Most of them experienced this as a positive challenge, and wanted to test it with their pupils.

The teachers also reflected on the mathematical progression they observed for both the pupils and themselves as teachers. Some of the teachers regarded the faster progression as a problem, as they experienced that this makes pupils’ learning difficulties too visible already in the first grade. However, others felt that it allows them to better identify the pupils’ difficulties at an earlier stage. Some teachers were concerned about difficulties pupils coming from other schools using Swedish materials might confront with because of the faster progression with the Finnish materials. Two late-career teachers also felt that their pupils had too little practice in basic arithmetic when using a Finnish textbook. Thus, this forced them to give them extra homework aiming to enhance the automation of basic mental arithmetic.

Organization of mathematics teaching

The use of Finnish materials in Swedish schools also reveals differences between school traditions with respect to the organization of teaching, which the teachers reflected on in the interviews. All teachers reacted in the same way to the idea of giving homework in order to prolong the pupils’ learning opportunity after the school day. They were afraid of what might happen if they let the pupils take the textbooks home, as they expected them to forget the books there. According to the teachers it was not common to give homework after every lesson. Some of them seldom gave homework, while others did so once a week at the most.
The Finnish materials include sections of homework mediating the Finnish tradition of having regular homework and some teachers in our study first tested how it would work at Grade 1, telling pupils that ‘the textbook lives in your school bag’. The experience was good also because teachers noticed that taking the textbook home allowed pupils work in case of illness. In addition, some additional material from the textbook, such as audio files on the website, allows pupils to have the same activities that the class had at school. However, some parents demanded the possibility to complete homework on a certain occasion, mostly weekends, due to several time-consuming hobbies that pupils have on weekdays. This is against the idea mediated in the Finnish materials that homework is mainly for weekdays while weekends are for resting after the school week (cf. Pehkonen, 2004). Some teachers had difficulty resisting the pressure, although they themselves regarded the short homework after every lesson as effective.

Teachers tried to organize classroom activities to focus on the same learning object with all students, and thus make them work on the same pages of the textbook in accordance with the underlying idea of the curriculum materials. Most teachers understood the idea that the materials include both basic and additional tasks for every lesson. Still, after the first term one of them started using speed individualization, as she had previously done with the Swedish materials. Two of the teachers, who were ill for a longer period during the project, witnessed that the substitute teachers simply allowed pupils to continue to new mathematical content without providing an introduction. Also, some parents complained that their children were not allowed to proceed in the textbook even though the teachers explained the pedagogical idea behind the activities.

DISCUSSION

The interplay described through the three themes is obviously embedded in a specific sociocultural context, and our analysis reveals certain traditions that impact the teachers’ interplay in different manners, for example concerning the mathematical content and organization of teaching (cf. Stigler & Hiebert, 1999). All the teachers were interested in the new materials and studied the teacher guides carefully, and most of them wanted to follow them; at least for the most part. Yet, the teachers who had previously worked with materials containing a great deal of skills training did not trust that their pupils would gain skills if they did not assign them extra homework. Further, although all the teachers wanted to avoid speed individualization, one of them gave up already after the first term as she experienced the content as difficult and did not trust that all her pupils could proceed at the same pace.

The school community also has an impact on the way teachers act with the materials. Parents can be influential in textbook adaptations (e.g. Herbel-Eisenmann et al., 2006). Indeed, some teachers had problems with parents resisting the new ways of organizing instruction, with respect to both the homework and holding the pupils within the same mathematical area. This kind of pressure seems to be more common in later school years (Grade 3 and 4) when certain routines, for example concerning homework, have been rooted. Some teachers who had difficulty resisting the pressure adapted the organization to certain parents’ wishes. Further, it was difficult for the substitutes to work in the new manner, which might be because they were not among those who were working with the new materials.
This paper is the first step of an analysis of Swedish teachers’ interplay with Finnish curriculum materials. Applying the materials to another context than the original one may reveal inconsistencies between teachers’ views and the materials, such as conflicting views on mathematics education, teacher professionalism and classroom practices. Our study will contribute to the theorizing of the interplay between teacher and curriculum materials in a specific context, and deepen our understanding of essential issues that should be considered when developing high-quality materials for teaching, and furthermore, enhancing teachers’ ability to utilize the materials for their professional development.

References


