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Adaptation of lesson study in a Danish context: Displacements of teachers' work and power relations

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HIGHLIGHTS

- We explore and explain culturally sensitive conflicts when Danish teachers adapt lesson study.
- We show that teachers' lesson study engagement displaces their ordinary work and power relations.
- We identify a fundamental conflict resulting from the way strong subject positions are created.
- We combine literature studies at the macro and meso levels with empirical analysis at the micro level.
- We identify cultural characteristics that must change in order to sustain lesson study in Denmark.

ABSTRACT

Though lesson study adaptations in the West have flourished, there is scarcity of associated culturally sensitive research. We contribute such research by exploring the conflicts that emerge when Danish teachers engage in lesson study. Using figured worlds, we analyze how teachers realize lesson study in their local setting through their dynamic orientations towards possibly conflicting worlds. We show how this realization challenges the teachers' work and power relations and is influenced by broader issues of culture and power. We conclude that, in order to adapt lesson study in Denmark, it is necessary to address the overriding cultural characteristics we identify.

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1. Introduction

After more than two decades of research into lesson study, it is clear that this approach to teachers' professional development has strong potentials. But it is also clear that it is harder than initially thought "to import a routine developed in one culture and in one educational system into countries with different cultures and different systems" (Stigler & Hiebert, 2016, p. 581). Lewis, Perry, and Hurd (2009), and Perry and Lewis (2009) provided an early existence proof that lesson study can be practiced, adapted and sustained by educators in the US, but the extent to which lesson study can be replicated outside Japan and China still remains unclear (Ebaeguin & Stephens, 2014; Groves et al., 2016; Lim, Lee, Saito, & Haron, 2011; Stigler & Hiebert, 2016). Since then, adaptations have been carried out in many countries outside East Asia, such as the UK (Hadfield & Jopling, 2016), America (Gero, 2015), The Netherlands (Schipper, Goei, de Vries, & van Veen, 2017), Australia (Groves et al., 2016), Italy (Bussi, Bertolini, Ramploud, & Sun, 2017) and Portugal (Ponte, Quaresma, Mata-Pereira, & Baptista, 2018), with a growing focus on cultural factors. As such, our study contributes culturally sensitive research on lesson study adaptations in a Danish context.

In Denmark, as in the other countries mentioned above, lesson study introduces entirely new forms of teacher collaboration. These new forms pertain to the three distinct features of lesson study: planning a research lesson collaboratively; conducting and
observing the lesson: jointly reflecting on the lesson based on observations of student activity (Murata, 2011). We have been involved in lesson study as facilitators and researchers since 2013. During this time, we have experienced a number of conflicts that do not seem to pertain to the particular adaptation of lesson study at a particular school but instead pertain to aspects of a broader teaching culture and of teachers’ work and power relations in the local school setting. In this article, we analyze these conflicts, focusing on how they emerge when teachers interact with each other during lesson study (micro level) and analyzing how they relate to issues of culture and power at the school (meso) level and the political (macro) level. By doing so, we respond to a shortage of investigations into teachers’ work and power relations within the lesson study field (e.g. Saito & Atencio, 2013).

Our analysis of how micro-level conflicts relate to broader societal issues of culture and power is inspired by Hadfield and Jopling (2016). In conceptualizing lesson study adaptations, we build on social practice theory as used and developed by Holland, Lachicotte, Skinner and Cain (1998), especially their concept of figured worlds. In line with J. Scott (2013), we combine this framework with an emergent perspective in order to explore teachers’ work and power relations as changing interplays of their dynamic orientations towards different past, present and new figured worlds. These interplays might be harmonic or conflictual, and we therefore examine how the worlds may interact and mutually transform one another. More precisely, we address the following two questions:

1. What characterizes the dominant figured worlds when groups of teachers engage in lesson study in a Danish context?
2. How can we explain the emerging conflicts interpreted as a matter of interplay between these figured worlds?

We begin by sketching the contributions that the few relevant studies have made to the discussion of how to adapt lesson study successfully outside East Asia. We then present our theoretical approach, which builds on the framework of figured worlds. We use this approach to characterize an overriding teaching culture in Denmark at both macro and meso levels. Following this, we outline our methodological approach and present the results of our analysis in two sections that correspond to our two research questions. In the first result section, we provide elaborated profiles of the figured worlds that turn out to dominate the teachers’ lesson study interactions. In the second result section, we present and analyze emerging conflicts. We conclude by discussing our methodological approach and the significance of our results.

2. Research on lesson study adaptations outside East Asia

From our review of the research literature on adaptations of lesson study, we have identified four distinct, yet not mutually exclusive, research approaches, which we will now outline in order to position our own study.

The first approach highlights the right or authentic way to do lesson study, either by identifying omitted critical aspects in adaptations outside East Asia (Doig, Groves, & Fuji, 2011; Lewis & Perry, 2013; Takahashi & McDougal, 2016) or by identifying misconceptions of lesson study (Fujii, 2013). This approach sharpens our understanding of hitherto non-explicit yet defining features of lesson study, including establishing a clear research purpose and planning thoroughly (Takahashi & McDougal, 2016), and designing and analyzing tasks related to specific pedagogical foci (Doig et al., 2011).

The second approach emphasizes important conditions for the successful adaptation of lesson study and identifies instances when these conditions conflict with the educational context in question. In a rare quantitative study of 56 Singaporean schools, Lim et al. (2011) identify a number of counteracting factors, such as resistance to open one’s classroom for observation, a lack of support from knowledgeable others (e.g. researchers or highly profiled teachers) and from leadership, and insufficient time set aside for lesson study activities. A range of qualitative studies have found similar and other counteracting (e.g. Groves et al., 2016) or decisive factors. A study by Fernandez, Cannon, and Chokshi (2003) identifies three overall lenses for examining teaching – a researcher, a curriculum developer and a student thinking lens – as decisive for teachers to adopt in order to produce new insights and profoundly change their teaching by engaging in lesson study. This second approach focuses on general conditions that are critical for a successful adaptation of lesson study largely regardless of the specific culture of the adapting country.

The third approach applies a cultural perspective by focusing on cultural conditions that permeate beyond the surface features of teaching in order to give reasons for the differences between Japan and the adapting country. Ebaeguin and Stephens (2014) use Hofstede’s dimensions of culture to compare Japan and the Philippines in relation to their cultural capacity to conduct lesson study. They focus on three dimensions in particular: working towards long-term goals and avoiding uncertainties (i.e. the extent to which people feel threatened by and prepare themselves for uncertain situations). According to Ebaeguin and Stephens, these dimensions align well with lesson study and correspond well with Japanese culture, while they are at odds with dominant traditions in the Philippines. Similarly, Gero (2015) identifies three dominant aspects of Japanese culture: interdependence, emphasis on continuous effort, and practice of critical reflection, which he contrasts with three dominant aspects of American culture: individualism, celebration of personal ability, and sheltering of self-esteem. Gero suggests that Japanese aspects support lesson study processes more effectively than the American aspects as the celebration of personal ability may hinder a respectful collaboration and the sheltering of self-esteem may prevent benefits of critical reflections. This third approach promises to uncover important aspects of the culture in the adapting country.

The fourth approach focuses on conflicts and aspects of power in teachers’ work relations. In a review of the use of lesson study in initial teacher education, Ponte (2017) emphasizes that the problem of establishing and adjusting work relations in lesson study deserves more research attention. Based on the assumption that complex and potentially problematic power relations exist when teachers collaborate, Saito and Atencio (2013) draw on experiences from Singapore, Indonesia and Vietnam to provide examples indicating that lesson study challenges teachers’ work relations and identities. In hierarchical and authoritarian educational contexts such as in Vietnam, senior or awarded teachers sometimes use lesson study to enact power upon younger colleagues; for example, by issuing them with harsh criticism during joint reflections. These authors emphasize that lesson study “has not been thoroughly examined in relation to key micro-political power relations that are arguably endemic to the use of this collaborative learning model” (Saito & Atencio, 2013, p. 87).

In summary, the first research approach seeks the right way to do lesson study and the second identifies critical, almost culture-independent, conditions for successful adaptations outside East Asia. The third approach attempts to uncover significant cultural aspects in the adapting country and the fourth explores conflictual aspects of teachers’ work and power relations. We align ourselves with the third and fourth approach in our attempt to identify the aspects of an educational context and of power embedded in the teachers’ work relations that prove important for adaptations of
lesson study in Denmark.

3. Theoretical framework

Holland et al.’s framework (1998), especially their concept of figured worlds, will help us answer our research questions. The framework situates people’s (e.g. teachers’) acts, discourses, meaning-making, and everyday activities into socially and culturally constructed realms of interpretations that are influenced by their mutual positioning and broader societal forces. This framework thus provides a perspective on how people’s outlook and behavior form and are formed heuristically by their cultural and social contexts, including aspects of power. A figured world is defined as “a socially and culturally constructed realm of interpretation in which particular characters and actors are recognized, significance is assigned to certain acts, and particular outcomes are valued over others” (Holland, Lachicotte, Skinner, & Cain, 1998, p. 52). One of their examples is the world of romance among American college students. The most salient actors are attractive women, friends, and lovers, who engage in a limited range of significant acts, such as flirting, falling in love, and dumping, which are moved by specific forces, such as attractiveness, in order to obtain the valued outcome of having a romantic relationship with someone of the opposite sex.

Viewing figured worlds as contexts for an individual’s orientations and behavior involves two interdependent, but not necessarily coincident, processes: figuring and positioning. Figuring concerns the general narrative or storyline of a figured world, imagining its actors, acts and valued outcomes, such as imagining the storyline of a Japanese lesson study. Positioning involves the “day-to-day and on-the-ground relations of power, deference and entitlement, social affiliation and distance” between people who occupy or claim different subject positions afforded by a figured world (Holland et al., 1998, p. 127). For example, one subject position afforded by the world of romance is having-a-boyfriend-backhome, which actors such as an attractive woman claim in order to avoid getting involved with a specific man. From this perspective, acting takes place from a point offered by a certain constellation of available, interrelated subject positions. We can therefore examine teachers’ orientations and actions in relation to the subject positions that are available and those the teachers claim or occupy. For this reason, it becomes important for us to analyze the subject positions afforded by the figured worlds that we find, and the teachers’ claiming of these positions.

For our purpose, the way people realize and come to participate in new worlds (e.g. a world of lesson study) is important. We emphasize two aspects of this. The first aspect concerns how people form cultural knowledge in order to realize a new world. Viewing figured worlds as a kind of abstraction, Holland et al. refer to D’Andrade’s description of this abstraction as a “guided discovery”, emphasizing its slow and “natural” development (Holland et al., 1998, p. 297). People learn things gradually through trial and error and through other people offering advice and explaining what has been learned (D’Andrade, 1981). This can be contrasted with the “artificial” development of specialized and regulated knowledge disseminated by verbal and formal instruction (Holland et al., 1998, p. 297). The second aspect therefore concerns how individuals behave in terms of (inevitable) improvisations. When confronted with a specific situation for which one has no set responses (e.g. when first engaging in joint reflections), one is forced to improvise. However, people are not acting freely. People’s improvisations are based upon sediments of their past experiences as conveyed partially by the concept of history-in-person (Holland & Lave, 2001) and upon the cultural resources available and the subject positions afforded to them in the immediate situation (Holland et al., 1998). History-in-person implies that the formative aspects of being a person are relational and “always but never only ‘in’ the person” (Holland & Lave, 2001, p. 6).

In order to take into account people’s dynamic orientations towards a multitude of shifting significant figured worlds, we supplement Holland et al.’s framework with J. Skott’s emergent perspective (J. Skott, 2013). By doing so, we can conceptualize teachers’ participation in lesson study interactions as emerging patterns of their orientations towards and engagements in past, present and new figured worlds. From this perspective, a teacher’s participation in social interactions is influenced by both his/her interpretation of the immediate social situation and simultaneous meaning-making of how to (re)engage meaningfully in acts from past, present and new worlds. For example, J. Skott empirically identifies figured worlds that are significant for one newly qualified teacher, which include the reform, relating and teaming (J. Skott, 2013; 2019). He investigates changes and transformations in the relationships between these worlds, including their significance for the teacher’s professional experiences of being, becoming and belonging, as they evolve throughout his study.

The framework of figured worlds is widely used in educational research (Urrieta, 2007). However, our literature review suggests that an explicit in our previous study of teacher leaning (Skott & Møller, 2017), it has not yet been used in lesson study research. In educational research, the framework appears to be used in three ways, which we exemplify in relation to four studies on teachers and instruction: 1) To investigate one world and its features (e.g. Naraian, 2010; Rubin & Land, 2017) or several worlds and their interrelations (e.g. Ma & Singer-Gabella, 2011; J. Skott, 2013; 2019). 2) To assume the ‘existence’ of specific worlds (e.g. Ma & Singer-Gabella, 2011; Naraian, 2010; Rubin & Land, 2017) or to deduce worlds empirically (e.g. J. Skott, 2013). 3) To adopt a group perspective (e.g. Ma & Singer-Gabella, 2011) or an individual perspective (e.g. Naraian, 2010; Rubin & Land, 2017; J. Skott, 2013; 2019). Like J. Skott (2013; 2019), we identify figured worlds empirically and, like Ma and Singer-Gabella (2011), we adopt a group perspective whilst considering individual positionalities within these groups. Similar to Rubin and Land (2017), we expect multiple worlds to be at stake simultaneously and focus on their conflicting interplay.

In summary, by supplementing Holland et al.’s framework with J. Skott’s emergent perspective, we can conceptualize cultural adaptations of lesson study as the teachers’ realization of a new figured world into their local school context dominated by other worlds. Furthermore, we can analyze the teachers’ improvisation of this world through their dynamic orientations towards shifting significant worlds and possible conflicts between them. Besides the significant worlds that may play prominently in a local educational system, we also refer to an overriding Danish teaching culture in terms of a figured world described at both macro and meso levels. In what follows, we outline important aspects of this world.

4. An overriding figured world of classroom teaching in Denmark

There is growing agreement that lessons, especially mathematics lessons, have some predictability and consistency in their routines within a given culture (e.g. Andrews, 2010; Stigler & Hiebert, 1999). However, there are significant cultural differences among and between countries in East Asia and in Europe (Andrews, 2010; Carlgen & Klette, 2008; Osborn, 2004). This also applies to the countries within the Nordic region. It therefore seems meaningful to characterize a particular Danish culture of classroom teaching, even though this culture may share characteristics with
other Nordic and Western countries (e.g. Kaiser & Blomeke, 2013). Inspired by Andrews (2010), we conceive a teaching culture as a collective memory, a societal analogy to individual memory. It comprises (implicitly or explicitly) shared ideas of what is good, right and desirable to do in teaching as well as the beliefs, artefacts and acts that have proved expedient for teaching in a society through history. It functions as a figured world in the sense that it constitutes a realm of broader historical, cultural and societal interpretations of general aspects of classroom teaching, artefacts framing these interpretations (e.g. syllabuses), and structures of power.

4.1. The world of classroom teaching at the macro level

Denmark has a strong tradition of a decentralized school system based on powerful traditions of local democracy, parental involvement, and teacher self-determination (Osborn, 2004). However, like many European educational systems, the Danish system has experienced dramatic changes during the last three decades (Antunes, 2012; Carlgren & Klette, 2008; J. Skott, 2004). For our purpose, two aspects at the macro level prove significant for these changes.

The first aspect is teacher self-determination. For generations, the aims, goals, and contents of teaching were determined at the macro level, while the individual teacher was responsible for the choice of teaching methods and their enactment in the classroom. This endowed teachers with a high degree of self-determination, the so-called methodological autonomy. However, in recent national syllabuses, the teacher’s role in the classroom has shifted from disseminating pre-specified content to facilitating learning, meaning that the teacher has to provide each student with appropriate learning opportunities and to build on student contributions. Syllabuses have also shifted from focusing on content products to focusing on processes (e.g. competencies). The steering documents, however, fail to supply well-defined methods for teachers to manage these two shifts. Consequently, the teacher needs to play a more profound and challenging role as a link between the macro sphere of the school subject and the emerging micro sphere of the classroom by maneuvering “independently and autonomously in order to sustain individual and collective learning opportunities through on-the-spot decision-making” (J. Skott, 2004, p. 239).

The second aspect is teacher collaboration as promoted in recent policies. This aspect challenges the traditional views that classroom teaching is private and that teacher methodological autonomy is an individual concern (Tingleff, 2013). A related policy priority is to educate teachers to support educational development within schools, such as coaching colleagues to teach reading or mathematics.

We supplement these two aspects by appealing to Kaiser and Blomeke (2013), who compare Western and East-Asian teaching cultures by analyzing the cultural influence on mathematics teacher students in 15 countries. Norway is the only Nordic country included in their study, but we believe that two findings about Norway also apply to Denmark. First, Norway is part of a “progressive education” tradition that places the well-being of the individual child “in the foreground” and assigns the content “a background role” (Kaiser & Blomeke, 2013, p. 13). Second, in Western cultures, teaching is traditionally considered as private and, therefore, becoming an expert teacher is seen as a task for the individual teacher who must learn how to “provide effective learning environments and good classroom management” (Kaiser & Blomeke, 2013, p. 17). In contrast, in East Asian cultures, becoming an expert teacher is considered a collective endeavor.

Interpreted in terms of figured worlds, we conceive classroom teaching at the macro level as an imagined world with educational politicians, educational researchers, and policy consultants as the dominant actors. The significant acts for teachers relate to the methodological parts of enacting predetermined aims, goals and contents in the classroom, and to realizing and acting in line with the two shifts in the syllabus: facilitating learning and focusing on processes. The dominant values are an individualistic approach to instruction and the well-being of the individual student.

4.2. The world of classroom teaching at the meso level

We supplement the macro-level world of classroom teaching with aspects of teacher collaboration at the meso level. Organizationally, the school leadership frames teacher collaboration by scheduling a limited number of compulsory meetings during a school year for teachers of the same subject or in the same year group. Apart from this, the leadership only plays a marginal role by occasionally providing items for the meeting’s agenda. An appointed teacher (often a coach) calls and chairs the meetings, which are relatively informal and typically orientated towards practical and disciplinary aspects of teaching, such as purchasing teaching resources, or towards what Tingleff (2013) calls the functionality of teaching. Tingleff’s empirical study of Danish teacher collaboration also shows a prevailing family culture that prioritizes cozy and family-like interactions. According to Tingleff, these two dominant aspects contribute to reproducing a collaboration culture that focuses on neither content nor student learning. This underpins Kaiser and Blomeke (2013) point that professional development appears as a task for the individual teacher. The family culture that characterizes the collaboration works alongside a traditional hierarchical distribution of roles according to seniority. Thus, although democratic aspects of collaboration are valued in a Danish educational context, the experienced teachers traditionally have more to say.

Carlgren and Klette (2008) investigate how teachers in the Nordic countries perceive their jobs in light of the recent changes to the educational systems. They show that the teachers feel disturbed by the changes but that Danish teachers stand out by appearing “to shake off the new demands, sticking to teaching in a more traditional hierarchical distribution of roles according to seniority. Thus, although democratic aspects of collaboration are valued in a Danish educational context, the experienced teachers traditionally have more to say.”

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These considerations add to the world of classroom teaching that the significant acts of teacher collaboration relate to the functionality of teaching and that an essential value outcome of this collaboration is to preserve a family culture. Another implied act is to shake off (new) macro-level demands.

5. Methodology

We conducted our study as a combined development and research project at a school in an upper middle-class neighborhood of Copenhagen. The school had no prior experience with lesson study. We acted as participating observers (Yin, 2003) with dual roles as facilitators and researchers. As facilitators, we organized two different phases of lesson study, and we participated in all the activities to help maintain a focus on specific content, goals, activities and instructional approaches. In phase 1 (2013–15), we facilitated three-cycles lesson studies (i.e. re-teaching the research lesson three times) with extensive planning (three 2-h meetings) before the first research lesson and less planning between the cycles. The whole process lasted two months. We did this with two groups of teachers in 2013–14, one group of Danish teachers and one group of mathematics teachers, and with four groups of teachers in 2014–15, two groups of Danish teachers and two groups...
of mathematics teachers. Each team consisted of three teachers in the same year group, who had volunteered to participate. Encouraged by these teachers’ enthusiasm, the school leadership subsequently decided that all the teachers (25 Danish teachers and 15 mathematics teachers) should engage in lesson study in 2015–16. This formed phase two of the study in which four teams of Danish teachers and four teams of mathematics teachers each spent two 2-h meetings planning one research lesson. One of the teachers taught the lesson while all the other Danish or mathematics teachers observed and participated in the joint reflections. The teams consisted of three teachers in the same year group, who had all agreed to take on this specific task. The leadership appointed one teacher coach from each subject to take part in our facilitation, particularly our facilitation of the first planning meeting.

As researchers, we adopted a focused ethnographical approach (Knoblauch, 2005). Focused ethnography studies certain aspects of one’s own society, typically structures and patterns of social interactions, such as the coordination of work activities. Such an approach, as opposed to conventional ethnography, requires an intimate knowledge of the study field and is characterized by relatively short-term field visits (e.g. special events), large amounts of data, and an intensive data analysis. During our long-term collaboration with the teachers, we aimed to develop an intimate knowledge of the teachers’ ordinary collaborative setting, which the framework of figured worlds enabled us to analyze critically regarding the social and cultural aspects that proved significant for their lesson study engagement.

We collected data at special events (i.e. lesson study activities and related workshops conducted by us as facilitators), which we supplemented with teacher interviews, thus obtaining a large amount of data:

**Phase 1:**

- 6 individual semi-structured pre-interviews (1 h) on teaching approaches;
- 2 workshops (6/12 teachers, 2 h) to introduce lesson study and evaluate the teachers’ experiences;
- 6 three-cycles lesson studies;
- 3 group and 8 individual semi-structured post-interviews (1 h) on experiences with lesson study.

**Phase 2:**

- 1 workshop (4 h, all 40 teachers) to introduce lesson study;
- 8 one-cycle lesson studies;
- 4 group semi-structured pre- and post-interviews (1 h) on ordinary collaboration compared with lesson study collaboration.

All data were audio recorded and we transcribed all interviews, the planning meetings in phase 1, and almost all reflections (19). The interviews from phase 2 in particular informed our present research focus. In this phase, we interviewed seven teachers: four Danish teachers (two of whom took part in both phases, the other two only in phase 2) and three mathematics teachers (all of whom took part in both phases). Unless specified, all utterances in this article are from these interviews. In order to avoid bias as researchers working within our own study field, we posed open interview questions (for example, questions regarding the teachers’ experiences of advantages and disadvantages of lesson study), produced thick descriptions of the settings, shared analyses with our research group, and compared analyses with our other data.

We conducted three intensive analyses. The purpose of the first was to draw an empirical landscape of the most prominent figured worlds when the teachers engaged in lesson study. We explored data without pre-developed codes using our former analysis of teacher learning in phase 1 (Skott & Møller, 2017) as a backdrop. Inspired by coding procedures from grounded theory (Charmaz, 2014), we initially coded the data line-by-line using gerunds whenever possible to maintain the process perspective. Examples of initial codes from the interviews are ‘conceptualizing teamwork informally’, ‘developing teaching is not a common responsibility’, and ‘selecting resources based on experiences and attitudes’. By reading across and comparing such codes, we were able to synthesize them into distinct ‘as-if’ worlds such as teaching. Similarly, we constructed a figured world of lesson studying. Contrary to our previous study, only these two subject-independent worlds were shown to play significant roles in the teachers’ lesson study engagement.

The purpose of the second analysis was to elaborate empirical profiles of these two worlds at the micro level by scrutinizing data in relation to the three defining aspects of figured worlds and their affordances of subject positions: 1) actors and subject positions, 2) significant acts, and 3) valued outcomes. Though we expected a world of lesson studying, we aimed empirically to derive its cultural and social details from the local school setting. We identified the subject positions by analyzing the teachers’ ways of positioning themselves and each other. For instance, we constructed the two positions LS (in)experienced based on utterances such as, “Lesson study is something someone else does ... it is like them and us”. We also developed focused codes for significant acts and values, such as ‘collaborating on matters not affecting one’s own instructional approach’ by re-comparing and synthesizing our initial codes from the first analysis.

The purpose of the third analysis was to identify conflicts of a generic character that tended to emerge during the teachers’ lesson study interactions. When analyzing these conflicts, we used both the elaborated profiles and the overriding world of classroom teaching.

**6. Results: elaborated profiles of teaching and lesson studying**

Our first analysis identified two worlds that played prominent roles in the teachers’ lesson study interactions. The first, the well-established world of teaching, comprised an interpretative frame for the teachers’ ordinary collaboration, while the second, the realized world of lesson studying, comprised the teachers’ improvisations of new collaborative forms.

Below, we present the results of our second analysis, providing elaborated profiles of each significant world based on the three defining aspects of figured worlds and the subject positions afforded by them: 1) actors and subject positions, 2) significant acts, and 3) valued outcomes. We will structure our presentation around these three aspects.

**6.1. Actors and subject positions**

The actors in teaching are all the mathematics and Danish teachers, as all these teachers are obliged to participate in collaboration with colleagues. We identify four subject positions:

- Senior-teacher;
- Old-hand;
- Extra-educated;
- Development-orientated.

The first position, senior-teacher, is closely linked to power and status. This may relate to the fact that many of the teachers at the school have been there a long time. The entitlement to this position is expressed, for instance, in a dialogue between a less experienced and an experienced teacher at a planning meeting in phase 1. “It is
because of your many years as a teacher. You are more confident in what you are doing. You have it at your fingertips whereas I have to consult the books”. Most of the teachers’ work and power relations are characterized by similar kinds of respect and deference towards more experienced colleagues.

The old-hand position also relates to experienced teachers as it is occupied by teachers acting to protect the power of the senior-teacher position. From a development-orientated position, these teachers appear reluctant to develop professionally and to collaborate, “They sit in a corner [during meetings] looking sullen, as if it were a waste of their time”. Surprised by these teachers’ reluctance, one teacher occupying an extra-educated position recounts, “We have a strong solidarity in our team. If the leadership decides we have to do something, whatever we agree or not, we usually stand together in every respect. I was therefore stunned that so many colleagues resisted planning together and opening their classrooms”.

While no position in teaming is equipped with decision-making authority, the senior-teacher position is the strongest. This is suggested in an utterance in which a teacher uses her in-situ planning experiences to entitle herself to this position, “I constantly change my plans during the teaching process in collaboration with the students. It takes many years to learn … As a new teacher, I planned in much more detail than now. But I realized that I was too tied up, so gradually I cleared all this and felt instead what was needed in the class[room]”.

The two positions extra-educated and development-orientated often correlate. For instance, a teacher claiming the development-orientated position emphasizes the extra-educated position as the explanation for the development of the teachers’ collaboration, “[from] not knowing what we actually should do” to “making it clearer what the tasks of the collaboration are”. Occupying the same position, another teacher argues for providing the extra-educated position decision-making authority. “As teachers in a particular subject, I think we need to accept that the person with the specialist coach education gets the authority to orient the subject in a certain direction or to insist on wanting something on behalf of the colleagues”. However, another dominant narrative, often from the senior-teacher position, is more ambivalent about this emerging extra-educated position, “In the old days, before the hell of the coaches, all teachers were able to take responsibility”. The development-orientated position is primarily claimed by teachers concerned with the collaborative development of teaching, and it is inferred from utterances such as, “We are slowly approaching a more professional collaboration that deals with what constitutes teaching quality through these reflective discussions”.

In lesson studying, the actors are 12 teachers and four external facilitators in phase 1 and all 40 teachers (including two coaches) and four external facilitators in phase 2. We identify three subject positions:

- LS-experienced;
- LS-inexperienced;
- LS-coach.

It is mainly the teachers from phase 1 who contribute to creating the two first positions by emphasizing that a body of knowledge is required to participate in lesson study, “I have participated [in lesson study] twice, and I think it was very exciting. I know the terms and the setting so I got the hang of it”. However, it is also possible to identify these two positions among the other teachers; the following utterance, for example, indicates displacements in positions, “It has been like … mind the gap … some people are talking about lesson study, and they are part of lesson study and they are very happy. It is like them and us” (senior-teacher and LS-inexperienced position). The LS-coach position is only implicitly at play in our data and contributes to legitimizing the idea that teachers, especially those positioned as LS-inexperienced, can take up a coaching role.

6.2. Significant acts

The significant acts in teaming, such as discussing disciplinary issues, purchasing resources, and organizing forthcoming events, are peripheral to classroom teaching. Discussions of content and educational matters count as significant acts to a much lesser extent, “What we do not do a lot of is to dig deeper into some educational matter” (senior-teacher and extra-educated position). However, teachers claiming the extra-educated position in particular call for deeper reflections on instructional approaches not based on experience and attitudes, “Of course, we can say that Multi [a textbook] emphasizes communication compared with Fessor [a digital portal], which is skill-oriented. But this is the standard of our discussions … And we still talk about teaching from our own point of view”.

The significant acts in lesson studying clearly relate to the three lesson study features: planning, observing, and reflecting. One teacher compares the significant acts in lesson studying to those of her teacher education, “It is just like being back at college again. Because it’s a tricky business to always pull yourself up and not fall back on routines and habits” (LS-experienced position). She claims, hereby, that participating in lesson studying is about engaging collectively in developing teaching, indicating that such collaboration forms are not common in teaming.

In general, the teachers are unaccustomed to the detailed nature of planning, which often leads to frustrations, “Sometimes, we really went into details … where I wanted to go over it quickly. But we came through and I learned a lot” (senior-teacher and LS-experienced position). This utterance reflects an ambivalent attitude by implicitly comparing significant acts in lesson studying with those in teaming, such as making deliberate versus quick decisions (see Bremholm & Skott, 2019).

Concerning the joint reflections, the teachers appreciate the focus on student learning as it replaces the focus on their performance. However, they are unaccustomed to joint reflections, particularly the idea of connecting the focus of inquiry to their observations, “We did not achieve as much as I had hoped. It is difficult to activate my colleagues and to get the reflections as they should be” (extra-educated position).

6.3. Valued outcomes

In teaming, the major valued outcomes are to respect colleagues’ instructional approaches and acknowledge various viewpoints. One teacher entitled to a senior-teacher position clarifies, “We are teachers so it [the collaboration] is also about the good atmosphere and how we talk to each other”. Occupying the same position, another teacher relates these values to teacher methodological autonomy, “Regardless of whether we decide to use the same resources as mathematics teachers, we still have quite free rein to find ways to achieve our goals”. However, due to these values, many teachers find it taboo-breaking to open their classroom, “Then you put yourself in a situation where you know you are vulnerable, because you have planned something and you show it and your relationship to the students. You reveal everything” (senior-teacher position).

In lesson studying, we identify three minor and two major valued outcomes, which we partly addressed above. The minor values correspond to the lesson study traits: discussing content and
knowledge, focusing on student learning, and developing teaching. The major values are considering teaching development as a collaborative endeavor and building a shared body of professional knowledge.

6.4. Comparison of the two profiles

To summarize, we compare the profiles of the well-established world teaming and the new realized world lesson studying. The teaming profile shows that seniority is the traditional way of gaining power and claiming strong positions, although opposing tendencies are emerging in terms of two new, albeit weak, positions: extra-educated and development-orientated. In contrast, the teachers’ orientations towards an inquiring instructional stance and affiliated ways of acting create the strongest positions in lesson studying. We claim that the two weaker positions in teaming are generally in line with the LS-experienced and LS-coach positions, as their orientations intertwine with the significant acts and valued outcomes of lesson studying. We therefore suggest that these weaker positions have prepared the way for the LS-positions, but also that the LS-positions are born into existing conflicts between the weaker and stronger positions in teaming.

The significant acts in teaming mirror some of the acts related to the overriding world of classroom teaching (i.e. the functionality of teaching), but they also relate to individual overall interpretations of teaching that are peripheral to classroom instruction. In contrast, the acts significant in lesson studying stand out as dealing with in-depth explorations of relationships between specific content, student learning, and multiple instructional factors. This exploration presupposes a certain degree of a shared understanding of teaching quality among the teachers. Thus, the acts in lesson studying are fundamentally new in this local school context and they disturb the balance in teaming, in particular with acts that directly address the teachers’ instructional approaches.

The valued outcomes in teaming mirror the family culture affiliated with classroom teaching and are closely connected to teacher methodological autonomy. In contrast, the realized values in lesson studying deal with orientations that lesson study research argues are vital for making such collaboration efficient (e.g. joint responsibility for developing teaching).

By comparing these two profiles, we can see that the teachers’ realization of lesson studying profoundly challenges their ordinary collaborative setting characterized by teaming in all of this world’s defining aspects. We argue that the gap between these two profiles constitutes a basic source of conflict, which we discuss in more detail below.

7. Results: emerging conflicts

In order to examine how and why conflicts emerge when the teachers engage in lesson study, we present two vignettes, which we analyze in terms of the interplay between teaming and lesson studying, the teachers’ claiming of subject positions, and the overriding world of classroom teaching.

7.1. How should teachers behave in joint reflections?

Vignette 1 comprises a mathematics teacher’s recount of an experienced colleague’s behavior in a joint reflection in phase 2:

Not everybody is necessarily acquainted with the rules of the game of this reflection. For instance, what is your focus during observation? Afterwards, you do not say, “You said something wrong. It was not mathematically correct”, and sit with your arms folded. To tell a teacher that he/she actually made a fool of him- or herself at the blackboard can hurt some teachers’ feelings.

In vignette 1, teaming and lesson studying are completely intertwined in two ways. The first way concerns the act of reflection, which is significant in lesson studying but not in teaming (cf. the profiles). Occupying a LS-experienced position, the recounting teacher is acquainted with ways of behaving such as reflecting on observations of student actions in relation to the lesson goals. However, when it emerges that the colleague in question is not acting accordingly, he requests rules in order to protect the observed teacher from being overtly criticized. Hence, he improvises the new act of reflection while simultaneously remaining faithful to teaming and thus upholds a family culture by demanding protective rules. The second way concerns the question of what constitutes teaching quality. The recounting teacher questions whether teaching quality relates exclusively to delivering the content correctly, which is a common interpretation in teaming. He improvises with an orientation towards lesson studying by distancing himself from his colleague’s judgment. At the same time, he lacks experiences to handle the situation, as it calls for other ways of judging teaching quality and dealing with complex interpersonal relationships. Thus, we see how the teacher’s interactions are orientated dynamically by the two worlds and in contradictory and complex ways.

Analyzing vignette 1 in terms of subject positions and from the perspective of the recounting teacher, the experienced colleague claims an old-hand position (teaming) in two ways. Firstly, he judges the teaching performance of a colleague by disclosing content errors. By doing so, he consolidates his own expertise and superiority as a mathematics teacher. Secondly, he distances himself from the act of reflection and the research lesson by sitting with his arms folded. From his senior-teacher position, he is entitled to know what constitutes teaching quality (i.e. delivering the content correctly), and, by avoiding engaging in the reflection through his way of distancing himself, he sustains and protects the power of this entitlement. Moreover, he claims the position of old-hand. However, the recounting teacher is oriented towards lesson studying and wishes to engage in negotiations of teaching quality. Consequently, the senior-teacher’s attempt to transmit acts and values from teaming into lesson studying causes conflicts to emerge. These conflicts threaten both his otherwise strong position in teaming and his colleagues’ realization of lesson study.

According to our analysis, it proves difficult to transmit strong subject positions across the two worlds. In particular, the derived orientations of the senior-teacher and old-hand positions do not appear to be decisive for acting significantly or contributing valuably in lesson studying. On the contrary, we see that these positions are challenged by the requirement to build up new authorities by reflecting on and negotiating teaching quality and by engaging in and producing the valued outcomes of lesson studying. The teaming profile shows that such acts and values are unfamiliar to teachers occupying these two positions. Furthermore, less experienced and newly qualified teachers with traditionally low status in teaming may claim the strong positions in lesson studying by engaging skillfully in its acts and values. These are much in line with the acts and values taught in teacher education in Denmark. Besides, these teachers can act more freely by not having to defend strong positions. We thus conclude that the teachers’ realization of lesson studying fundamentally disturbs the social dynamics of their work and power relations, most significantly by displacing their hierarchy of positions and almost inverting the strong positions of teaming. However, as these positions are formed relationally (cf. history-in-person), they are only possible to change by the teacher
groups over a longer period.

7.2. Lesson study - an opening to professional development?

Vignette 2 deals with the mathematics coach’s experiences when trying to use lesson study to develop her colleagues’ teaching in order to base their discussions on evidence rather than on attitudes and experiences and to develop a shared understanding of teaching quality aligned with the syllabus:

This drill and practice instruction needs to be changed into inquiry and problem-solving approaches … That is why I use our meetings to tune my colleagues in to these competences. They are not written in the syllabus only for fun.

Occupying extra-educated, development-orientated and LS-experienced positions, the coach has high expectations for her and her colleagues’ collaborative engagement in lesson study, “You must be very thick-skinned if participating in lesson study does not affect your instructional approach”. However, she is surprised by some of her colleagues’ reactions, “Some feel that something is being imposed on them …”. Who the hell has decided this?, and “At lunch talking about lesson study, I was stunned by some colleagues’ reactions and felt like a complete fool. You know yourself that this is so good. Then you are confronted with such opposite attitudes from your colleagues”. The task load also surprises the coach, “I think the professional developmental part is hard.

We interpret vignette 2 as displaying general issues of a coach establishing professional authority among her colleagues. Our elaborated profiles show that the nature of the teachers’ acts and assertions is different depending on whether the teachers orient themselves towards teaming, where seniority and the upholding of traditions dominate, or towards lesson studying, where contextualized and up-for-review explorations of teaching dominate. These conflicting teacher orientations contribute to the emergence of a new conflict field of authority especially regarding teacher development and teaching quality. We unpack this conflict field by analyzing vignette 2 from the perspective of teacher methodological autonomy (cf. classroom teaching). Two different interpretations of this autonomy prove significant.

The dominant interpretation of teacher autonomy relates to teaming and endows the individual teacher with almost full legitimacy to decide on teaching matters, not only those related to methods. This even occurs to the extent that some teachers overtly ignore the current two shifts at the macro level: the focus on processes (i.e. competences) and the teacher’s role as a facilitator of learning rather than a provider of ready-made concepts and skills. The coach indicates this in the first quotation above when referring to her colleagues. These colleagues draw on the dominant interpretation to justify continuing their instructional approaches that focus on content products and their delivery of these products. Their behavior is in line with the classroom teaching’s meso-level act of shaking off macro-level demands.

Furthermore, by applying the dominant interpretation to the teachers’ work relations, we can explain the conflicts that emerge in vignette 2 when some colleagues feel compelled to participate in lesson study. These colleagues consider classroom instruction their own closed domain of which they are individually in charge, and they therefore react strongly when the coach does not act accordingly. This protection of their domain and autonomy may explain why they position themselves in opposition to lesson study.

The coach, however, calls for a second interpretation of teacher autonomy affiliated with lesson studying. This interpretation encourages teachers to take joint responsibility for their professional development. It emphasizes exploration of and reflection on instructional approaches and the alignment of these with the two macro-level shifts. The second interpretation is also evident in other parts of our data, typically when teachers position themselves as extra-educated, development-orientated and LS-experienced (cf. the elaborated profiles). Usually, the coach implicitly “tunes” her colleagues towards new macro-level shifts and demands at meetings without directly addressing their instructional approaches. In vignette 2, however, she breaks the scope and setting of her normal authority in two ways by acting in line with the second interpretation. First, she initiates a professional development (i.e. lesson study) that obligates her colleagues to participate in new forms of teacher collaboration possibly against their will. Second, she engages herself and her colleagues in key acts of lesson study that directly address their instructional approaches and imply highly contextualized negotiations of teaching quality. The coach’s establishment of this kind of professional authority is further complicated by issues at the macro and meso levels. As the macro level provides no guidelines or methods for teachers to manage the two macro-level shifts the coach has no authoritative documents to support her facilitation of teaching quality discussions among her colleagues. At the meso level, the school leadership does not award her this kind of authority and its lack of support for the lesson study initiative (aside from scheduling activities) in general undermines her professional authority.

By analyzing vignette 2 in terms of micro-level interpretations of teacher autonomy, we see that a new conflict field arises about a coach’s establishment of professional authority among her colleagues. This conflict field relates in particular to issues of professional development and teaching quality. The analysis shows how these conflicts emerge due to the strong tensions between the well-established world of teaming and the new world of lesson studying as well as broader power, cultural and social issues at the macro and meso levels. The coach’s decision to leave the school after phase 2, overwhelmed by her task as a coach, indicates the potential pressure of this conflict field.

8. Conclusion

Based on our analyses, we draw two overall conclusions. The first conclusion is that the teachers’ dynamic orientations towards the two shifting dominating worlds, teaming and lesson studying, fundamentally challenge and complicate their lesson study adaptation. The vignettes in particular show how the fundamental gaps between these two worlds (cf. their profiles) cause a number of conflicts primarily due to their often counter-acting orientations of the teachers’ outlook and behavior, their different creation of strong subject positions implying fundamental displacements of the teachers’ traditional power hierarchy, and the impossibility of transmitting strong positions across the worlds. Characteristics of the overriding world of classroom teaching, in particular teacher methodology autonomy, also play prominent roles in the teachers’ adaptation of lesson study. In vignette 2, two different interpretations of teacher autonomy give rise to a new conflict field about the coach’s authority. All these results, showing how the teachers’ ordinary work and power relations are displaced and disturbed during lesson study, also explain why the potentials of lesson study do not materialize to any great extent in this local school setting.

The results, however, also indicate the importance of working on adaptations of approaches such as lesson study in order to transform issues of culture and power in the teachers’ local setting. This applies in particular to those related to the three characteristics of a Danish teaching culture identified earlier in this article: teacher methodological autonomy (as interpreted from a teaming perspective), teacher collaboration characterized by functionality of
teaching and a family culture, and the tendency to shake off macro-level demands. This importance is supported by parts of our data showing that some teachers occupying senior-teacher positions alternate between old-hand and development-oriented positions.

Our second conclusion is therefore that it is necessary to address these broader issues of culture and power in order to adapt lesson study in a Danish context. Stimulating transformations by opening up a figurative space of alternative views and approaches to teaching is arguably among the most important potential contributions of lesson study to education in Denmark.

9. Reflections on our methodological approach

In our literature review, we mentioned that several scholars have discussed the challenges of introducing lesson study in the West (Hadfield & Jopling, 2016; Lewis et al., 2009; Murata, 2011). We now reflect on how our methodological approach may allow new interpretations of these challenges.

We supplemented Holland et al.'s framework with J. Skott's emergent perspective. In doing so, we transformed issues of lesson study adaptations into questions about which figured worlds play prominent roles in a local educational system and how teachers' dynamic orientations towards shifting significant worlds may create conflicts when teachers engage in lesson study. We gained insight into the teachers' work life and local culture by empirically abstracting actors, subject positions, significant acts and valued outcomes into elaborated profiles of two micro-level worlds. By combining this empirical approach with a literature study that abstracted actors, subject positions, signifiers of power are displaced in lesson study interactions by the emergence of new subject positions and the inversion of the power relations. We argue that, in order to understand such challenges, we need to identify overriding characteristics of the teaching culture in the adapting country that will fundamentally influence the ways a particular school and its teachers adapt lesson study.

The second research approach identifies conditions that are essential to consider when adapting lesson study, almost regardless of the teaching culture of the adapting country. Our study confirms the importance of such specific conditions, such as teachers' resistance to open their classroom. However, by comparing our study with Saito and Atencio (2013), we can see it is necessary to specify in detail what it means when different educational cultures experience similar conditions. Saito and Atencio characterize the Vietnamese educational system as hierarchical and competitive, where teaching contests rank teachers and appoint winners. Even though Vietnamese teachers are accustomed to opening their classroom, they are reluctant to do so, as winner teachers are likely to be harsh in their criticism of the observed teacher (Saito & Atencio, 2013). In contrast, there are no teaching contests or ranking practices in Denmark. Danish teachers' resistance to open their classroom is instead rooted in a reluctance to show their relationship with the students and their overall performance as a teacher. If we wish to understand and sustain national adaptations of lesson study, it is essential to specify such conditions with reference to the adapting country's teaching culture.

The third research approach reaches beyond the surface features of an adaptation and considers cultural impacts at a deeper level. Our study combined this approach with the fourth approach (restated below) and identified three distinctive characteristics of a Danish teaching culture: teacher methodological autonomy, teacher collaboration characterized by functionality of teaching and a family culture, and teachers' tendency to shake off macro-level demands. Hence, we contribute cultural aspects closely related to the Danish educational system, while both Ebaeguin and Stephens (2014) and Gero (2015) focus on general aspects of the adapting country's culture.

The fourth research approach focuses on conflicts and aspects of power in teachers' work relations and identities. Our result differs from Saito and Atencio (2013) as regards the positions of senior teachers. In their study, the senior and awarded teachers are repositioned as even more powerful and expect their younger colleagues to internalize and reproduce their prevailing ideas. However, in our study, it is not possible for teachers from the senior-teacher and (especially) the old-hand positions to transmit their power to lesson studying, as seniority in this local realization of lesson study is not decisive for acting significantly and contributing valuably.

Considering its potentials (Quaresma et al., 2018), lesson study appears to be a well-suited collaborative way for teachers to address the restructuring challenges to the Danish and other European educational systems. However, in line with Saito and Atencio (2013), our study suggests that lesson study adaptation may profoundly challenge the status quo of teachers' work and power relations. We argue that, in order to understand such challenges, we need to identify overriding characteristics of the teaching culture in the adapting country and issues of power and culture in the teachers' local collaborative setting. Based on such understandings, we can begin the slow process of figuring and realizing lesson study in D'Andrade's (1981) perception of guided discovery.