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Ksenia Solheim

Institutions: University of Stavanger

Published on: 23 Jun 2019 - International Journal of Learning, Teaching and Educational Research (Society for Research and Knowledge Management)

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Teachers' Aspirations to Improve their Classroom Interaction

Ksenia Solheim
University of Stavanger
Stavanger, Norway

Abstract. This article explores teachers' aspirations to improve their classroom interactions with students. The classroom interaction framework of Pianta and colleagues (2012) and the motivational factors approach were combined to investigate 76 in-service lower-secondary school teachers' perceptions of their motivations towards emotional support, classroom organization and instructional support improvement. The results showed that the teachers' aspirations were explained by a desire to improve for students' sake. Self-growth as a professional and the desire for increased knowledge in different domains of classroom interaction were among the factors influencing teachers' possible educational processes. Recognizing teachers' professional values, expectations and emotions may inform teacher education pedagogies and contexts for teacher learning.

Keywords: Classroom interaction; Motivational factors; Teacher Educational Improvement.

Introduction

Research on educational effectiveness and teacher professional development has shown that teachers are a key element of classroom processes and are an important source of knowledge for students' learning (e.g., Fairman & Mackenzie, 2012; Lomos, Hofman, & Bosker, 2011; Moolenaar, 2012; Rivera, McMahan, & Keys, 2014; Vermunt, 2014). Interactions between teachers and students through which teachers influence learning and development are an effective teaching process that has been theoretically and empirically addressed by international researchers (Allen et al., 2013; Hamre, Hatfield, Pianta, & Jamil, 2014; Pianta & Allen, 2008). These researchers used the domains of classroom interaction (emotional support, classroom organization and instructional support) to describe effective teaching. The significance of teacher motivation for teaching practice and students is self-evident (Han & Yin, 2016). However, research on teachers' own motivation to improve their classroom interaction skills with students while participating in an intervention is lacking. Furthermore, quantitative approaches have dominated the research on

motivation (Han & Yin, 2016; Roth, Assor, Kanat-Maymon, & Kaplan, 2007). Thus, the present study explores teachers' own descriptions of their motivation to improve their classroom interaction skills and knowledge through a qualitative approach, which contributes to the field of teacher motivation to learn. Furthermore, the study sheds light on teachers' reasons for improving their knowledge of emotional support, classroom organization and instructional support. By exploring teachers' experiences and studying their descriptions of classroom interaction, the path toward establishing and implementing classroom interaction skills becomes clearer. Investigation of this topic brings new perspectives to the field of teacher professional development and is relevant not only to teacher education but also to in-service teacher learning in general.

Theoretical Frameworks

In this study, the content of the classroom interaction framework (Pianta et al., 2012a) is combined with the motivational factors approach (Maehr & Braskamp, 1986; Roede, 1989; Thoonen, Slegers, Oort, Peetsma, & Geijssel, 2011) to explore teachers' aspirations to improve their classroom interactions with students.

Classroom interaction. Classroom interaction is an effective teaching framework focusing on relationships between teachers and students. Developmental theory is at the core of this framework. The biological, psychological, cultural and behavioral processes of teacher-student relationships are grounded in classroom interaction domains (Hamre et al., 2013; Pianta, 2016; Pianta & Allen, 2008). Each domain consists of specific dimensions that characterize and represent it. A set of indicators describe each dimension, and connected to behavioral markers (Pianta et al., 2012a). Emotional support, classroom interaction, and instructional support (Figure 1) are the main features of the teacher-student interactions, which allow observing the relationships in the classroom and influencing the teachers' course of actions (Hamre et al., 2013). The research literature on teachers' classroom behaviors has explored teachers' social and emotional behaviors towards students, their practices related to classroom management and their instructional skills (Danielson, 2007; Marzano, 2014; Pianta, 2016), emphasizing the commonalities across these clusters.

Emotional Support	Classroom Organization	Instructional Support
Positive Climate	Behavior Management	Instructional Learning Formats
Teacher Sensitivity	Productivity	Content Understanding
Regard for Adolescent Perspectives	Negative Climate	Analysis and Inquiry
		Quality of Feedback
		Instructional Dialogue

Figure 1: Adapted from Pianta, Hamre, Mintz (2012)

Emotional support enables students to be autonomous, express ideas and opinions, and feel useful. Teachers' strategies, sensitivity and respect may

support students' needs and enhance their motivation. Positive student academic performance and positive student behavior outcomes, along with the student school motivation and engagement is the result of a strong student-teacher relationship (Roeser, Eccles, & Sameroff, 1998; Skinner, Zimmer-Gembeck, Connell, Eccles, & Wellborn, 1998).

The domain of *classroom organization* involves teachers organizing and managing time and activities in such a way that students have clear expectations about behavior, tasks, performance and routines in the classroom. Self-regulation and executive functioning skills among students shown to develop because of the effective working space organized by teachers (Raver et al., 2011).

The intent of *instructional support* is to develop students' cognitive capacities. Teachers' ability to respond to students with supportive feedback and organize dialogs in the classroom that lead to a deeper understanding of lesson content stimulate students' high-level thinking skills, and providing cognitive development tasks (Williford et al., 2013) has proven to be effective for students' learning outcomes (Pianta et al., 2012b). According to a large body of research reviewed by Wolfe and Alexander (2008), it is important to engage students in meaningful conversations, through which they can learn to understand facts, concepts, and principles of the topic under discussion. The instructional support domain captures the quality of the activities used in the student learning process.

Hamre et al. (2014) argued that considering teachers' positive relationships, classroom management and provision of cognitive stimulation, the domains of classroom interaction are presumed to be crucial for students' social and emotional development, attention, self-regulation and achievement and predict students' academic performance. Knowing the relevance and importance of the classroom interaction perspective, we applied its theoretical framework and examined the motivational components of teachers' willingness to improve in classroom interaction, understood as the emotional support, classroom organization, and instructional support domains. We explored teachers' perceptions of classroom interaction learning through the lens of motivational factors.

Motivational factors. Previous research on teacher motivation indicates that not only teachers' professional experiences and their initial teacher training, but also teachers' own experiences as learners develop teachers' beliefs (Avalos, 2011; Mansfield & Volet, 2010). According to international literature motivation is the desire to act in a particular manner in a given situation (e.g., Schiefele, 2009; Schunk, Pintrich, & Meece, 2008; Wigfield, Eccles, Schiefele, Roeser, & Davis-Kean, 2006). The current study leans on the motivational factors (Maehr & Braskamp, 1986; Roede, 1989), which are composed of expectancy, value and affective components (Hascher, van der Veen, & Roede, 2005; Pintrich & de Groot, 1990). This framework is an adaptation of a general psychological expectancy-value model of motivation used by Eccles et al. (1983) and Pintrich (1988). The emphasis is on understanding teachers' perceptions of their

willingness to improve classroom interaction by exploring the motivational factors in teachers' descriptions of their learning in the classroom. Teachers' own vision of what drives them to improve their classroom interaction can inform an exploration of real classroom situations and reveal what can be done to help teachers in their learning at work and how educational settings for teachers' improvement can be organized.

According to Thoonen et al. (2011), the main idea of the *expectancy* component is the teacher's belief regarding his or her ability to perform a task, which is in line with Bandura's (1997) concept of self-efficacy. Identifying this component in the study can offer insight into the teachers' perceptions of their sense of self-efficacy for improving classroom interaction. Those who believe they are capable and successful work harder and achieve more (Schunk, 1991). Self-efficacy is an important factor of effective and high-quality leadership in the classroom (Han & Yin, 2016) and can influence the choices people make and the courses of action they pursue. According to Schunk and Pajares (2009), self-efficacy is a critical key factor of how individuals control their thinking and behavior, and it has proven to be a consistent predictor of educational outcomes. However, no amount of self-efficacy will generate teachers' excellent work if they lack the will to succeed (Schunk, 1995). Teachers' perceptions of the importance of learning and their integrity can also influence their behavior (Wigfield, Tonks, & Eccles, 2004). The current study addresses the expectancy component by analyzing teachers' beliefs in their ability to improve in classroom interaction and because it helps explain teachers' desires to learn more about classroom interactions.

The *value* component refers to the teacher's personal goals and the importance of those goals. Eccles et al. (1983) define values as the qualities of different tasks and with respect to how those qualities effect the individual's desire to do the task. Because in the psychological literature goals mean the incentive or outcome a person is trying to achieve (Maehr & Zusho, 2009), it is relevant for this study to investigate teachers' learning goals and to determine the motive behind teachers' desire to improve in classroom interaction. The current study addresses the value motivational component because it might offer insight into teachers' reasons for learning and improving their classroom interaction knowledge. According to Schunk (1991), an engaging goal, together with the belief that it is attainable, will motivate teachers to learn. If the teacher interprets the task to be difficult or almost impossible, the motivation to make an attempt is minimal.

The *affective* component refers to teachers' emotions and feelings towards tasks and school in general. According to Chang (2009), emotions are generated, when teacher makes an evaluation of the situation he/she is involved in. Their judgments of the reasons that stand behind the events influence the types of emotions they may have and the intensity of the emotions they may feel. Exploration of teachers' perceptions of their emotions that trigger their willingness to learn more about classroom interaction might give us a better understanding of teachers' motivation to improve their knowledge in the field of classroom interaction. This information will add to the knowledge in the field of

education, which is, in general, in need of more research on the affective component.

In order to improve the quality of teacher-student interactions one should understand the nature of effective teaching for adolescents (Allen et al., 2013); therefore, teacher motivation is one of the essential component of enhancing classroom effectiveness (Carson & Chase, 2009). According to international research on students' learning outcomes, it had been underlined that students' results are highly dependent on such factors as the teachers' quality of instruction, teacher effectiveness. They have straight relation to teacher motivation factors (e.g., Butler & Shibaz, 2014; Kunter et al., 2011; Thoonen et al., 2011). By looking at classroom interaction domains through the lens of the motivational components, we explore teachers' desire to improve their knowledge about teacher-student relationships, their goals for doing so, and the emotions that influence the process. Exploration of teacher motivation will shed light on what can be done to improve the quality of teachers' classroom interaction skills and identify the areas needing enhancement in order to achieve excellent and effective teaching.

The National Program

The current research was executed within the framework of the larger Classroom Interaction for Enhanced Student Learning (CIESL) study, the aim of which is to investigate teachers' improvement of classroom interaction practices under a Norwegian National Initiative. A five-year program, "Ungdomstrinn i utvikling" [Lower Secondary Schools in Development] (UIU), was initiated by the Norwegian Directorate for Education and Training to improve secondary school teachers' knowledge in literacy, numeracy and classroom management. Most of the schools chose classroom management as the area of improvement. To make the long-term initiative accessible to all schools, the Ministry of Education divided schools by region. Each year, one of the five groups began a development course that lasted for a year and a half. The teachers participating in the UIU program were provided with courses, seminars and workshops on classroom interactions framework. This intervention provided a context for researching teachers' motivation to improve classroom interaction at their workplace while participating in the national initiative.

Research Questions

The primary goal of the present study was to address the research questions as follows:

- (a) *How do teachers describe their motives to improve their classroom interactions?*
- (b) *What are the reasons for teachers' aspirations to improve their knowledge of emotional support, classroom organization and instructional support?*

Method

Sample

Seventy-six teachers participated in this study. They represented 14 lower secondary schools (grades 8-10, ages 13-16) in three counties in Norway. The age

range of the participants (59 women and 17 men) was 25-65 years. The teachers' backgrounds differed in terms of teaching experience (from 3 to 34 years). Participation was voluntary. Teachers could withdraw from the study at any time without consequences. Written consent was mandatory for the participation; therefore, only teachers who provided it were included in the study.

Data Collection

Data were collected using digital logs. They constituted of six questions, which were sent to the participants via email (see appendix). The respondents answered the log questions at their own pace and over a period of three weeks. Since geographically the schools were spread over three different regions of Norway, collecting data through email logs allowed access to dispersed groups of teachers (Gibson, 2017). Since the current study was carried out within a national initiative for developing lower secondary schools in which classroom management was one of four fields of improvement (Ministry of Education, 2016; Ministry of Education and Research, 1996), the log questions addressed teachers' perceptions regarding classroom management skills rather than their classroom interactions. Since according to Hamre and colleagues the classroom interaction framework is part of the classroom management field and the concept of classroom management is well-known among Norwegian teachers, teachers' participation in the national program provided a possibility for researchers to explore teachers' experiences with classroom interaction.

Three different groups of teachers delivered data three times over a period of 4 years. Each school participated for one and a half years in the National Initiative. The first log collection started in 2014 with a group of 40 participants. The second group of new participants consisted of 10 teachers (2015), and the third and last group consisted of 27 participants, who delivered their logs in 2016 and 2017.

The log questions were designed to help teachers reflect on their recent learning situations while in the classroom interacting with the students. The data collection method that was applied in the current study was similar to that of Bakkenes, Vermunt, and Wubbels (2010). Since all information was delivered in written form, we transferred the data from 76 logs to the NVivo 11 program to organize and code the data.

Analyses

Transcriptions of 76 logs provided the primary data for the study and were coded for emerging patterns. The study adopted a direct content analysis approach to the data interpretation that relied on existing theory to develop the initial coding scheme (Hsieh & Shannon, 2005). The analysis draws on the log analysis from the CIESL research (Solheim, Ertesvåg, Berg, 2018). However, for the current study, the data were reanalyzed with respect to the specific research questions. According to Miles, Huberman, and Saldana's (2014) principle, we condensed the data to identify the important findings. The classroom interaction theme was used as the context for analyzing teachers' willingness to improve. The motivation components were the predetermined codes. Moreover, those

parts of the text that could not be categorized with the initial coding scheme, we gave a new code (Hsieh & Shannon, 2005). Further, a visualization (Table 1) of the condensed data was made, which shows the directions the researchers investigated to answer the research questions.

Table 1: Identified components of teachers' motivation to learn about classroom interactions

Motivation components	Classroom interaction theme		
Expectancy (N=51)	Want to be a 'better' teacher (N=51)		
Value (N=76)	Want to gain knowledge about:		
	Emotional support (N=20)	Classroom organization (N=25)	Instructional support (N=23)
	Want to improve students' learning (N=36)		
Affective (N=34)	Want to learn from emotional experiences:		
	(a) Positive emotions (N=16):		
	Satisfaction/ pride	Joy	Happiness/pride
	(b) Negative emotions (N=18):		
	Frustration/ embarrassment/ anxiety	Frustration/anxiety	

*N represents the number of teachers who referred to the specific category.

The last step, according to Miles et al. (2014) approach, is to draw conclusions. Four main categories emerged: 'desire to be a better teacher', 'desire to gain knowledge about classroom interaction', 'desire to improve students' learning', and 'desire to learn from emotional experience'. The last category had two subcategories: (a) 'positive emotions' and (b) 'negative emotions'. The number of teachers in the table indicates the number of references counted from the logs: one reference per participant. However, the same teacher could make references to different categories across the data.

Validity

The researchers focused thoroughly on language to ensure the authenticity of the citations, since the study was conducted in Norwegian. The accuracy of the study was ensured via discussion among three researchers. Lund and Haugen (2006) identified four types of validity: statistical conclusion, internal, construct and external validity. Lund (2005) redefined the concept of *statistical conclusion* in quantitative research as *result validity* for qualitative research. It refers to the amount of qualitative materials and the study's systematization. This study has a broad scope of transcribed data in the form of 160 pages of log information. All data were imported to the qualitative analysis program NVivo 11 for systematization and categorization. All participants had identical log questions. In this study, *construct validity* refers to whether teachers' learning was measured accurately. To ensure accurate construct measurement, a thorough examination

of international research literature in the field of classroom interaction and teacher motivation was conducted. *External validity* is of some relevance to this work. External validity concerns generalization to the defined populations from the sample of persons, settings, treatments, and outcome. In this study, the results will not be generalizable in the strict sense. However, the relatively large sample of teachers as a group represents a variety of schools and contexts that most likely will have some relevance for other teachers and schools. *Internal validity* is less relevant in descriptive research.

Findings

The aim of this study was to explore teachers' aspirations to improve their classroom interactions. Analysis of the logs produced four categories. Fifty-one teachers reported that being a better teacher was important to them. They focused on personal improvement and believed that they could achieve mastery. All 76 teachers implied that improvement in classroom interactions was meaningful to them. Here, the same teacher could refer to different categories. Twenty participants emphasized emotional support, 25 teachers underlined classroom organization and 23 teachers reflected on instructional support learning. Thirty-six teachers reported that they focused on students and that this gave them the motivation to be more proficient so that they could help students improve.

Thirty-four teachers asserted the importance of emotional experiences for improvement. For 16 participants, positive emotions such as happiness and pride provided motivation to improve. For 18, negative emotions, such as frustration and anxiety, were a strong motivation to change. We addressed the three factors of teacher motivation and explored their relationship to the classroom interaction domains. In the following, we describe each category and provide quotations from the teachers to illustrate the reasoning behind their motivation to improve. The descriptive evidence is presented in Table 1.

Desire to be a 'Better' Teacher

The results revealed that 51 teachers reported that their main motivation for learning about classroom interaction was to improve their skills and knowledge to become a 'better' teacher. In other words, participants had a "teacher focus". Fifty-one teachers referred to their competence and skills as classroom managers and explained how they could become better at classroom interaction. One teacher stated the following:

"It is fantastic to have an opportunity to be a good role model for students and to be a person who sees them and helps them. I find it motivating to develop myself as a teacher."

The responses indicate that teachers' perceptions of which classroom skill they should possess are meaningful for them. Most of the teachers described planned learning situations in which the teacher is well prepared and comfortable in his/her role but also remembers how he/she should behave in different settings and thinks through how he/she wishes to be seen as a leader. One teacher made the following comment:

“One must think more carefully about what and why one does things. In order for the students to benefit from my learning in classroom interaction, first, I must as a teacher be attentive and understand the classroom dynamics.”

The logs illustrated teachers' focus on self-improvement. Making mistakes and being willing to try new methods motivated them to do their work better; teachers believed that classroom interaction could and should be an area of constant improvement for those wishing to develop as teachers. Participants with such desires expressed openness to new knowledge about classroom interaction because this aspect of their work defined them as teachers and gave meaning to and fostered understanding of the social, emotional, and instructional system in the classroom. Participants described a skilled teacher as a safe, predictable, and positive adult who is in control, aware of his/her actions, and has a respectful relationship with students. Understanding the aspects of classroom performance that they felt they lacked competence in, motivated teachers to improve their classroom interaction knowledge.

Desire to Improve Classroom Interactions

Emotional support improvement. Twenty teachers reported that they wanted to learn more about emotional support. The logs provided explanations of the importance of the relationships among teachers and students. One teacher wrote:

“Students must know what the teacher expects of them, and there must be trust and mutual respect that characterizes a classroom. At the same time, teachers must be supportive, empathic and acknowledge students as actors in a learning process. That is what motivates me to learn more about classroom interaction.”

Enjoyment and fun, non-verbal interactions, positive communication, and the social aspect of the classroom were discussed in the teachers' reflections. Individual students' needs were mentioned in the logs, indicating teachers' sensitivity. Teachers reported that problem anticipation and checking in with students, taking their perspective and adjusting time to accommodate individual student needs was something they needed to work more diligently on. Participants also reported that the most challenging aspect was providing opportunities for student autonomy. One teacher made an observation about having regard for the adolescent perspective:

“I mean, classroom interaction is about taking students seriously. Letting them participate and decide means giving them responsibility, which, again, creates a good learning environment. I usually talk too much. Must do something about it.”

The logs illustrated that these teachers understood the importance of following students' lead, heeding students' opinions and advice, and taking their adolescence into consideration because all of these factors interrelate and help build a strong relationship.

Classroom organization improvement. Twenty-five teachers reported that they wanted to learn more about classroom organization. Management of student behavior was the foremost concern. The teachers appeared to share a common struggle with student behavior. They wanted to learn more about strategies and effective methods to prevent misbehavior. They discussed the importance of clear expectations and the absence of chaos in the classroom for ensuring a successful learning experience. One teacher made the following observation:

“If students do not get a proper start on the lesson and clear expectations, then I am unsure if they will get a learning outcome from the activity in the end.”

The teachers stressed the need to be prepared, which provided motivation to learn what to do and how to do it. Teachers expressed that if they learned how to be more efficient and productive, it would give them extra time to help, correct, supervise and give feedback to students.

Instructional support improvement. Twenty-three teachers referred to their motivation to learn about learning formats and methods. The teachers’ goals with respect to improving their knowledge about how to provide interesting and engaging lessons were very clear:

“What motivates me the most is to learn more about instructional learning formats, supervision of students and be able to read new professional literature.”

Teachers expressed a need to know a variety of modalities and strategies and different ways to teach and to present material to facilitate exciting and educational lessons:

“I am trying to focus on new, more vigorous methods to teach. Trying to invent new ways both for training and for assessment of educational material.”

We also identified examples of teachers’ expressed motivation to develop knowledge about approaches to help students obtain a deeper understanding of the subject of the lesson.

“It is important for my future work to build lessons in such a way that students gain an understanding of what we are working with before we go to the next chapter.”

The reflections were not deep and varied enough to specify more markers for instructional support, but the willingness to instill better content understanding in students by applying new knowledge was clear. We found no motivational indications from the teachers regarding analysis and inquiry, quality of feedback or instructional dialog.

Desire to Improve Students’ Learning

Thirty-six participants emphasized student improvement as their goal for learning. One teacher offered the following example:

“I feel that when I manage to exercise good classroom leadership, better student learning takes place; moreover, my relationships with students become better.”

Thirty-six teachers discussed that it is important to create lessons and introduce new knowledge in a way that develops students constantly. They noted that if a teacher focuses on classroom interaction, learning and achievement will occur automatically, and good relationships with students will further improve.

"I am motivated to learn about classroom interactions because I have experienced that good classroom interactions can have a big impact on students' learning. In addition, it helps to build a good relationship with individual students, which is important for their school satisfaction."

Teachers discussed different aspects of students' learning: achievement, engagement, and motivation. These are the important factors, and teachers emphasized the task of improving students' learning through these factors.

Classroom interaction is key for every student, can produce unexpected results, and opens the door to new possibilities. One quotation went further:

"The motive to learn about classroom interaction is to have more fun at work with students so they follow, understand and learn better."

Overall, the logs indicated that teachers had a 'student focus'. The participants discussed students' improvement because they encountered difficulties with students' lack of motivation and engagement. They suggested that an effective lesson is a lesson in which students are involved, attentive, and have a good feeling of having learned something. Learning about classroom interaction in order to enhance students' participation, learning process and learning outcomes was important to the teachers.

Desire to Learn from Emotional Experience

Thirty-four participants elaborated on their emotional experiences in the classroom. Teachers reported positive feelings along with negative feelings concerning situations that occurred during lessons. Sixteen teachers expressed *(a) positive emotions*, which motivated them to learn more because they felt happy when classroom interaction went well. Teachers achieved good results when children were engaged and learning occurred. Thirteen teachers described feelings of happiness and inspiration in the *instructional support* domain. One teacher described these feelings as follows:

"I see now how useful it was to be inspired to try new approaches. I feel happy to discover something new. It feels good to see the students learn a lot during the lesson, even though they might find it difficult."

Four examples referred to feelings of satisfaction connected to relationships with students (emotional support). Teachers expressed pride and happiness because they saw that their positive relationships and classroom climate produced results and helped to build a respectful communication base.

Among the teachers, 18 reported *(b) negative emotions*. The results showed that *classroom organization* caused concern for 15 teachers. These teachers felt frustration, embarrassment and anxiety. Loss of control and not being able to manage the classroom as planned, such as when the lesson did not go according to plan, became problematic and emotionally distressing for teachers, as in the following example:

"I thought I planned everything well, but something happened that I could not predict. I was so frustrated and annoyed that we had to use some time from the next lesson to sum up."

Not having enough time and having behavioral management problems with students frustrated teachers. Negative feelings connected to *instructional support* were mentioned three times. In one case, the teacher was stressed because he had to explain the topic several times. Two other examples related feelings of embarrassment due to making a mistake during a lecture. No negative emotions were associated with *emotional support*.

Overall, the logs indicated that teachers' willingness to learn from emotional experience was influenced by pleasant and unpleasant feelings. Teachers were motivated to learn more about classroom organization when negative emotions were involved. Positive feelings motivated teachers to learn more about instructional support.

Discussion

The first research question addressed teachers' motives to improve their classroom interactions. The three components of motivational factors (expectancy, value and affective) seemed to be fundamentally interconnected in teachers' learning process, with beliefs determining the course of action; goals equipping teachers with a reason to learn; and emotions providing the necessary impulse to start the process. These findings support Dweck's (1992) argument that thoughts, emotions, goals and certain behaviors are coordinated systems that are interlinked. Pekrun's (2006) study on emotion, motivation and cognition emphasized that these elements are overlapping and closely linked in many cases.

The findings of this study suggest that teachers tend to picture a person who has qualities that fulfil the criteria of the three classroom interaction domains. Moreover, teachers' descriptions of an optimal classroom interaction situation highlighted that teachers are willing to seek new knowledge about the qualities they lacked and believed they needed to improve on. Thus, participants' perceptions of how to manage classrooms related to their ability to learn more about classroom interaction and accomplish the task of becoming a better teacher. Since expectancies are related to one's perceptions about future events (Zusho, Daddini, & Garcia, 2016), the teachers seemed to have specific ideas about what they would improve to become better. Teachers engage in a learning activity to develop competence by increasing understanding, where success is measured in terms of personal improvement (Patrick, Turner, & Strati, 2016). Based on the findings of this study, teachers have a need for self-development. They are motivated to learn more and improve their classroom interaction knowledge by focusing on themselves because this will influence students' learning. However, previous research on the same sample of teachers reported that the teachers did not show notable results in terms of what they learned and that the activities they applied were rather limited (Solheim, Ertesvåg, Berg, 2018; Solheim, Roland, Ertesvåg, 2018). There is a possible explanation for this

discrepancy. Schunk (1991) discussed that in order to transfer self-efficacy one would be involved in learning and motivation. It requires willingness to apply skills and strategies over extended periods, to different content and situations (Borkowski, 1985). The results of this study indicated teachers' willingness to improve, which also indicates that teachers need more than just motivation to learn about classroom interaction; they also need strategies and knowledge about how to implement acquired information in practice. Downer and colleagues (2012) argued that for teachers to become skilled professionals it is highly relevant not only to focus on their own learning in pedagogy, but also on transferring that knowledge in classrooms. Only then, teachers can promote student learning.

Research on teachers' sense of efficacy (Hoy, Davis, & Pape, 2006) emphasizes that teachers' behavior in the classroom, such as planning, curricular decisions, interaction with students, monitoring and instruction verbalization, is influenced by their self-efficacy. Moreover, teachers' behavior may have a direct or indirect influence on students' behaviors, decisions and emotions (Hoy, Hoy, & Davis, 2009). Thus, it is not surprising that teachers make a choice to pursue further action (to develop themselves) by giving this pursuit a purpose (to be better at classroom interaction). The results indicated that teachers' perceptions of their expectancies to improve were linked to their effort to learn about classroom interaction domains.

The value component appeared in teachers' reports in the context of their reflections on how to improve students' learning. According to the student motivation literature (Ruzek et al., 2016) and research on student achievement (Loeb, Kalogrides, & Béteille, 2012) and student behavioral and social outcomes (Darling-Hammond, 2017; Wang, Brinkworth, & Eccles, 2013), the teacher is the most important factor influencing student learning and development. Interestingly, 36 teachers directly indicated their willingness to improve (in any area of classroom interaction) to enable the students to achieve. In addition, fifty-one teachers referred to the same topic indirectly in discussions of their own improvement, noting student success as an outcome. Overall, all participants found it beneficial for their students if they learned more about classroom interaction and improved their skills in this area. However, the teachers also seemed to distinguish between the domains of classroom interaction. They appeared to have distinct beliefs about the domains in which they are proficient and the domains that they value more. This finding indicates that the teachers are motivated to learn more about the domain they find useful for students' results. Given that teacher knowledge of classroom interaction is linked to classroom processes and the classroom environment and that the findings indicated that different participants have different levels of knowledge regarding these three domains (Solheim, Ertesvåg, Berg, 2018), there is a potential danger in teachers being willing to learn only fragments of some domains. In addition, in order to learn more, teachers might need to have a deeper understanding of the phenomenon. However, the participants reported that they did not use literature in the field of classroom interaction as an additional learning source as part of their improvement work (Solheim, Roland,

Ertesvåg, 2018). Although it is evident that teacher knowledge is linked to teacher behavior and the quality of teacher-student relationships in the classroom, the present research supports the benefits of more knowledge of classroom interaction for creating positive and high-quality teacher-student relationships (Wubbels et al., 2015). Therefore, a lack of knowledge might limit teachers' improvement in classroom interaction and hinder students' development as a result. This contradiction presents a dilemma to researchers in terms of how to support each teacher's unique needs for classroom interaction knowledge while maintaining teachers' willingness to progress in this area.

The affective component appeared in participants' negative and positive experiences and affected teachers' perceptions of further actions, which indicated that emotions might be predictors for teachers needing to learn about classroom interactions. The data showed that, even though the number of responses related to the affective component was not numerous, the influence of emotions on teachers' motivation is undeniable. International research has shown that teachers' positive emotions are influenced by students' achievement (Beilock, Gunderson, Ramirez, & Levine, 2010; Hargreaves, 2000), relationships with students (Golby, 1996; Klassen, Perry, & Frenzel, 2012) and instructional effectiveness (Frenzel, 2014; Kunter, Frenzel, Nagy, Baumert, & Pekrun, 2011). The findings in the present study indicated that teachers' own reports of experiencing pleasant emotions were positively linked to the instructional support domain. The ability to provide effective instruction through strategies that enhance students' engagement and learning was motivating for teachers. Teachers felt happy when the instructional goals were achieved and proud when students successfully completed a task. Considering that previous research on classroom interaction (Pianta, & Allen, 2008; Pianta, 2016; Havik & Westergård, 2019) indicated that the instructional support domain is the domain with the most potential for improvement among teachers, the findings of this study suggest that teachers with stronger skills in creating successful instructional lessons will feel emotionally stronger and motivated to use different instructional strategies. In other words, instead of instructing students what to do, teachers would explain the relevance, provide instructional dialogue and encourage students' metacognitive thinking. Positive practical experience helps teachers to improve. This finding is also in line with international research on teachers' satisfaction (Emmer, 1994; Hargreaves, 2000); it seems evident that when children learn and make progress and when teachers get everything done, it motivates teachers to teach.

By contrast, a key leading factor causing negative emotions in teachers is students' misbehavior (Frenzel, Pekrun, & Goetz, 2007; Sutton & Wheatley, 2003). Moreover, disregard to classroom rules (Emmer, 1994; Hargreaves, 2000) or teachers' uncertainty regarding whether they are doing a good job create frustration among teachers. The current study indicated that teachers' perceptions of unpleasant experiences were mostly connected to the classroom organization domain. Students preventing teachers from achieving their classroom goals and disrupting their lesson plan, instruction and performance were shown to be stressful for participants. Teachers experienced anxiety when

they were uncertain if they were doing a good job. They felt frustration when students were not able to comprehend certain concepts. Moreover, the negative emotions aroused when teachers' competence was challenged. Therefore, this study's results indicate that negative experiences motivate teachers to try to learn new approaches to classroom organization.

Since previous research (e.g., Beilock et al., 2010; Frenzel, 2014) emphasized a link between student achievement and teacher emotions, Frenzel (2014) argued that teacher emotions are linked to classroom processes, including both student and teacher behaviors. Moreover, not only teachers' but also students' well-being and the smooth functioning of classrooms seem to be related to teacher emotions. According to Sutton and Wheatley (2003), emotions may affect teachers' goals, beliefs and intrinsic motivation. Thus, it is expected that teachers' emotions influence their motivation to improve classroom interaction skills irrespective of the type of emotion they feel. Teachers' behavior originates from a complex mix of cognitive, affective and motivational factors; therefore, to promote teacher learning, one must consider teachers' thinking, feeling and wanting (Korthagen, 2017). Consequently, strategies to influence teacher learning in, for example, classroom interaction have to be adjusted to individual teachers' needs. Therefore, all three components of motivation, i.e., the affective, value and expectancy components, cannot be overlooked when organizing professional teacher learning opportunities.

The study also provided insight into the second research question, which explores the reasons for teachers' aspirations to improve their knowledge of emotional support, classroom organization and instructional support. Similar to other studies, the present findings indicate that student achievement and teachers' personal growth as professionals are critical factors that affect teachers' motivation to learn (e.g., Appova & Arbaugh, 2018; Styslinger, Clary, & Oglan, 2015). However, the findings of the current study contribute additional knowledge to the educational field regarding teachers' willingness to improve with respect to classroom interaction. Interestingly, in light of the classroom interaction theoretical framework, the results underlined that teachers unconsciously separate emotional support, classroom organization and instructional support and express the need to improve in one or two of those domains. Furthermore, teachers connect their improvement in specific domains to improved student outcomes. This might mean that the better knowledge teachers have about classroom interaction, the better students' outcomes may be. However, only the combination of all the domains of classroom interaction can allow teachers to reach new heights in their teaching careers and improve the quality of the teaching process. Thus, there is potential for teachers' further professional development and improvement in classroom interaction.

The results for the *emotional support* domain of classroom interaction further support the idea that the regard for adolescent perspectives has highest potential for improvement among other dimensions of this domain (Hamre et al., 2013). On the one hand, in classrooms where teachers are more autonomy supportive, students tend to become more motivated and competent and tend to feel better

about themselves. On the other hand, inattention to students' perspectives diminishes their opportunity for growth (Allen et al., 2013). The finding of this study indicating that teachers are aware of the importance of emotional support but lack the knowledge necessary to provide autonomy support for their students is thought-provoking. Therefore, teachers need assistance in creating emotionally supportive environments where they can connect to students' adolescent life, allow choices, and give students responsibility.

The results of the *classroom organization* analyses indicated some teachers' motivation to learn more about methods for keeping the learning environment in the classroom in order. Teachers desired to improve so that they could minimize disobedience and disruption in the classroom. Good classroom rules and procedures have been found to be associated with fewer discipline problems (Holt, Hargrove, & Harris, 2011), and more behavioral control has been found to be related to a lower level of classroom misbehavior (Nie & Lau, 2009). The results of this study are consistent with previous research on the topic and show that teachers' needs to improve classroom organization skills are of current interest, even though for the last decade the focus of the Norwegian educational system has been directed on teachers' professional improvement in the area of classroom management. Teachers are willing to improve their classroom organization skills because it is of utmost importance for them to be able to maximize learning time for students and support effective classroom environments. Therefore, these findings corroborate the idea that teachers' professional development can benefit from being more effective and from creating learning opportunities for teachers that meet their needs and are practice-oriented.

This study explored the reasons for teachers' aspirations to improve their knowledge of instructional support as well. According to Pianta and colleagues (2012b), there are five dimensions of instructional support: instructional learning formats, content understanding, analysis and inquiry, quality of feedback and instructional dialogue. The teachers mentioned only the aspects of instructional learning formats and content understanding; moreover, most expressed a willingness to improve their knowledge of how to engage students in activities by applying different methods and approaches and of how to make lessons motivating and interesting, which are characteristic of instructional learning formats. Since the logs contained little information on teachers' willingness to improve other aspects of instructional support domain, it is possible to assume that participants' knowledge in this area is not broad. Given the international research on the benefits of instructional support (e.g., Pianta, 2016; Wubbels et al., 2015), it seems that student learning could be affected. Teachers who do not use strategies that focus on higher order thinking skills or give feedback that encourages student participation tend to have students with poorer academic achievement (Hamre et al., 2013). Teachers' perceptions, motivations and aspirations in relation to instructional support can influence the way they teach and interact with the students. Although there is a large body of literature on the value of instructional management, the findings from this study showed a lack of knowledge among teachers in the area of instructional support.

Methodological Considerations

The strength of the study lies in its use of a sample of teachers from a range of schools in different areas of Norway. The digital logs were a rich data source, and they produced valuable data for studying teachers' aspirations to improve their classroom interaction skills. Moreover, this study focused on a theme that has not been well documented in Norway. However, some limitations should be taken into consideration. The results may or may not have been influenced by self-report bias. It is also difficult to control the congruence between what teachers reported in the logs and the real classroom situation. It would be more informative to employ an additional method to collect data, since the findings cannot reveal the full knowledge of the teachers. Moreover, the teachers provided one-point-in-time answers that did not allow exploration of the full process of teachers' improvement. Future studies should investigate teacher aspirations to improve classroom interaction over a period of time. The small sample size may limit the generalizability of the results to other educational contexts.

Conclusion

Our findings suggest that teachers' willingness to improve their classroom interactions with students is based on their professional needs as well as opportunities to learn. This finding is in line with recent research on teachers' motivation to learn (Heystek & Terhoven, 2015; McMillan, McConnell, & O'Sullivan, 2016). This work contributes to an emergent understanding of teachers' motivations to develop classroom interaction knowledge in the workplace. It has important implications for researchers, policymakers and practitioners, providing evidence to inform and support the development of professional learning for teachers. Considering that interactions are the basis of all teaching, the information that this study provides shows the potential for teachers to become better at what they do by increasing their classroom interaction knowledge and by listening to teachers' opinions about their own educational needs. This study also provides evidence of the importance of teachers' professional values, expectations and emotions for new knowledge development. Given that teachers' own motivation is at the core of their improvement and learning, it is important to continue to explore teachers' desire to learn and create opportunities for their growth and development in classroom interaction. Efforts should be made to close the research gaps in the near future, not only for the sake of teachers but also in the interest of well-functioning classrooms.

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Appendix 1

Questions for the digital log

1. Describe an academic situation in which you learned something. What did you learn?
2. How was this learning related to classroom management?
3. What thoughts/considerations did you have about this learning experience? For example, was it planned? How? What reflections or thoughts did you have before and after this learning experience? What did you feel (e.g., happy, frustrated, aggressive)?
4. Why did you learn from this situation? For example, did you plan a lesson, or did it happen spontaneously? Was there anything during or after the lesson that contributed to your learning? What learning activities did you undertake alone or with colleagues?
5. Did you learn anything from the situation that made you look at the classroom practice differently? What motivated you to learn more about classroom management?
6. How can students benefit from what you have learned?