

Designing communicative spaces – innovative perspectives on teacher education

Jessica Aspfors and Anne Marit Valle

Faculty of Education and Arts, Nord University, Bodø, Norway

ABSTRACT

The issue of lack of consistency between teacher education and professional practice has been a subject of debate for a long time. In Norway, like many other countries, both scientific communities and governing bodies have put this on the agenda. The current study is qualitative, using a phenomenological-hermeneutical approach. The aim is to deepen the understanding of a communicative space between student teachers and pupils, both face-to-face and online, in order to develop student teachers' interaction competence. The data comprise reflection logs, group interview and video recordings from both live and online meetings with student teachers and pupils, and is analysed by using qualitative content analysis. The findings demonstrate that online communication is different from ordinary classroom communication and therefore student teachers need to interact with pupils online in order to develop these skills. Reflecting on these kinds of situations while still in education helps student teachers to develop their ability to reflect critically on their own practice and prepare them for their future work as teachers.

KEYWORDS

Teacher education;
communicative spaces;
student teachers' interaction
competence;
critical reflection

Introduction

Research has shown that the transition from teacher education into working life is a challenge. The social responsibility of a teacher's work is constantly increasing, and relationships seem to define newly qualified teachers' (NQTs') first work experiences (cf. Aspfors 2012; Hobson et al. 2007; O'Connor 2008). Many teachers are thus meeting greater demands in their relations with colleagues, pupils and parents, and many countries are having problems recruiting, developing and retaining good teachers in the profession (Achinstein 2006; MacBeath 2012; Rots, Kelchtermans and Aelterman 2012). Furthermore, research has confirmed that the interaction competency of the teacher has a decisive impact on pupils' learning (Hattie 2009; Johnsen 2008; Nordenbo et al. 2008; Rodges and Raider-Roth 2006). It is mainly by encountering pupils that student teachers' interaction competences and professional identities are developed (Aspelin and Persson 2008). However, much of this interaction with pupils in the classroom is unpredictable and cannot be planned in advance (Valle 2014). By critical reflection afterwards, while still in education, student teachers have the chance to

CONTACT Jessica Aspfors  jessica.m.aspfors@nord.no  The Faculty of Education and Arts, Nord University, PB 1490, 8049, Bodø, Norway

consider and decide for themselves who they would like to be as teachers (Aspelin and Persson 2008; Wackerhausen 2009). Finally, teacher education often encounters critique for not being able to give student teachers enough authentic classroom experiences and prepare them well enough for their future work (Brouwer and Korthagen 2005; Wideen, Mayer-Smith and Moon 1998). Consequently, a challenge for teacher education is how to enable student teachers to develop their interaction competence. Is it possible to see new alternatives for how future teachers' interaction competence might be developed? And moreover, can net-based learning platforms be used as a tool to develop this competency?

This article is based on a study called “Innovative learning spaces”; a research project carried out at a teacher education department at a university in Norway during 2014-2015. The overall aim is to deepen the understanding of a communicative space between student teachers and pupils, both face-to-face and online, in order to develop the student teachers' interaction competence. The ambition is to create new possibilities for student teachers to interact more regularly and continuously with pupils, both online and through face-to-face mentoring activities.

According to Kemmis and McTaggart (2005, 296), *communicative spaces* are about the “intersubjective agreement, mutual understanding of a situation, and unforced consensus about what to do.” Communicative spaces thus refer to thoughtful interaction and communication, in which experiences are encouraged to be mutually shared, acknowledged and considered, as well as explored, reflected on and negotiated. Furthermore, communicative spaces rely on authenticity, informality, respect and trust, and are nurtured when participants are present and prepared to listen, in order to promote perspective-taking and learning from one another (Bodorkós and Pataki 2009; Kemmis 2006). The participants are empowered to influence, improve and transform the circumstances and conditions under which they function, and together they can engage in researching and improving their practices. In this way, the relationships can facilitate a collaborative sense of agency and legitimacy. Communicative spaces are consequently a discursive arena where voices can be heard, but also an organised physical arena of space and time where people are enabled to meet in order to engage in discourse (Bevan 2013). Communicative spaces in this article refer not merely to the interaction between student teachers and pupils, but to the broader spectrum of communication (social arenas) between teacher education and the practice field, where a constructive dialogue, creative problem-solving and common ground for action can be established when developing teacher education (cf. Bodorkós and Pataki 2009).

Research on teacher education

The research base for teacher education is often criticised for being fragmented and narrow (Özçınar 2015). There seems, however, to be a global consensus that teacher education needs to be improved in order to meet the challenges of the 21st century (Darling-Hammond 2010; Hökkä and Eteläpelto 2014; Murray 2008). Many studies report on the weak impact of teacher education, e.g. on the prior beliefs and attitudes of student teachers, as well as on their day to day work as fully qualified teachers (cf. Brouwer and Korthagen 2005; Wideen, Mayer-Smith and Moon 1998). Critics advocate the necessity of real world experiences and a tighter connection between courses and

field experiences (Fletcher, Chang and Kong 2008). It has been repeatedly pointed out that, during the transitional phase from teacher education to entering the profession, teachers feel that they have not been sufficiently prepared for the demands of the teaching profession (Bezzina 2007). Especially in cases where the character of teacher education is highly research-based and scientific, teachers may find it difficult to apply research-based knowledge into the practice of their day-to-day work (cf. Hansèn, Eklund & Sjöberg 2015; Hiebert, Gallimore and Stiegler 2002; Westbury et al. 2005). However, there is also evidence to the contrary, and it seems the outcome depends on factors such as the focus of the studies, how the studies have been conducted, and the context of the studies, as well as the quality of the teacher education programme (Zeichner and Gore 1990).

As a consequence, a lot of the ongoing as well as recent debates about teacher education internationally seem to focus on how the preparation of teachers should be organised. According to Zeichner's (2014) overview, two different strategies have emerged. One is to strengthen the dominant university-based system of teacher education (which is the case, for example, in Finland), whereas the other is to promote greater deregulation and privatisation (which has happened, for instance, in England). The last strategy means, more explicitly, that emphasis is laid on shorter teacher training routes taking place mainly in service (Murray and Passy 2014). This article will take its point of departure from the university-based teacher education in Norway.

Norwegian teacher education context

As in many other countries, Norwegian educators and policy makers have found their low scores in international student achievement tests like PISA shocking. Since the beginning of this millennium, a number of measures have therefore been taken to improve the quality of teaching, to enhance recruitment into teaching careers, and to increase respect for the teaching profession. One example is the investment of substantial resources in education and research. Another example is that the Ministry of Education and Research in 2009 initiated new standards for the teacher education curriculum (Ministry of Education and Research 2010) and new curricular guidelines (Ministry of Education and Research 2011). This resulted in a new and differentiated teacher education programme for primary and lower secondary education for years 1-7 and years 5-10. Teacher education for primary school teachers in Norway is on average four years, but will become Master-based, i.e. five years, from 2017. Compared to the other Nordic countries, Norwegian teacher education is highly centralised and regulated (Nordic Council of Ministers 2009).

In a recent study by Hammerness (2013), Norwegian teacher education is compared to three key features found in the international literature contributing to effective teacher education programmes. These are vision, coherence, and opportunities to learn in connection to teaching practice. The study shows that teacher education institutions in Norway often lack shared visions and offer few opportunities to learn in the context of practice. Haugan's (2011) and Munthe's (2013) reviews of research also reveal that studies with a pupil-centred approach are missing in previous research. Although a research-based approach is emphasised in Norwegian teacher education in

order to foster innovative teachers, it varies greatly both concerning context and content (Munthe and Rogne 2015).

The study

Methodology

This article builds on a research project funded by the Research Council of Norway in 2014. The project was carried out during 2014–15 in order to develop collaboration between teacher education and the practice field. The aim is to deepen the understanding of a communicative space between student teachers and pupils, both face-to-face and online, in order to develop the student teachers' interaction competence. A phenomenological-hermeneutical approach forms the basis for the study in order to obtain a deeper understanding of the phenomenon studied, emphasising the researchers' active role as interpreter (Gadamer 2004). The in depth nature of qualitative research has the potential to allow the participants to describe their experiences and thoughts in their own words aiming at description and understanding (c.f. Creswell, 2007; Petticrew & Roberts, 2006).

Research question

This article is based on the following research question:

What are the experiences of creating a communicative space between student teachers and pupils in primary school, both face-to-face and online, in order to develop student teachers' interaction competence?

In the next section, we will present the study participants, activities, data collection and analysis. For an overview, see [Table 1](#).

Study participants

The study consists of two partners: the teacher education department at a university, and a nearby primary school that also functions as a practice school. The two partners are regarded as equal participants, which initially involved three researchers from the teacher education department and the principal and a teacher from the primary school. A written agreement was signed at the start. The research group met regularly both on campus and at the primary school in order to plan the activities. The meetings took place equally in both locations.

All the first year students participated, and the group consisted of 17 females and 3 males. They had just begun their four year primary school teacher education when the project started and had little or no previous experience of teaching or pedagogical studies. The participants from the primary school comprised 40 fourth grade pupils.

Table 1. Overview of study activities, data collection and analysis.

| Study activity | Data collection | Data analysis |
|-----------------------------------------------------|-------------------------------------|------------------------------|
| Introductory seminar (1) (P, S, R, T) | Reflection logs (10) (S) | Qualitative content analysis |
| Online meetings (3) (P, S) | Video recordings (11)(P, S) | Qualitative content analysis |
| Evaluation (final) with student teachers (1) (S, R) | Unstructured group interview (S, R) | Qualitative content analysis |

Pupils (P), Student teachers (S), Researchers (R), Teacher (T)

The students and pupils were, at the start of the project, divided into ten mentor groups. Each group consisted of two students and four pupils. During the study period, three students gave up their teacher studies. Two researchers, the teacher from primary school, and a PhD student (in Norwegian language), as well as the department for IT services and support also participated in this part of the study. The main role of the primary school teacher was to coordinate the pupils' participation in the project. The two researchers (also the authors of this article) work as teacher educators at the teacher education department, but were not involved in the primary school teacher education programme that took part in this study.

Study activities

The activities planned were an introductory seminar and three online meetings in relation to writing a narrative story together with the pupils in the subject of Norwegian language. In addition, there were regular meetings with the student teachers and ongoing as well as final evaluations. Upcoming challenges were solved together and possible adjustments made in a dynamic and interactive process.

The main activity was to establish mentor groups and arrange regular encounters between students and pupils face-to-face and online in order to facilitate the development of student teachers' interaction competence. To get the student teachers and pupils acquainted, an introductory seminar was organised, where they were able to meet face-to-face and collaborate closely in mentor groups. The student teachers were responsible for planning the activities within their own group. This resulted in slightly different agendas and activities, for example name or card games. The student teachers also interviewed their pupils about their opinion on "what a good teacher is like".

The students were, because of their role as mentors, also connected to the class and the practice teacher through online communication. The idea of the online communication was that, when working on suitable topics, the students can go online and directly interact with pupils as part of their didactic studies. One major issue was to find the most appropriate technical solution for online communication. Different solutions were carefully discussed with the ICT experts at the University. We finally decided to try out the web conference platform Adobe Connect, as this platform was already in use at the University. The platform is aimed at web meetings, eLearning, and web seminars, and offer the possibilities of video communication, chat and sharing of documents.

Data collection

The data collection methods for answering the research question were:

Student reflection logs: After the introductory seminar, where the student teachers met their pupils in their mentor groups for the first time, the students were asked to write reflection logs. Four open-ended questions were posed that concerned what they did together with their pupils, how they experienced the meeting (pupils, atmosphere, and activities), and thoughts about their mentor role and about the continuous work. The two student teachers in each mentor group collaborated in answering the questions, resulting in ten reflection logs altogether.

Video recordings: The data material consists of 11 video recordings of the interaction between student teachers and pupils. The length of the recordings varies between 11 and 41 minutes. The purpose of using video recordings was to observe the online interaction between student teachers and pupils undertaking different tasks in the virtual classroom. Each group consisted of two student teachers and four pupils, altogether ten groups. The conversations with student teachers after the recorded online meetings were noted and were important in opening up the uniqueness of the observations which emerged. The video recordings were transcribed.

Unstructured group interview: As a part of the evaluating process, at the end of the project period the students were interviewed about their experiences so far in the project. The interview took the form of a discussion between one researcher, the PhD student and 15 student teachers. Notes and reflections from the meeting were written immediately afterwards.

Data analysis

In line with the phenomenological-hermeneutical inspired view of knowledge development, the data material from the reflection logs, video recordings and group interview were analysed using qualitative content analysis. This is an inductive approach to identify themes and categories and obtain a deeper understanding of student teachers and pupils' interactions (Lankshear and Knobel 2004). The two researchers (the authors of this article) analysed the data individually in a first phase of analysis. Based on this initial analysis the researchers, in a second phase, discussed emerging themes and developed final categories together (Elo and Kyngäs 2008). The data was thus analysed by using a grounded theory inspired approach in which codes can be grouped into concepts and then into categories (Glaser and Strauss 2012). In the findings section we present rich and thick descriptions of the experiences that exemplifies the categories found in the analysis (c.f. Creswell, 2007; Peticrew & Roberts, 2006). This together with peer debriefing enhanced the trustworthiness of the study (cf. Angen, 2000).

The study has followed the general ethical standards approved by the scientific community (The Norwegian National Research Ethics Committees, 2016). The research project is approved by the Norwegian Social Science Data Services (NSD), which is a resource centre that assists researchers with regard to data gathering, data analysis, and issues of methodology, privacy and research ethics. We informed the pupils' parents about the project and received written forms of consent regarding the children's participation. An overview of study activities, data collection and analysis is presented in Table 1, where also the study participants and number of activities are listed in brackets.

Findings

In the following, we present the findings from the study. We will focus on two areas that emerged as particularly crucial: *face-to-face encounters* and *online communication*. The findings are illustrated with excerpts from the reflection logs and video recordings. The Norwegian responses are translated by the authors.

Face-to-face encounters

When analysing the reflection logs, we discovered three main categories: 1) *positive and rewarding meetings*, 2) *learning experience*, and 3) *enthusiasm and uncertainty of project progress*. The excerpts stem from the mentor groups, i.e. student teachers' reflection logs after the introductory seminar.

Positive and rewarding meetings

Despite the fact that many of the student teachers and the pupils were nervous before their first meeting, the reflection logs reveal that they experienced it as overwhelmingly positive. The student teachers described the meeting as exciting, fun and rewarding. The atmosphere was good as well as the collaboration within the groups, except in one group where the mentors found it difficult to collaborate with each other and therefore wished to switch groups. They even delivered separate reflection logs. On the other hand, one student teacher explicitly highlighted that due to the positive encounter with the pupils, she was confirmed that she has chosen the right profession and wants to become a teacher

The encounter with the pupils was very exciting! The pupils were engaged and active throughout the meeting, and they were interested in what we were doing. This was a very motivating experience for us mentors. There was a really good and light-hearted kind of mood! (mentor group 5).

In the written logs, the student teachers also in general expressed that they experienced the pupils as well behaved, dedicated, active, interested, creative and easy to communicate with. However, as the following excerpt shows, many of the student teachers also wished they had more time to plan the activities and spend more time with the pupils.

We think encountering the pupils was a real treat. They too were really curious about what meeting us would be like, and that was a lot of fun, too. They did a really good job, gave good feedback, and they did really well at doing what they were told. Great pupils, just the kind you dream of getting when you're a teacher yourself one day. We wish we had more time to plan the activities, though, and we are sorry we didn't have more time with the pupils (mentor group 2).

As this quotation illustrates, the mentor group were sorry about the time limits and therefore reported the meeting as a bit stressful. The same was highlighted in several of the mentor groups.

Learning experience

The student teachers experienced the first meeting as a part of their learning process, encountering a group of pupils with different personalities and getting everyone involved, also the more reserved ones. In their reflection logs, the student teachers expressed awareness of this as a learning experience that concerned their development in both pedagogical and professional knowledge. They also focused on the pupils' learning –and development processes and talked about acknowledging each pupil as an individual:

The mentor role seems very interesting. This scheme will help us develop both pedagogical and professional knowledge in the coming years: experiences that will help us in our working lives. Having so few pupils in our group means we are more able to see each individual, and give the pupils more individually adapted learning (mentor group 7).

At this stage of the project, the student teachers had just entered their teacher education. As stated in the quotation above, the students in this mentor group are giving the expression that they have already started an important reflection process concerning the pupils' learning when they focus on individually adapted learning. Several mentor groups also explicitly stated that they got new ideas and insights into new teaching methods through the pupils. They expected the pupils to help them become good teachers in a long-term perspective:

The pupils had many good ideas and we learned some new teaching methods as well. For example, they have something they call "learning partners". The pupils are divided in pairs and if they encounter any difficulties they should turn for help to their learning partner first before asking the teacher. After two weeks the learning partners rotate (mentor group 6).

This mentor group points out that meeting the pupils have given them new ideas about teaching. We understand this quotation, as the student teachers are stimulated to focus on creative thinking around learning. This can also be seen in conjunction with the next category.

Enthusiasm and uncertainty of project progress

When asked about their expectations of their mentor role, the student teachers gave the impression of being enthusiastic. They said they looked forward to their upcoming mentoring role and believed it would be fun, exciting, inspiring and instructive. They hoped to be able to practice what they learn in teacher education, especially concerning the everyday life of the school and parental contact:

Even if we are a bit insecure about what participating in this project will be like, we believe the mentor role can be fun, with us getting the opportunity to have contact with pupils. The pupils are really the most important actors in a teacher's everyday job (mentor group 4).

Furthermore, the mentor group expressed some insecurity about the work they were about to get involved in. Several other groups also anticipated the task as being challenging and demanding.

In the group interview at the end of the project period, the student teachers emphasised the importance of planning the activities during the year, and they wanted to get in touch with the pupils more often. They also stated that they wanted to get to know the pupils properly face-to-face before using online communication. In line with the reflection logs at the start of the project, the student teachers expressed that being engaged in activities as mentors supported their development as teachers. Spending time with the same pupils during a longer period of time offered them the possibility to act as teachers in a small group.

Online communication

When observing and analysing the video material, two main categories emerged: 1) *ICT as a working tool* and 2) *online interaction competence*. Fictive names are used in the quotations. Pupils are identified by (p) and student teachers by (s).

ICT as a working tool

The data shows that the pupils seemed very comfortable using ICT when communicating online even though they did not have previous experience of working with the tool used (Adobe Connect). As this interaction between student teachers and pupils reveal, the pupils seemed more focused on finding solutions to different technical problems than the student teachers, who generally appeared more passive and resigned.

- David (p): Where are you?
 Christine (s): At home [In Norwegian: hjemme]
 David (p): In the sky? [Himmelen. The two Norwegian words sound alike]
 Julie (p): She says she's at home.
 David (p): You have to keep the microphone further away [the pupil gives instructions to the student teacher who does as she is told without further communication]

This is an example which shows that the pupils easily managed to communicate what to do to get the ICT to work, while the student teachers did not taking the initiative in solving ongoing challenges.

Normally all participants in the virtual classroom can be present at the same time, even if they are located in different places. In the next virtual class meeting there were some problems with the video, and the pupils therefore could only see and talk to one student at a time. As this dialogue started, the pupils had talked to one of the students for a while (about 10 minutes).

- Tom (p): I think it's time for us to talk to Maria now [the other student they cannot see and hear, but who can hear them. Maria smiles. The pupils say goodbye to Catherine].
 Anna (p): Do you hear us, Maria?
 Maria (s): Yes, I can hear you [smiles]
 Tom (p): Have you been sitting there all the time?
 Maria (s): Yes [looks a bit ashamed as she hides her face in her hands for a few seconds]
 Anna (p): There's something wrong with the technology and therefore you cannot see us [on the screen].

In this excerpt, as we interpret the communication, one of the pupils took responsibility for the interaction and acted as the more competent party in managing the ICT. The student teacher, when hiding her face, looked a little embarrassed, and we can understand her non-verbal communication, as she was aware of the pupils taking the lead, but at the same time did not know how to respond to this. She also remained passive, as she did not try to contact the other student teacher, Catherine, nor the pupils through the chat application.

Online interaction competence

One of the themes that immediately emerged was the pupils taking the lead in the interaction.

Two of the pupils in the group are “chit-chatting”, but are quickly corrected by one of the other pupils in the group. The two student teachers are quiet, not giving any response to the small dispute between the pupils.

Thomas (p): How are you? [he asks the students]

Sarah (s): How are *we* doing? [she sounds and looks surprised being asked about this]

Thomas (p): Yes...

Here is another example that shows the pupils dominating the interaction, while the student teachers appeared more passive. The pupils took the initiative in talking about the story they were supposed to write together and giving a response to the student teachers' draft.

Mark (p): I like your part of the story a lot. We would never have been able to write something like that [The students seem a bit uncomfortable, but are not responding to the pupils' comments. Some quiet seconds..].

Alice (p): She's not saying anything [the pupil sounds a bit weary]

Paul (s): What's your story about?

[one pupil holds the sheet with the written story up against the screen]

Mark (p): Would you like us to read it?

Paul (s): No, you don't have to

[some silent seconds, then the pupils continue]

Mark (p): When are we going to meet again?

In this sequence, the pupils were once again in charge of the social interaction between student teachers and pupils. The excerpt shows that the pupils seemed more comfortable in taking the lead when communicating online. This in regard to the topic (story) they were about to discuss, but they also showed maturity in the dialogue between student teachers and pupils.

When evaluating the online communication, we asked the student teachers about their experiences so far. In the group interview, the students came up with different suggestions about how to improve the online communication in order to use this as a learning and research tool. They wanted to have reflection seminars after the online meetings on a regular basis. Even though most of the student teachers were satisfied with Adobe Connect as an ICT tool, the group interview revealed that some student teachers were frustrated with the technical problems during the research period, and some also said they wanted to quit the project.

Discussion

In 2014, the curricular reform of teacher education in Norway implemented in 2010 was evaluated by SINTEF, the largest independent research organization in Scandinavia (Finne, Mordal and Stene 2014). The evaluation points out that the intersection between theoretical education and practice is still where the potential for improvement

is greatest. This also corresponds to research in other countries (Hammerness 2013; Hökkä and Eteläpelto 2014; Zeichner 2014). With this in mind, in this study we wanted to develop new ways of communication between student teachers and pupils. To be able to develop student teachers' interaction competence, new spaces where student teachers and pupils interact need to be created. According to Valle (2014), the teacher's actions have a comprehensive impact on what happens in the classroom, and consequently, on the quality of the interaction between teachers and pupils. In this section, we will discuss some of the findings in relation to the theory of communicative space and previous research.

Face-to-face and online encounters as communicative spaces

According to the findings, it was quite notable that the responsibility of being mentors for a group of pupils allowed the student teachers to flourish professionally when communicating face-to-face. We also found that acting as teachers and having responsibilities for the same pupils for a longer period gave the students the opportunity to develop as teachers whilst at the same time feeling secure. As Aspelin and Persson (2008) maintain, encountering pupils gives student teachers the opportunity to develop interaction competence and professional identities as teachers.

As revealed in the findings section, the mentor groups received less time than planned with their pupils. This was also raised as a negative factor by some of the mentor groups in their reflection logs and further discussed in the group interview later on. We could also see some uncertainty amongst the student teachers about future activities in the project, as these were not all set out from the beginning. This is a typical phenomenon in communicative spaces, and as such they are not to be mistaken for solely harmonious and restful places. Gayà, Wicks and Reason (2009) see them rather as dynamic places where the system, culture and structure can be confronted by those taking part. Communicative spaces are, accordingly, continuously changing, offering unexpected possibilities and unpredictable challenges. Opening up for communicative spaces can be both paradoxical and contradictory.

In contrast to the face-to-face encounters, we found that the pupils took the lead in online communication. When analysing the video recordings, we noticed that the student teachers, when interacting online, became passive and often left the responsibility of the communication to the pupils. As in ordinary classroom management, the quality of the interaction depends on the teacher's ability to communicate explicitly his/her expectations to the pupils (Ogden 2012), and the fact that the student teachers did not manage the classroom leadership was easily noticed in the video-recordings. As revealed in the findings, one student teacher even rejected a pupil's attempt to read the story they had written. According to the theory of communicative spaces, this can be recognised as insufficient communication, acknowledgement, respect and ability to reach mutual understanding and consensus (Bodorkós and Pataki 2009; Kemmis 2006).

Pupils taking responsibility for the online communication we also interpret as a sign of being more comfortable with online communication than the student teachers, even though Adobe Connect was a new tool for both groups. A national report in Norway (NOU 2014) strongly emphasises the importance of giving teachers the necessary prerequisites to be able to continuously develop their ICT competence. Because of the

rapid changes in the field of ICT in today's society, the pupils seem to be ahead of the student teachers when it comes to communicating online. In this way the pupils become teachers of the student teachers, and both groups can learn from each other through innovative encounters (Kemmis and McTaggart 2005; Valle 2014).

At the beginning of the project period, some of the mentoring groups had problems connecting online. We found it was easier for those who had communicated online earlier to discuss academic topics later. The conversation in the other groups therefore mostly revolved around everyday tasks, and we therefore assume that frequent online meetings will help student teachers and pupils to concentrate more easily on academic topics. As mentioned, some of the students' encounters with pupils cannot be planned, and this kind of situation will to a certain degree help develop both the student teachers' and the pupils' competence, as they are forced to act according to the development of the ongoing interaction. It is also primarily by interacting with pupils that students can become conscious of how they are perceived as teachers (Valle 2014).

We also believe that being part of a process where every detail cannot be planned in advance, helps the students to develop their expertise in innovation (Valle 2014). By practicing their skills in self-critical thinking, they may later when working as teachers continuously develop their own practice. In line with Wackerhausen (2009), self-reflective thinking can contribute to consciousness of how our own culture affects our way of thinking, and as a consequence established patterns of thought are challenged, and by this the student teachers also get the chance to look beyond their own blind spots. The metaphor of "blind spots" seems to imply that the problem is connected to not being aware of one's own actions, but it is also possible to look at it as a way of protecting oneself from taking responsibility for one's own thoughts and actions (Valle 2014).

Reflecting on how the online meetings turned out, we can note the importance of having continuous dialogue with the student teachers. For the participants to feel safe, it is essential to set boundaries, provide a clear purpose and confront conflicting understandings regarding participation (Gayà Wicks and Reason 2009). In the future, it will therefore be important to allocate more time for the mentor groups to meet face-to-face before they meet online. In this way, they have the chance to get to know each other in a proper way and also make agreements on how to make the online communication work. As Newton and Goodman (2009, 308) state, "the value and test of communicative space is the willingness of participants to enter into affective exchange and move from feelings about each other to 'thinking together'". Communicative spaces thus need to be constructed and sustained beyond technical and practical action.

Conclusion

As stated, the role of practice in the preparation of future teachers is essential. The aim of the study was, in line with the phenomenological-hermeneutical approach, to deepen the understanding of a communicative space, enhancing the interaction between student teachers and pupils in school. The ambition was to find new areas for interaction between teacher education and practice schools, and as a part of this, enable student teachers to maintain continuous contact with pupils in schools, both online and face-to-face. Since this study was restricted to one academic school year and limited to a

specific context, it is not possible to draw any far-reaching implications. Nevertheless, the study indicates that establishing mentor groups enhances student teachers' interaction competence as it implies close collaboration between pupils and student teachers. Furthermore, the results demonstrate that online communication is different from ordinary classroom communication, and therefore these skills need to be developed in teacher education. For instance, the student teachers can act as “teaching assistants” helping the teacher in tutoring pupils in the classroom, even though they are not physically present.

As the pupils in this study were more comfortable interacting online, they took the lead in the communication and in a way acted as teachers of the student teachers. From our point of view, pupils acting as teachers of student teachers provides the opportunity to put the pupils at the heart of teacher education and contribute to the development of the student teachers' interaction competence. Being a part of a research project also gives the pupils the opportunity to participate in communicative spaces where their voices are allowed to be heard. This, we believe, will enhance their chances to become collaborative change agents. The designing of communicative spaces that improve and challenge established practices can be one important piece in the big puzzle of developing new and innovative perspectives on teacher education.

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Notes on contributors

Jessica Aspfors Ph.D., Associate Professor at Nord University, The Faculty of Education and Arts, Norway. Her main research interest is in the field of teacher education, newly qualified teachers' professional development and mentoring.

Anne Marit Valle Ph.D., Professor at Nord University, The Faculty of Education and Arts, Norway. Her primary research interests are language development and literacy, reading and writing disabilities, classroom management, teachers' interaction competence, and innovation, teacher education and collaboration between teacher education and the practice field.

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