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Collaboration in groups during teacher education
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Summary

This dissertation reports on four studies in which collaboration between student teachers has been investigated. Collaboration during teacher education is important, as it has the potential to stimulate the learning process of the student teachers during teacher education as well as to prepare them for their own social role as colleagues in school.

Chapter 1 gives an overview of the background of this research, the theoretical framework and the set-up of the dissertation. Teachers often feel isolated in school and want to have more contact with their colleagues. An opportunity to do so can be found within teacher communities. From the literature (e.g., Achinstein, 2002; Grossman, Wineberg, & Woolworth, 2001; Little, 2002, 2003; McLaughlin & Talbert, 2001; Stoll, Bolam, McMahon, Wallace, & Thomas, 2006) we know that this type of community can enhance the development of a shared vision and collective capacity in school, professional development of teachers and better results of students. At the same time we know that such communities are not automatically successful, which makes it important that teachers are professionally prepared for collaborating in teacher communities. Student teachers can be prepared for their future participation in such communities during teacher education, by means of collaborating in similar types of communities. Research by Ruys, Van Keer, and Aelterman (2010) and Timoštšuk and Ugaste (2010) has shown that in teacher education little collaboration takes place between student teachers.

Teacher communities create the opportunity to work and learn together within a meaningful activity. They are characterized by a group identity (the nature of the community), a shared domain (what a community is about) and a shared interactional repertoire (how a community functions). There are opportunities within teacher education to create communities. These differ from professional teacher communities because learning is an explicit goal and such communities are part of a relatively short, predefined and compulsory curriculum. As these communities of student teachers are in large part bounded by a fixed curriculum, participants have less autonomy. As they are meant to prepare for work in professional teacher communities, attention to the role of student teachers in regulation of collaboration is very important. The questions that are central to this dissertation are: *How does collaboration in groups of student teachers take place? How can the community development of such groups be improved?* To find answers to these questions, four studies were conducted.

Chapter 2 reports on a study on the state of the art concerning collaboration in the curriculum of teacher education. The question central to this chapter was: *to what extent do the teacher education curricula in three teacher education institutes in the Netherlands pay attention to and aim to stimulate the development of community competence?* We interviewed heads of department, teacher educators and student teachers, observed meetings and analyzed study guides, portfolios and electronic learning environments. We investigated the intended, implemented and attained curriculum of three teacher education institutes. This study revealed that teacher education institutes deem it important to prepare their student teachers for collaboration in communities, but this aim is weakly conceptualized in the implemented and attained curriculum. This means that institutes do not pay explicit and systematic attention to collaboration. At the same time there are different types of groups which have the potential to increase the community competence of student teachers. These are *mentor groups*, in which general educational subjects are dealt with under the supervision of a teacher educator; *subject matter groups*, in which subject specific didactics are discussed under the supervision of a teacher educator; *reflection groups*, in which small groups of student teachers reflect on their teaching experiences at school; and *research groups*, in which student teachers collaborate in small groups on a small-scale research project.

Chapter 3 reports on the development of design principles that are aimed at improving the collaboration in different communities in teacher education. Different stakeholders have been interviewed, namely teacher educators, student teachers and experts on communities. Ideas from these interviews have been combined with ideas from the literature in order to arrive at sets of design principles. We did this by determining whether different design principles were relevant for the different types of group. The research question central to this chapter was: *Taking into account different stakeholders and the existing literature, what are the appropriate sets of design principles for promoting community development in different types of group in teacher education?* Design principles, aimed at group identity, shared domain and shared interactional repertoire have been developed by means of focus groups and interviews. Sets of design principles were developed for all types of group, some of which were already being applied by teacher educators and others were not. Some design principles were relevant for all types of group, like "by exchanging stories, students detect similarities." Other principles were not applicable to all types of group. For example, the principle "By inviting experts, the knowledge of the group is extended" was found applicable to the mentor group and subject matter group, but not to the reflection group and research group. This study shows the importance of involving different stakeholders when developing sets of design principles, as well as the importance of considering the nature of the group as a relevant factor.

After the development of design principles which could give direction to activities in teacher education, these were implemented in the four types of group and data were collected on the collaborative process within each group. During the analysis of these data attention has been given to a crucial precondition for good collaboration, namely regulation. Because student teachers play an active role in regulating their own collaboration they can give direction to that process. In **chapter 4** the regulation of collaboration in the four types of group is investigated. The research question of this study was: *How do student teachers regulate collaboration in different types of group in the context of a teacher education program?* By means of discourse analysis the regulation within each type of group was analyzed. This study took a dialogical perspective, which means that every action is seen as part of, and determined by, the activity in which it is situated. Three conclusions can be drawn from this study. First, the role of the teacher educator is crucial, as this has serious consequences for the role of the student teachers in regulation. This influence can be either positive or negative, either stimulating or hindering the active role of student teachers in the regulation of the group. A second conclusion is that different types of group regulate collaboration in different ways. For example, in the reflection group co-regulation was frequently applied, which means that more group members together give better direction to the collaboration. In the research group, on the other hand, usually just one person regulated during a specific phase. The third conclusion of this study is that regulative actions can have different functions, namely staying focused on a certain topic, moving to a new topic or moving to a new speaker.

From the literature (Cochran-Smith, Barnatt, Friedman, & Pine, 2009) and our data it appears that collaborative research can be demanding for student teachers. **Chapter 5** therefore reports on a detailed investigation into the research process of two small groups. More specifically, the processes of *elaboration* and *decision making* were studied. These processes give insight into the shared domain and the shared interactional repertoire of the group. The question central to this chapter was: *What role do elaboration and decision making play in the inquiry processes of research groups in teacher education?* Video observations were made and stimulated recall interviews conducted. From this study it appears that one research group consciously and meaningfully alternated between elaboration and decision making. Two group members were gate-keepers for elaboration; for example, discussing the pros and cons of different possible research topics. The other group member was gate-keeper for decision making; for example, by indicating that it was time to come to a decision. This group easily attained good outcomes and the group members were proud of their research process. The other research group spent less time on both elaboration and decision making and when they did do so it was by means of long, undirected discussions and quick, ad hoc decisions. The research process of this group was arduous and at the end of the process the group members had a negative image of "doing

research". The conclusion of this study is that both elaboration and decision making are necessary in a good collaborative research process. By engaging in elaboration and decision making in a thoughtful and meaningful way, a group can learn much about conducting research. This study of the processes of elaboration and decision making gives insight into how the shared domain and shared interactional repertoire of this type of group can be developed.

Based on the results of the four empirical studies, in **chapter 6** conclusions are drawn, and limitations and implications of the research are discussed. Four overarching conclusions are drawn on the basis of the four studies. *First*, collaboration is found to be important in teacher education, but this is not implemented in the curriculum in a systematic and explicit way. There are many activities in which student teachers collaborate, but this collaboration is usually not an explicit learning aim. The same goes for regulation of collaboration: student teachers are expected to regulate collaboration in groups but this is not given explicit attention.

The *second* general conclusion is that there are several possibilities to increase attention for the development of communities in teacher education. Within this dissertation we developed design principles that can be applied to different types of group in teacher education. In addition, a more conscious approach can be taken towards stimulating an active role of student teachers in the regulation of collaboration. When engaged in a research group, student teachers can be made aware of how they can consciously engage in elaboration and decision making.

The *third* general conclusion is that groups in teacher education differ from each other and that these differences have to be taken into account when communities are developed. This diversity in types of group is valuable, as it offers student teachers the opportunity to develop competences that can be of use within different types of group in schools.

The *fourth* general conclusion of this dissertation is that there are big differences between groups in the degree to which they are able to engage in good collaboration. That being so, teacher education needs to pay attention to learning to collaborate. This is even more important in the context of teacher education, as not only the learning process of the student teachers is at stake, but also the learning process of their (future) pupils.

The greatest limitation of this research is its small scale, so caution is needed in generalizing the results. At the same time, this small scale provided us with the opportunity to analyze our data in depth. Another limitation is that learning outcomes (in terms of community competence) of student teachers have only been investigated in the first study. Lastly, we have concentrated on the different types of group and more specifically the processes student teachers go through within these, giving little consideration to the role of the teacher educator.

In relation to these limitations, directions for future research have been determined. On the one hand, a large-scale experimental study would give insight into which design principles and recommendations are successful in improving the groups, as well as the role of the teacher educator. On the other hand, more in-depth, qualitative studies are desirable, aimed at obtaining more insight into collaboration processes and the roles of different group members.