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Collaboration in groups during teacher education

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Chapter 6

Conclusions and discussion

Email from Rosanne (1st research group) to her group members: “Well done! I’m also proud of us! Well deserved compliments, we’ve worked hard on it!”

Email from Tom (2nd research group) to the supervising teacher educator: “You made us work hard, gave severe criticism and in that way supervised us towards an article which I’m proud of myself as well.”

Although they appear to be rather similar, these remarks from the student teachers show that there were differences in their feelings towards collaboration. Whereas Rosanne emailed her group members after their article was accepted by the teacher educator, Tom emailed the teacher educator. Furthermore, Rosanne expressed feelings of pride towards the group as a whole, while Tom felt proud of the end product. Whereas Rosanne addressed the fact that the group had worked hard, Tom thanked the teacher educator for *making* the group work hard. These, at first sight, rather small differences reveal two different stances towards roles within groups, and towards collaborative inquiry.

This dissertation aims to provide insight into the opportunities that teacher education programs can offer to student teachers in terms of working and learning in communities. The general research questions were: *How does collaboration in groups of student teachers take place? How can the community development of such groups be improved?* In order to answer these main questions, four empirical studies were conducted. The focus and conclusions of each of the empirical studies will now be discussed, after which general conclusions will be drawn.

6.1 Findings from the four studies

As not much is known about the curriculum of teacher education institutes in terms of community competence development, this dissertation started out with a study into the current situation in that respect. The question which was central to Chapter 2 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?* The extent of the attention and stimulation which was devoted to this aspect was determined by studying different levels of the curriculum (Van den Akker, 1998, based

on Goodlad, 1994). Based on Admiraal, Lockhorst, Beishuizen, and Pilot (2007), we defined community competence as the ability to establish, maintain and develop relationships with other professionals, and to contribute to a professional learning and working culture in the school. Interviews with Heads of Department, teacher educators and student teachers, observations of groups and document analysis of study guides, portfolios and electronic learning environments were conducted. The conclusion of this study was that teacher education programs are intended to prepare student teachers for collaboration in communities. At the same time, this aim was weakly conceptualized and not thoroughly implemented nor attained. As such, the programs which were investigated did not systematically and explicitly prepare student teachers to fulfil this part of their professional role. At the same time, different types of groups were found within the teacher education programs that seemed to be well suited to stimulate the development of community competence. Mentor groups, subject matter groups, reflection groups and research groups can provide opportunities for student teachers to acquire community competence by means of collaboration.

Knowing that these different types of groups already exist in teacher education, ways to improve them were considered in Chapter 3. The question which was 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?* This study investigated the ideas of teacher educators, community experts, student teachers and the ideas contained in the scientific literature (e.g., Wenger, 1998; Wilson, Ludwig-Hardman, Thornam, & Dunlap, 2004) in order to create sets of design principles that might promote community development in the four types of group. Design principles were derived, aimed at the development of group identity, the shared interactional repertoire and the shared domain in groups. For each type of group, the different stakeholders determined the applicability of the design principles. The resulting sets of design principles for the various types of group differed. Some principles, such as “By exchanging stories, students detect similarities”, were deemed to be relevant for all types of group. Others were considered to be relevant for some types of group, but not for others. For example, the principle “by inviting experts, the knowledge of the group is extended” was considered to be applicable within the mentor group and the subject matter group, but not within the other two group types. This study showed that a community perspective does not mean imposing a single set of design principles onto different groups, but rather that it is important to carefully consider the nature of each group.

After determining design principles for the four types of group, regulation was studied, as this is an important precondition for collaboration. The regulation of collaboration is especially important when groups are expected to regulate their own process, without a supervisor. In Chapter 4, we studied how the four types of group deal

with the regulation of collaboration. The research question for this study was: *How do student teachers regulate collaboration in different types of group in the context of a teacher education program?* For this study, a discourse analysis (Taylor, 2001) was conducted. In this analysis, we took a dialogical perspective (cf. Akkerman, Admiraal, Simons, & Niessen, 2006; Wegerif, 2008), meaning that regulative actions were seen as part of, and determined by, the larger collaborative activity. In all types of group, the student teachers were expected to regulate collaboration in some form. It was shown that during the teacher education program, the regulation of collaboration shifted from the teacher educator towards the student teachers. Student teachers became more active in leading parts of plenary meetings and collaborated more in small groups outside of the larger meetings. Several conclusions have been drawn from this study. First, the role of the teacher educator is very important, as he or she can either hinder or stimulate student teachers to take an active role in the regulation of collaboration. Hindering can, for example, take place when a teacher educator takes over the regulation of collaboration during a plenary meeting which is supposed to be led by student teachers. Stimulation can take place, for example, when teacher educators provide small groups of student teachers with clear assignments that can be used as structuring tools during the meeting. A second conclusion pertained to the regulation of collaboration by one leader or co-regulation by more group members. It was found that within the reflection group, co-regulation was most common, while in the context of the research group, one person usually regulated collaboration within a certain research phase. A third conclusion which was drawn from this study was that regulative actions can have several functions, namely to keep a group focused on a certain topic, to shift to a new phase in collaboration, and to create space for a new speaker. It is argued that teacher education programs should devote explicit attention to the different roles which student teachers can take in regulating collaboration.

From the data on the four types of group it became apparent that it was relatively difficult to apply the “regular” design principles for community development to the *research group* type. At the same time, it appeared that collaborating within this type of group was quite demanding for student teachers. As a result of these difficulties, the inquiry process within this group was studied in a more thorough way, focusing on the shared domain and shared interactional repertoire of research groups. These dimensions of community were investigated by looking at the processes of “elaboration” and “decision making”. Elaboration and decision making are both processes that allow groups to define a shared goal and build shared knowledge, which makes them instances of the development of shared domain. At the same time, both elaboration and decision making entail a certain way of interacting, by which they become instances of shared interactional repertoire. This was reported in Chapter 5, which focused on the question: *What role do elaboration and decision making play in the inquiry processes of research groups in teacher education?*

This study was contextualized within a recent discussion about “inquiry as stance” versus “inquiry as project”, the first being a “long-term and consistent positioning or way of seeing”, while the second is a time-bound activity in a teacher education program (see Cochran-Smith, Barnatt, Friedman, & Pine, 2009, p. 22; for a more extensive discussion of the concept of “inquiry as stance”, see Cochran-Smith & Little, 2009). The inquiry processes of “decision making” and “elaboration” were studied. Whereas being predominantly engaged in decision making is related to approaching inquiry merely as a project, alternating between decision making and elaboration can be related to taking inquiry as a stance. This study showed the occurrence of these processes in two small research groups, each consisting of three group members. The first of these groups alternated between elaboration and decision making in a conscious and meaningful way. This was facilitated by the fact that one of the participants was the gate-keeper for decision making and the two others were gate-keepers for elaboration. As such, each of these processes was engaged in thoroughly within the process. The group attained good outcomes and group members were proud of their process in the end. The second group engaged in the two processes to a minimal extend, and in a non-deliberate way. They did not get a firm grip on their research process, which was revealed by their engagement in long, undirected discussions as well as by the fact that they made ad hoc decisions. This group had difficulty in meeting the requirements of the program, the group members were not satisfied with their process and at the end of the research project they had a negative image of “research”. This study was helpful in terms of gaining a more detailed qualitative understanding of the inquiry processes of “elaboration” and “decision making” in research groups. These processes have provided insight into the development of the shared domain and shared interactional repertoire of this specific type of bounded student teacher learning community.

6.2 General conclusions and discussion

With the conclusions from the different studies in mind, a general conclusion can be reached. The research questions which were central in this dissertation were: *How does collaboration in groups of student teachers take place? How can the community development of such groups be improved?* Four general conclusions can be drawn as an answer to these questions. The first is that collaboration is thought to be important in teacher education, but at the same time, it is not implemented in a systematic and explicit way. The second general conclusion relates to the fact that there are opportunities to improve collaboration within teacher education. The third conclusion is that different group types should be seen as a desirable form of diversity. The fourth conclusion is that

collaboration within groups of student teachers is not automatically a success. Each of these general conclusions will now be elaborated upon.

From the four studies investigated in this dissertation, it can be concluded that collaboration is considered to be important by those involved in teacher education, but that in practice, it is not part of the curriculum in a systematic or in an explicit way. This finding is in line with other studies, in which it has been found that student teachers in teacher education programs collaborate with each other only occasionally (Ruys, Van Keer, & Aelterman, 2010). This dissertation shows that student teachers are given opportunities to collaborate and engage in the regulation of collaboration, which takes shape within four types of groups, but that collaboration is not seen as a learning aim. Consequently, it is not clear whether student teachers will actually be able to engage in meaningful collaboration themselves as well as apply it within their own classrooms. The regulation of collaboration is a precondition of good collaboration, and as such the organization of regulation within the different types of group becomes an important issue. At the same time, it was found that the regulation of collaboration is also does not given explicit attention within the teacher education program.

Although presently very little explicit attention is paid to collaboration within the teacher education programs in question, looking at groups in teacher education from a community perspective opens up valuable insights into the development of better practices, and ultimately could lead to better learning for student teachers. Our first recommendation is that appropriate sets of design principles aimed at community development for each type of group can be developed, as was done in Chapter 3. This study has shown what a process of developing design principles can look like when a communicative approach (Visscher-Voerman & Gustafson, 2004) is applied. Such an approach implies taking the perspectives of different stakeholders into account. By means of that approach, we developed design principles which are aimed towards the development of a group identity, a shared interactional repertoire and a shared domain.

The second recommendation is that conscious attention should be devoted to the preparation of student teachers for taking an active role in different types of regulation. This recommendation builds on literature in which co-regulation is most valued (e.g., Volet, Summers, & Thurman, 2009; and Volet, Vauras, & Salonen, 2009) as well as on leadership literature, in which one regulator is seen as the best practice (e.g., Hannah, Avolio, Luthans, & Harms, 2008; Boal & Hooijberg, 2000). We state that being able to engage in both types of regulation would make the best preparation for practices at school, as teachers are increasingly engaged in different types of community, in which they will be assigned different types of roles in terms of regulating collaboration.

The third recommendation is that collaboratively engaging in elaboration and decision making in an iterative, conscious and well-prepared way within research groups

might improve both the outcomes of such groups, and the group members' feelings of success. This elaborates on the dichotomy which Cochran-Smith and Lytle (2009) pose between "inquiry as stance" and "inquiry as project". When a group engages in both elaboration and decision making, the group members can take on inquiry as a stance, while participating in an inquiry project. Teacher education programs in which student teachers engage in a collaborative inquiry project should therefore prepare groups of student teachers to engage in elaboration and decision making.

When improving teacher education in each of the described directions, consideration should be given to the fact that groups in teacher education differ greatly. They differ in their educational objectives (e.g., gaining knowledge on a specific subject or conducting a research project), activities (e.g., reflection or role play), conditions (e.g., homogeneous groups or heterogeneous groups), tools (e.g., a pre-defined reflection method or a school book), products (e.g., lesson plans or a research report), the number of participants (e.g., three or 40) and the roles of group members (e.g., student teachers as active regulators or listeners). Consequently, when one's aim is community development within groups, it is important to first consider the current characteristics of the group. This is in contrast with most literature on communities, in which this concept is usually defined along a single set of characteristics, which presumably is thought to be applicable to each community. When different communities are mentioned, these differences are often stated in terms of weak or strong communities, such as in the study by McLaughlin and Talbert (2001). Such categories imply that there is one type of community which should be strived for. Conversely, Wenger, McDermott, and Snyder (2002) acknowledge the fact that communities of practice can take a variety of forms, distinguishing, for example, between small or big, homogeneous or heterogeneous and spontaneous or intentional communities. We similarly argue that different types of community all have their own benefits for group members in terms of unique working and learning opportunities, and that as such, a diverse range of types of community is desirable.

Collaboration is often thought of as a process that every adult can easily engage in, but this dissertation shows that there is more to it than that. Rojas-Drummond and Mercer (2003) state that children are not commonly taught how to talk together effectively or helped to develop dialogic strategies for thinking collectively. Most of the literature on learning to collaborate focuses on collaboration between pupils in the classroom (e.g., Fawcett & Garton, 2005; Webb, 2009; Williams & Sheridan, 2010), while studies on how teachers learn to collaborate are scarce (Ruys, Van Keer, & Aelterman, 2010). Grossman, Wineburg, and Woolworth (2000) state that one of the first lessons that should be learned in teacher communities is that the collective wisdom and knowledge of the group exceeds that of the individual group members. In teacher education, both the learning process of student teachers and also the learning processes of their future pupils are involved. As such,

learning how to collaborate is even more important in educating student teachers for professional practice than within other educational contexts (Matusov, 2001). Only when people collaborate in a conscious way are they able to reflect and, when necessary, change their practice.

6.3 Limitations

The studies within this dissertation mostly employed qualitative methods, both in terms of data collection as well as in the process of analysis. Such methods can help to get an in-depth picture of the processes and activities within groups. Discourse analysis in particular revealed how the actions of group members were part of the social practice of the group as a whole. As such, this does justice to the inherent dialogicality of such actions (cf. Akkerman, Admiraal, Simons, & Niessen, 2006; Wegerif, 2008). The downside of using such qualitative methods, and especially discourse analysis, is that they are very time-intensive and only a small number of participants can be studied. In the first study, three teacher education institutes were investigated, in the second study we investigated two teacher education institutes, the third study investigated four groups in one teacher education institute and the last study investigated only two small groups in one institute. These small sample sizes necessitate caution in generalizing the results of these studies.

In this dissertation, the learning outcomes for student teachers were only investigated in Chapter 2, when describing the outcomes for student teachers pertaining to the development of community competence. The focus of the other studies was mostly on describing the processes within groups of student teachers. Although this was a conscious choice, stemming from the fact that not much was previously known about how collaborative processes develop within groups in teacher education, it can be seen as a limitation to not consider whether or not a collaborative process actually leads to the intended outcomes, be it in terms of individual learning outcomes (i.e. community competence) or group outcomes.

A related limitation concerns the role of the teacher educator in collaborative activity. As we have focused on different types of group of student teachers and their processes, little attention has been devoted to the role of the teacher educator. The importance of this role, in terms of, for example, organization and conflict management, can be very significant (Matusov, 2001). A focus on the teacher educator, both in terms of design as well as the analyses of practice, might reveal other crucial aspects concerning collaboration and community development than the ones found within this study.

6.4 Suggestions for future research

The small sample sizes combined with the collaborative design approach made it impossible to systematically determine the effects of a design which aimed to achieve community development in teacher education groups. A large-scale experimental study, including several conditions, could reveal whether the sets of design principles which have been developed, complemented with our recommendations for more explicit practice in preparing student teachers for taking an active role in the regulation of collaboration and consciously alternating elaboration and decision making during research, actually lead to better outcomes for student teachers. In addition, the role of the teacher educator deserves a more thorough examination. Ideally, further studies would investigate whether or not student teachers who have followed a program which includes these improvements would perform better within communities in schools, and maybe even gain better student outcomes.

At the same time, combining a larger number of small-scale studies and applying different qualitative research and analysis methods will be necessary. This would provide a more detailed insight into how the processes involved in collaboration and the roles of different group members in these processes affect individual and group outcomes. As such, theoretical knowledge on collaborative processes, as well as practical ideas on how to support them, could be developed. In these studies, more aspects which are relevant to communities (cf. Admiraal, Lockhorst, & Van der Pol, 2011) could be investigated, as well as the relationships between them. More in-depth studies could complement the larger scale study mentioned above.

Looking at groups from a community perspective is also valuable within teams of teachers (Brouwer, Brekelmans, Nieuwenhuis, & Simons, in press) and within groups that are formed in the context of school-university partnerships (Vandyck, De Graaff, Pilot, & Beishuizen, in press). Within these contexts, more research is also needed into how community competence develops, which designs stimulate community development, how regulation of interaction is given shape within communities and how the groups engaged in inquiry develop. In that way, the themes central in this dissertation can be investigated across the entire professional life of a teacher.

6.5 Implications for teacher education

In teacher education, more attention could be devoted to preparing student teachers for taking an active role in communities in schools. As found in Chapter 2, collaboration with the aim of community development is said to be deemed important, and yet it is not given systematic and explicit attention within the program. More attention could be devoted to the social aspects of the teaching profession by focusing and reflecting explicitly on the role each student teacher takes in (the regulation of) collaboration during the teacher education program. In such a way, they can learn how to take control of their own development as a community-member and deliberately change this when necessary.

A better conceptualization of collaboration in the teaching profession, as well as the development of ideas on how this can help to prepare student teachers for practice, would be necessary. This would require discussions between Heads of Department and teacher educators, aimed at developing a shared goal towards improving collaboration between student teachers within the program. From this study, three important topics for such discussions can be given.

First, it is important to keep in mind that not all types of group in teacher education programs are the same, and a such, collaboration within these groups should not be the same. The aim and nature of the group should be taken into account when developing designs aimed at stimulating community development in each group.

Second, more explicit attention should be paid to regulation processes within groups as actively involving in regulation is one way to prepare them for professional teacher communities at school. Student teachers can become prepared for this by taking on increasingly more active roles in regulating collaboration. When working in small groups without a teacher educator present, they can be asked to reflect on this regulation and when necessary, change it.

Third, when research is conducted within groups of student teachers, explicit preparation for engaging in both elaboration and decision making during such a project can give them a good starting point. During the process, the student teachers can be asked to reflect on their collaborative process and, when necessary, adapt it. Although it is only the first step in their professional career, teacher education can prepare student teachers to engage in professional communities in schools by means of developing community competence.

