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## **Collaboration in groups during teacher education**

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# Chapter 1

## Introduction

### *1.1 Background to the study*

Teaching is a process that mostly takes place between one teacher and a class of pupils. Apart from rather incidental meetings about common decisions concerning the curriculum and pupils, colleagues generally only meet in between classes, in the hallways or during breaks. As such, teachers often feel that teaching is too isolating as a profession (Flores & Day, 2006; McLaughlin & Talbert, 2002; Westheimer, 1999). As a response to this isolation, (professional) teacher communities have received a lot of attention during the last three decades within educational policy as well as within the research field (Achinstein, 2002; Grossman, Wineberg, & Woolworth, 2001; Little, 2002, 2003; McLaughlin & Talbert, 2001; Stoll, Bolam, McMahon, Wallace, & Thomas, 2006). Many advantages of such communities have been described, for the school in terms of the development of a shared vision and collective capacity, for teachers in terms of their professional development, and for pupils in terms of improvements in outcomes. Talbert and McLaughlin (2002) found that teachers who collaborate on instruction hold higher expectations for both students and colleagues, are more innovative in their classrooms, and have a stronger commitment to the teaching profession.

At the same time, teacher communities are not automatically successful (e.g., Achinstein, 2002; Stoll et al., 2006). As such, it is important to thoroughly prepare for working in communities. This preparation should start during teacher education, as for most student teachers, this is the first context in which they come into contact with different aspects of the teaching profession, as well as with other student teachers whom they have to work with. It is therefore relevant to consider the ways in which teacher education could prepare student teachers for their future participation in teacher communities. As a form of preparation for the collaborative conditions of the workplace, engaging in collaborative acts during education is becoming increasingly important (Brown, Collins, & Duguid, 1989). Collaborating in groups during teacher education can provide models for student teachers, through which they can learn about the practices of working in communities by means of experiencing such practices themselves. In the literature on teacher education, very little attention has been paid to collaboration or the development of communities (Ruys, Van Keer, & Aelterman, 2010). The aim of this research is to study the ways in which student teachers collaborate in groups, as well as possible improvements to such collaboration.

## ***1.2 Theoretical framework***

### *1.2.1 Collaboration in teacher education*

A great deal of research has been dedicated to exploring the effects of collaboration in classrooms (e.g., for problem-solving, see Fawcett & Garton, 2005; for reasoning, see Rojas-Drummond & Mercer, 2003; for constructive competition, see Williams & Sheridan, 2010; for a review on the role of the teacher, see Webb, 2009). Although there are studies which describe specific collaborative activities in teacher education (e.g., Kaasila & Lauriala, 2010; Korthagen, Loughran, & Russel, 2006; Richards, 2008; Slostad, Baloché, & Darigan, 2004), some studies which describe collaboration in teacher education by means of computers (e.g., Lockhorst, Admiraal, Pilot, & Veen, 2002; So, Pow, & Hung, 2009), and studies that focus on collaboration between student teachers and experienced teachers in the school context (e.g. Vandyck, De Graaff, Pilot, & Beishuizen, in press; for a review, see Darling-Hammond & Hammerness, 2005), studies that systematically describe and analyze the practices of face-to-face collaboration in the context of teacher education are scarce.

Ruys et al. (2010) investigated collaborative learning in the context of teacher education and found that student teachers collaborate only occasionally. Timoštšuk and Ugaste (2010) similarly found that teacher education is often rather individualistic. Some positive effects of collaborative learning in teacher education have been reported. As is the case with many practices in teacher education, collaboration can have a dual effect. First, it affects the learning processes of the student teachers themselves. In this respect, Chamberlin-Quislik (2010) found that collaboration can create a safe climate and build trust between student teachers, which provides opportunities to give feedback and reflect together. Second, student teachers can learn how to instruct pupils in the classroom in such a way as to encourage collaboration. In this respect, collaboration in teacher education was found to have a positive effect on the cooperative instruction skills of student teachers in the classroom (Veenman, Van Benthum, Bootsma, Van Dieren, & Van der Kemp, 2002). In order to prepare student teachers to learn the value of collaboration in their future classrooms, as well as to increase their own competence in collaborating with peers, collaboration in teacher education can be helpful (Brody, 2004).

### 1.2.2 Community development

In this dissertation a study on collaboration as a process of community development in different types of groups in teacher education is reported. This approach stems from the idea that learning becomes more meaningful when it is not an individual activity, but situated within a (teacher) community (Brown, Collins, & Duguid, 1989; Lave & Wenger, 1991; Roth & Lee, 2006). When learning is embedded in an activity and makes deliberate use of the social context, usable, robust knowledge can be developed (Brown, Collins, & Duguid, 1989).

A community perspective is mostly applied in the context of collaboration between professionals, such as teachers in a school. A teacher community is defined by Admiraal, Lockhorst, and Van der Pol (in press) as “*a group of teachers who are socially interdependent, who participate together in discussion and decision making, and share and build knowledge with a group identity, shared domain and goals, and shared interactional repertoire*”. These researchers have discerned, in accordance with the work of Wenger (1998), three dimensions through which communities and community development can be described:

- *Group identity* is the mutual engagement that binds teachers together in a social entity (the nature of the community);
- The *shared domain* consists of a joint enterprise as understood and continually negotiated by its members (what a community is about);
- The *shared interactional repertoire* is the shared practice of and beliefs concerning how teachers in a group interact (how a community functions).

This definition and these three dimensions provide valuable insights into teacher communities and their development.

This dissertation deals with *student* teachers who undertake an educational program at a teacher education institute. Communities in such a context are different from professional teacher communities in two ways. First, learning is the objective within groups of student teachers, whereas learning is generally not the primary aim of professional teacher communities. For this reason, scholars sometimes reserve the term “community of practice” (Wenger, 1998) for professional communities and terms such as “learning communities” (Bielaczyc & Collins, 1999; Brody, 2004; Lieberman, 2000; Roth & Lee, 2006) and “communities of learners” (Brown & Campione, 1994; Matusov, 2001) for educational contexts, in which there is a more explicit focus on learning, rather than a focus on work. Second, student teacher groups are part of a relatively short, pre-defined and fixed curriculum for teacher education. The student teachers therefore do not have the opportunity to freely organize their own groups based on their own preferences. This is in contrast with professional communities that are often said to form naturally, exist for a

sustained period of time and engage in self-determined tasks (Wenger, McDermott, & Snyder, 2002). Based on both of these points, Wilson, Ludwig-Hardman, Thornam, and Dunlap (2004) have introduced the notion of “bounded learning communities”. They describe such educational groups as being bounded by the expectations inducing participation and by the timeframe of a course. This “boundedness” applies to the participants within the present study, who are therefore best considered as participants in “bounded student teacher learning communities”. We feel that it is valuable to consider the community development of such groups, as these types of communities provide a social context for learning and can serve as a bridge between the school and work environments (Wilson et al., 2004).

For such special types of communities, self-management is not self-evident, despite the fact that this is thought to be an important aspect of communities (Wenger, McDermott, & Snyder, 2002). Penuel, Riel, Krause, and Frank (2009) discuss two teacher communities, of which the better one was less hierarchical and left more room for teachers to take on responsibility themselves. Roth and Lee (2006) similarly stress that using the notion of community with respect to pupils or students is useless unless students have some control over the process. Grossman, Wineburg, and Woolworth (2000) state that, for a community to form, group members have to take on the regulation of social interactions and group norms themselves. As we study student teacher communities as contexts in which student teachers are prepared for professional teacher communities, one of the issues to consider is the degree of autonomy which student teachers have, which is reflected in the extent to which they take shared responsibility for regulating their collaboration. The overall research questions which 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?*

### **1.3 Outline<sup>1</sup>**

The general aim of this dissertation is to provide insights into the opportunities that teacher education programs can offer to student teachers in terms of working and learning in communities. In order to achieve this aim, four studies were conducted within the context of teacher education.

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<sup>1</sup>As this dissertation consists of four articles that are (going to be) published in different journals, there is some overlap between the different chapters and the language (American English or British English) differs.

First, Chapter 2 contains a report on a study of the state of teacher education in terms of how teacher education institutes currently prepare student teachers for collaboration in communities. The preparation for such collaboration is described in terms of acquiring “community competence”. This study therefore provides insights into the current collaborative practices in teacher education, which will be investigated on three levels of the curriculum: the intended, the implemented and the attained curriculum (Van den Akker, 1998, based on Goodlad, 1994). Interviews with Heads of Department, teacher educators and student teachers, observations of groups and document analysis of study guides, portfolios and electronic learning environments will provide insights into the practices of the different programs. The research question of this study is: *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?*

Following on from the ways in which teacher education programs prepare student teachers to collaborate in communities at school, possible ways to improve the practices within such programs are considered in Chapter 3. This chapter contains a report on an empirical investigation into the possibilities for the improvement of different types of group within a teacher education program from a community perspective. The types of group within the teacher education institutes which were investigated were: *mentor groups*, in which student teachers learn about general educational topics; *subject matter groups*, in which student teachers learn how to teach their specific subject; *research groups*, in which student teachers collaborate on a small-scale educational research project; and *reflection groups*, in which student teachers reflect on their experiences at school. For each of these groups, a specific set of design principles was developed, which aimed to encourage community development. We made use of a communicative design approach, meaning an approach in which educational designers and stakeholders discuss and agree upon the design principles (Visscher-Voerman & Gustafson, 2004). In this study, this means that sets of design principles were created in collaboration with teacher educators and other stakeholders, and that they were grounded in current practice. As such, sets of design principles that fitted the specific context were assured. The research question of this study is: *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?*

The sets of design principles were implemented in the four types of group in two rounds. Observational data were gathered during this implementation process, complemented with data from stimulated recall interviews, data from the electronic learning environments and email correspondence. When analyzing these data, attention was drawn towards the regulation of collaboration as a precondition for good collaboration, as it was found to give direction to and to support the collaborative process within a group.

Student teachers' taking on an active role in the regulation of collaboration can be seen as an indicator of self-organization. This study of the regulation of collaboration is complementary to the previous study which determined design principles, in that it focuses explicitly on the process and stance of student teachers. Chapter 4 contains a report on an investigation into the way in which student teachers and teacher educators regulate collaboration in each type of group. This type of regulation directs and supports the interaction in a group. Discourse analysis (Taylor, 2001) was performed in order to look at the ongoing collaboration in groups, by looking at the utterances of group members in a chronological way. The regulative actions of group members were studied in a dialogical way (Akkerman, Admiraal, Simons, & Niessen, 2006; Wegerif, 2008), which means that each action was seen as part of, and determined by, an ongoing activity. This study aims to provide insight into the way in which collaboration is regulated in different types of group. The question which is central to this study is: *How do student teachers regulate collaboration in different types of group in the context of a teacher education program?*

When investigating the four types of group, it was found that the research group had a complexity which made community development very difficult. This complexity stems from the demanding nature of research activities, and especially collaborative research, for (student) teachers (Atay, 2008; Bianchini & Cavazos, 2007; Lunenberg, Ponte, & Van der Ven, 2007). Chapter 5 specifically focuses on the *research group* as a complex type of group. This study explores how two small research groups engage in inquiry. Two processes of inquiry were discerned, namely decision making and elaboration. When elaborating, group members listen, exchange and build on each other's ideas, whereas decision making involves coming to a shared conclusion about how to proceed. In this study, observational data are presented in combination with data from electronic communication and stimulated recall interviews. This study aims to show how the collaborative process takes place within the research group. The research question of this study is: *What roles do elaboration and decision making play in the inquiry process of research groups in teacher education?*

Chapter 6 presents the conclusions of the four chapters and discusses the dissertation as a whole. Furthermore, the methods, limitations and implications of this dissertation for research and practice are discussed.

