Working Together: A Caring Relation Between a Teacher and a Mathematics Educator

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Working Together: A Caring Relation Between a Teacher and a Mathematics Educator

Cover Page Footnote
I would like to thank to Signe Kastberg, who is helping me to become a researcher aware of teachers' lives, and Lisa Roetker for being my partner in the teaching mathematics world.

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ABSTRACT

Using Noddings’s (1984) caring theory, Elizabeth Suazo Flores—a third-year PhD student in mathematics education—describes how a caring relationship developed between her and an eighth grade mathematics teacher, Lisa. Noddings’s (1984) caring theory provided insights into their community-based experience, which was characterized by trust and open-mindedness.

INTRODUCTION

When I came from Chile three years ago to begin my doctoral studies, I wanted to be in contact with a local school so that I could better understand the American educational system and open up the possibility of researching it. I had also learned about the research-practice gap (Goos, 2014) and the underlying divergent relationship between mathematics educators and teachers. It is often unfairly portrayed that the former create knowledge, and the latter apply it (Hiebert, Gallimore, & Stigler, 2002; Wilson, Cooney, & Stinson, 2005). As a former secondary mathematics teacher now becoming a researcher, I wanted to be in the field so that I could easily cross the border between theory and practice. I was granted an opportunity when I met Lisa, a local school teacher, as part of a collaborative university program to integrate graduate students into a local school. In this program, I observed and cotaught classes with Lisa one day per week for three months, though our relationship ultimately has lasted much longer. Because the relationship became so rewarding for both of us and seemed so special, we wanted to analyze its evolution, for which we used Noddings’s caring theory.

CARING THEORY

Noddings (2005) defined a caring relation as “a connection or encounter between two human beings—a carer [or caring] and a recipient of care, or cared-for” (p. 15). A caring relation exists if both parties contribute something to the relation. The caring person should be attentive to the expressed need of the cared-for, whereas the cared-for needs to acknowledge and reciprocate the caring person. Moreover, Noddings (1984, 2010) noted that, in a caring relation, the caring person experiences engrossment and motivational displacement. The caring person experiences engrossment when she exercises receptive attention to listen and watch. Noddings (2010) explained, “the carer is engrossed in (or receptively attentive to) the needs expressed in an encounter” (p. 47). As a consequence of practicing receptive attention, the caring person might experience motivational displacement. Noddings (2010) defined this as “the motive energy of the carer flows toward the needs of the cared-for” (p. 48). In other words, caring people temporarily leave their own ideas aside to help the cared-for accomplish her or his goals. Therefore, motivational displacement is characterized by “a shift in the direction of motive energy” (p. 48). Noddings warned that a caring relation could fail if the carer decided not to respond to the communicated demands of the cared-for, or if her or his response was not acknowledged by the cared-for.
RESEARCHERS AS OUTSIDERS

Clandinin and Connelly (2000) claim that when researchers are in the field, “the most dramatic transitions are the beginnings and endings” (p. 74). In our first meeting, Lisa and I agreed on the importance of students working in groups. Lisa showed me her room with tables (no individual desks), which provided the physical space for students to work in groups. She seemed excited about our common interest in promoting group work. During my first weeks in the class, she introduced me to her environment by showing me different aspects of her lessons and sharing comments about her students. Meanwhile, I made great efforts to help her while also remaining, in some sense, invisible in the classroom. I felt that my presence in the class could have been likened to being in a family’s house that I did not know. This feeling made me think that I did not want to do anything that could disturb this family and its established environment.

In the beginning of a new relation, university researchers might feel like outsiders or uninvited guests in K–12 classrooms. Then, they might begin to negotiate their place in the new environment and, with the help of the teacher, can end up being or feeling familiar with it. In my experience, everything was new in Lisa’s classroom, despite the fact that I had teaching experience in my home country. I was amazed by the arrangement of the room, the materials available, and that students could stand up to reach whatever they needed without asking permission from the teacher—a foreign idea to me. Nevertheless, I felt welcomed by Lisa as she supported me in her role of insider and knowledgeable person. She gave me a physical place from which I could observe the class, and introduced me to the students, telling them that I was as knowledgeable in mathematics as she was.

Lisa took the role of caring person in the beginning of our relation. She realized that I could have felt lost in this new educational environment, so she took care of me by listening to my comments and sharing information about her class that allowed for my smooth immersion into her community. Noddings (2010) explained that in order to have a caring relation, the cared-for has to acknowledge the caring by sharing more information that might help the caring person to care for a future encounter. Reflecting back on my experience, I responded to Lisa’s caring by offering my help and sharing my thoughts and reflections about being in her room. Through her caring, and me allowing myself to be cared for, every week I began to feel myself become more of a part of the school community. I made clear to Lisa that I was open to helping her with her classroom duties. I quickly understood that she did not have much free time, so I felt grateful that she gave me some time to learn from her, and I tried to be useful in the classroom. I graded papers; helped her organize her physical space; prepared tools, papers, and handouts for her class; and tutored a couple of students who were struggling. Those activities and duties helped me to acquaint myself with the classroom and Lisa’s school environment, while also solidifying the caring relation.

CROSSING THE BORDERS: TEACHING IN AN AMERICAN SCHOOL

Noddings (1984) stated that in order to have a caring relation, people involved must know each other well. Once I knew the students, the school requirements, and Lisa’s work environment, I was able to participate actively in her community by tutoring students and offering some teaching suggestions to Lisa. After two months in the class, I had to teach a lesson. The focus of the lesson was finding connections between the graphs of quadratic equations and their solutions. Students had learned about this before, but they had not graphed equations in mathematical software. In the first part of the lesson, we learned to use software for graphing, but it seemed that the time spent on learning the software was not enough for the students. They had a lot of concerns about the software, and once they were able to graph, they could not understand what they had to look at in the graph. During the breaks between classes, I expressed to Lisa my disappointment with some aspects of my teaching. I showed her that I was willing to receive feedback even if it could be uncomfortable for me. She suggested that I be more explicit, and that she encourages students to think in a new way and to be patient with the technology. My first class in America ended up producing a discussion of how students’ ways of thinking are regularly promoted in classes, and how they struggled when we asked them to think or do something unusual. This experience, and others like it, set the beginnings of our collaboration. During the first weeks, I was an outsider, then I became another member of the community, and finally the students considered me another teacher in the room. We began to see each other as part of the same community and having one common goal: helping students learn mathematics. Lisa began to explicitly express her satisfaction of having another teacher in the room. She even shared this comment with her students and colleagues.
CROSSING THE BORDERS: WORKING TOGETHER

Once we knew each other better and I felt like a part of the class community, I implemented a research study with Lisa’s students. This was my first research as a graduate student. I valued Lisa’s experience, so I asked her for feedback on the design and implementation of my research. The study consisted of designing and implementing a multiple-ability task (Cohen, 1994). I showed Lisa the original task and explained that we were going to implement an open-ended version of it. The multiple-ability task was an adaptation of the Painted Cube task from Connected Mathematics 2 (Lappan, Fey, Fitzgerald, Friel, & Phillips, 2006). I had previously received feedback from an external researcher to adapt the lesson to the multiple-ability characteristics. Then, I showed Lisa this version and assumed that she might add some changes and suggestions. I supposed that her “teacher’s eyes” would help me improve the lesson even more. Indeed, she made some comments and suggestions related to the instructions for the task, and expressed her concern for the open-ended character of the task. Specifically, she wanted to provide students with direct instructions to organize information, and I wanted to leave that decision to the students. Moreover, I wanted to assign specific roles for the students in the groups, but she was resistant to do it. Upon reflection, I consider that we both experienced a negotiation process in which each of us ended up compromising some of our requirements. I described explicit goals for the final product and Lisa allowed me to keep the task written in an open-ended way and assign the roles. While negotiating, we both experienced engrossment and motivational displacement. Lisa disagreed with the open-ended characteristic of the task and the role assignments, yet she set aside her view to listen and address mine. Similarly, even when an external researcher already gave feedback on the task, I listened to Lisa’s feedback and incorporated her adjustments. We listened to each other while trying to understand what the other was saying and why, we controlled our actions, and we set aside our own goals or personal ideas to fulfill some of each other’s goals.

After implementing my first research study together, Lisa and I both learned different things. I learned the importance of the teacher’s role in the classroom. At the beginning, I thought that the task characteristics were what encouraged engagement in students. However, after analyzing the data and reading some research papers, I realized that Lisa played an important role in setting the learning environment. For example, she created the groups, described the roles, and spent time explaining the task and motivating the students to work. Lisa was amazed by the reactions of some of the students, particularly the performance of a student named Serena. Lisa witnessed how Serena’s identity as a mathematics thinker changed after working on the multiple-ability task. She transitioned from being an apathetic student in the classroom to an active participant, and, as Lisa said, a “shiny” student. Lisa described how Serena changed her participation in the mathematics classroom after experiencing the multiple-ability task. Even her classmates began to view her as a valuable mathematics thinker. The successful results with the task encouraged Lisa to transform the multiple-ability task into a STEM lesson for a summer professional development program. The next fall, we implemented this new version of the lesson together with new students. We have been learning how students interacted with the lesson, and after every implementation, we learned from the students’ new ways of thinking (Figure 1).

Sztajn (2008) found that when the cared-for recognizes the caring relation, she can also “express her needs in view of those brought forth by the one caring” (p. 303). In my own research, Lisa expressed her appreciation

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Figure 1. Elizabeth Suazo Flores and Lisa Roetker in the classroom together.
of our work by saying, “Having someone who is open-minded enough to be willing to make those changes is really important, as well as the fact that there has to be a certain trust level there” (L. Roetker, personal communication, May 1, 2015). In her words, she recognized my receptive attention and the balance of our caring relation. She further emphasized, “I also appreciated that you were not bound to what you ended up with, that you were willing to even change it more” (L. Roetker, personal communication, May 1, 2015).

DISCUSSION

Lisa and I consider our relation a caring one. We did not plan to create a caring relation at the beginning, but we intentionally made efforts to listen to the other and fulfill the other’s needs. This attitude significantly contributed to our relationship. Now we implement tasks and help each other on our professional and academic duties. Sometimes I am the caring; sometimes I am the cared-for. My experience collaborating with her contributes to the forthcoming caring relations that I might create with future middle school teachers. I am grateful to have had a partner in the journey of developing mathematical thinkers and becoming a mathematics educator. At the same time, I am aware of the complexity and risks of working on these relations. I know that mathematics educators might not be willing to invest time and energy on building them, while they may not work out in the end. However, if they do, the reward is having the teacher’s trust and the students’ engagement. I think that, for any researcher, this is worth the risk.

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