Creating Communities of Learners Among Beginning Teachers: A Matter of Social Justice

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Introduction and Premises
For the work in The National Network for Educational Renewal, social justice cannot remain an abstract concept. It must, of course, be built on theory, but we need to come to common meanings and descriptions of social justice in action and have it drive our daily work. In his work for the Hong Kong Institute of Education, Michelli makes this observation regarding seeking guidance in dealing with difficult concepts like social justice. He writes, “we cannot forget the work of the British philosopher W.B. Gallie. Gallie developed the concept of “essentially contested concepts.” In his analysis such concepts are inherently subject to multiple interpretations, depending on your values, concerns, experiences, goals, and beliefs (Gallie, 1956). Different individuals would, by this definition, have different meanings for such concepts. Consistent with Gallie’s work, my contention is that among these concepts are democracy and social justice and, I would add, freedom and education” (Michelli, 2010).

Given the absence of a widely accepted definition of social justice, it is important for each group claiming to work towards social justice to have an operational definition—a definition whereby it is likely that it will be possible to recognize and know instances of social justice when they are present. For this article I will suggest two definitions of social justice as the way I will use the term in exploring the connections between creating communities of learners among
teachers and social justice. First, within the work of Marilyn Cochran Smith we find the concept of “access to life’s chances” used in connection with social justice (Michelli, 2010). In this work, it is presumed that as we live our lives, and as our children grow and live their lives, “chances” or opportunities will be presented. We have achieved social justice when we will have attended to the question of whether or not the students we teach will have a reasonable opportunity to seize upon the chances he or she will encounter, chances like graduating from high school, going to college, securing a satisfying job and, of course, many others. Life does not allow anyone to succeed with every encounter of an opportunity, but having a reasonable likelihood of success is something we can work towards.

Second, drawing on the important work of Guttman (1987), Michelli uses two concepts that addresses her definition of democracy: nondiscrimination and nonrepression. He argues that:

These two concepts taken together are, from my perspective, a good basis for a definition of social justice. The idea is that we must lead our lives and examine our actions through the lenses of nondiscrimination and nonrepression of others. When we see evidence that these qualities are lacking, we are obligated so speak up and take action. This is true even if we cannot prove unequivocally that the condition is the result of discrimination and repression (Michelli, 2010, p. 14).

I argue in this article that creating communities of learning for teachers can impact several of the most serious problems we face in urban and other schools in the United States. These include student school leaving rates, teacher attrition, and student achievement. There is good evidence that teachers working in learning communities are less likely to leave teaching, and that has an impact on student learning and school leaving. I will describe how each of these is present in our schools and then describe a study of a learning community that suggests some specific actions we can take.

School leaving, which we commonly call “drop outs” is a very serious problem, especially in urban schools. Orfield (2004) has studied this problem and concluded that, in New York City, the graduation rates for whites in New York City are about 75%, that is, 75 of 100 entering kindergarten students will graduate. The rate for African American
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and Latino students is around 33%. Thus, 67% of these children will not graduate high school. We know the effect of not graduating, including increased incarceration, welfare, and poorer health. Anyone who looks at these data would conclude, I believe, that discrimination and repression are present. Orfield’s title, “Losing our Future,” sums it up. As a society we cannot afford to discard 67% of any group of students. Further, claims by politicians that the rates have improved dramatically does not hold up, at least not to the extent they claim. Part of this is the result of hiding those leaving schools by placing them on a “discharge” list, which covers a number of categories for leaving schools, but excludes them from the “drop out” list (Henry, 2011).

Why do students leave school or fail to achieve? The single most important factor we have control over is the quality of the teacher (Alliance for Excellent Education, 2005). With attrition of teachers at a high rate, increased pressure to raise student scores, and threats of losing jobs, teaching is seen as a stressful profession and we begin to lose the best candidates before they begin teaching. How do we reduce attrition?

That question is the focus of an important study released by the National Commission on Teaching and America’s Future, Induction into Learning Communities (NCTAF, 2005). After reviewing the data on attrition, estimated at 46% of new teachers after 5 years, and using the work of Richard Ingersoll, the Commission concludes that there are several factors which correlate highly with the decision to stay or leave teaching. Most important overall is the presence of a “learning community” that supports beginning teachers. Ideally the learning community is a school-wide community related to induction into teaching. I argue in this paper that, when that is not possible, learning communities that are not placed in a single school can be created to focus on factors most likely to be problematic to new teachers. In this case, as we will discuss, the focus is on beginning elementary school teachers and their knowledge of mathematics teaching.

Teacher attrition has another impact on schools—cost. This excerpt from an issue brief published by the National Alliance for Excellent Education makes the point about cost, and the effect of losing teachers on student learning:
A conservative national estimate of the cost of replacing public school teachers who have dropped out of the profession is $2.2 billion a year. If the cost of replacing public school teachers who transfer schools is added, the total reaches $4.9 billion every year. For individual states, cost estimates range from $8.5 million in North Dakota to a whopping half a billion dollars for a large state like Texas.

Many analysts believe that the price tag is even higher; hiring costs vary by district and sometimes include signing bonuses, subject matter stipends, and other recruiting costs specific to hard-to-staff schools. Others believe that the cost of the loss in teacher quality and student achievement should also be added to the bill.

There is a growing consensus among researchers and educators that the single most important factor in determining student performance is the quality of his or her teachers. Therefore, if the national goal of providing an equitable education to children across the nation is to be met, it is critical that efforts be concentrated on developing and retaining high-quality teachers in every community and at every grade level. (Alliance for Excellent Education, accessed February 1, 2012 from http://www.all4ed.org)

The evidence seems clear. The quality of teachers in urban schools has a direct impact on the high rate of attrition. The high rate of attrition of teachers leads to lower student achievement. Low student achievement is one of the factors connected to school leaving. The presence of a learning community to support new teachers, especially one focused on the content knowledge needed for beginning teachers, is among the important steps schools can take to begin to address these problems. Thus, in this author’s view, providing learning communities has potential both of lowering attrition of teachers and also reducing school leaving by students. It is a matter of social justice.

The case that follows involves a learning community created across schools in an urban center. I report on the nature of the community, the role of the researcher in the community, the activities and responses of the participants, and conclude with recommendations.
The Nature of the Community
In this case, the learning community created has its basis in the work of Wenger (1998) in which informal groups are formed where participants learn from the events that unfold in the environment in which they are situated. More importantly is how Lave and Wenger (2003) define a community of practice as a set of relations among participants, activity, and the environment. In this learning community, a forum was created where new teachers could work on aspects of their mathematics teaching. During the time in which the participants were involved in the learning community, their teaching, mathematics as a subject, and outside influences on their teaching were the focus of discussion. The teachers met with the author as a group approximately once a month for four months. During these group meetings, the participants watched video clips of their teaching, worked on mathematics problems, and discussed topics related to mathematics content and the teaching of mathematics. The participants and I chose the clips and the topics of discussion. The group meetings were conducted as a way to further the professional development of these new teachers in the areas of mathematics, mathematics teaching, curriculum understanding, and policy.

In addition to the group meetings, the author conducted bi-monthly observations of the mathematics teaching of each teacher in the group over the course of 5 months. The observations were documented by video and audio recordings to better inform the group meetings. During the observations, the author participated in the classes as an additional mathematics teacher for the students and as a mentor for the teacher. After each observed class, an informal interview took place resulting in the teacher asking how best to improve his or her teaching. Both the teacher and the author wrote reflections (both questions and comments) after each observation to help inform the learning community.

The participants chosen to be a part of this learning community volunteered after being informed by their university of an opportunity to build a rewarding mathematics learning community with a small group of new elementary public school teachers so that they would have the opportunity to learn and reflect on their own mathematics teaching practices. They were all students at the same urban university, which provided some commonality in their formal teacher preparation experiences. Two of the participants (Jessica and Julia, pseudonyms), were enrolled
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in a master’s degree program in childhood education while participating in an alternative certification program. The third participant (James, pseudonym), completed his undergraduate degree in childhood education and at the time of the study was enrolled in a master’s degree program in childhood education with a specialty in mathematics. Jessica taught third grade in a large urban elementary school in the southeast section of the city; Julia taught fifth grade in a large urban elementary school in the eastern part of the city; and James taught third grade in a medium-sized elementary school in the eastern part of the city.

The author’s role in this case was one of participant, observer, and mentor. The role of participant included bringing students’ questions to the attention of the teacher and helping individual students during group work. The mentor role, although non-evaluative, affected the teaching of the participants. They stated that they were more prepared and that they asked questions to help them improve their teaching or plan for a follow up lesson on the days of the observations.

The group meetings were held in a neutral place, a small conference room. The meetings occurred after work and lasted about two-and-a-half hours. The format for these meetings was to begin with a brief activity that was mathematics related such as a visual representation of “what is mathematics,” an investigation of algorithms, and problems exploring such topics as geometry, measurement, recognizing patterns and problem solving strategies. Watching video clips of each of the teachers followed up the initial activity. Occasionally, the clip was chosen in agreement between the teacher and the author based on the informal post-observation interview. The choice of clip depended on a couple of factors, but was not limited to these: mathematic content, pedagogy, student behavior, or curriculum. Comments and questions about pedagogy choices, mathematical content and other topics arose as a result of the videos. The rest of the agenda for the meetings varied from meeting to meeting depending on the topics that the participants wanted to discuss or issues raised from the video clips that were chosen in previous meetings. Examples of topics discussed in the meetings were planning a lesson, math coaches, state standards, curriculums, and pressures connected to choices made in classrooms.

These meetings became an environment where the teachers sought support in their experiences. They would recount stories from their day or week, as a way to decompress. Sometimes these conversations would occur while waiting for the full
group to assemble. Initially, these stories helped the participants get to know one another better and make connections. Not only did the group meetings serve as a support group where ideas were shared and encouragement was offered; but also as an opportunity for teacher learning based on the teachers’ practices and their current knowledge based on inquiry (Feiman-Nemser, 2001).

Since each of the group meetings had as its crux the viewing of three video clips, it is relevant to discuss teacher development that uses video clips or case studies for reflection and learning. There are a variety of reasons to use video clips of the participants. The premise that the group meetings were a community of practice enabled the participants to look at the practice of the teachers through the videos. In a school-based professional community, the usual format is for the teachers to observe one another’s classes and learn from their teaching with a commitment to inquiry and critique (Building Professional Learning Communities, 2007; Feiman-Nemser, 2001). Inasmuch as the participants were all teaching at different schools, they did not have an opportunity to observe one another teach. Furthermore, the video recordings gave the teachers an opportunity to continue to reflect on their teaching long after it took place.

The group meetings were central to the learning community but the written reflections conducted by the author and the teachers after the observations were pertinent to the learning community. Models of reflection are often based on using tools for reflection, such as video clips, professional learning communities, and lesson study, where the teachers reflect on their teaching while discussing specifics about teaching in the context of the classroom (Building Professional Learning Communities, 2007; Sherin and van Es, 2005; Stigler and Hiebert, 1999). In any form, the use of reflection in a teacher’s development has been supported for almost a century, but its importance increases and decreases with other trends in teacher development. Dewey (1997/1910) originally wrote that the purpose of teacher education was to inform and educate teachers on their practice. He modeled his ideas about teacher education on the reflective practitioner. Ball (1996) stresses that a certain type of knowledge for teaching is to be able to reflect on the teaching that is happening then. In other words, while in the classroom, teachers should consider what problems they could work on as a class based on the previous twenty minutes of class. Some writers define this as the ability to assess the students.
The Activities of and Responses to a Learning Community
This case demonstrates the benefits for new teachers in being a part of a learning community. What follows are a couple of examples of what transpired during the group meetings and why learning communities focused on content knowledge are advantageous to teachers’ learning and professional growth.

It is true that these teachers all had an affinity for mathematics but there were areas of stated need and support from the beginning.

• To understand better why he was making the choices he was making in the classroom with regard to the curriculum (James). He also stated during the first group meeting, “I’m just trying to become a better math teacher, a better teacher overall; that’s why I chose to do this; I know that this is only going to help”

• For her love of mathematics and just working in an environment in which mathematics and mathematics teaching were the topics of discussion (Julia).

• Because of the lack of information regarding mathematics teaching provided in her school setting. Although, believing her strength in mathematics was an asset, Jessica acknowledged the need for more information regarding pedagogy.

Learning communities increase the exposure and understanding of the many resources available to teachers. After returning from the NCTM conference, I shared a bibliography of books suggested at a session. James and Julia were familiar with some of the children’s literature.

**Julia:** I have a bunch of these in my class.

**Me:** Sometimes they just need to hear a story … Well, I mean it depends on the story and stuff like that.

(James nods his head vigorously, looking at Jessica, who is also nodding her head).

**Julia:** I definitely see how it is valuable.

**James:** *Two of Everything*[^1] (*Hong, 1993*) is a good book.

**Jessica:** Uh-huh,

[^1]: *Two of Everything* is a Chinese folk tale about a husband and wife who discover a magic clay pot that doubles anything that is put into it.
James to Jessica: “You have that book?”

Jessica: Yeah.

Julia mentioned a book on origami and James suggested starting to read a story and having the students finish it with a mathematical story. He used the example of a story entitled *One Grain of Rice* (Demi, 1997), in which the students have to write their own ending, predicting what is going to happen as the story progresses. I found this suggestion very helpful and the video shows the participants writing information down in their notebooks. This dialogue is an example of how the teachers are aware of their resources but how being part of the learning community increases the opportunity to share ideas with others and grow one’s resources.

Learning communities increase the camaraderie and support among peers. For example, some interesting dynamics of the participants began to develop during and after the second group meeting. As a second year teacher, James seemed to have a bit more comfort talking about his experiences in the class and tended to take a more authoritative position on topics related to teaching. For example, when discussing Jessica's clip on modeling with multiplication, he began to explain exactly how he went about teaching the same lesson. Most importantly he used the fact that during his first year of teaching, the topic went over his students' heads and as a result, he taught it in a much more systematic way during the year of this study.

Another example of them using each other as a possible resource follows. James made a suggestion after watching Julia’s lesson on modeling integer addition and subtraction, to have the modeling of what they are doing written down. Julia said that “one of my professors suggested always using the students’ names because they get more involved if they see some connection,” or Jessica commented in relation to the benefits of seeing James’s teaching, “one thing I liked that I don’t do [is] asking them to solve the problem as a group” (Group Meeting 1).

Learning communities give the participants an arena for discussing student understanding and therefore the ability to make sense of student learning.

James: He just knew it was 48 he was like, “I just know it is 48” but it was like out of all the numbers to pick how did you know to pick 48?

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2 *One Grain of Rice* is an Indian folk tale about a raja who hoards all of the rice in his kingdom until a clever girl, Rani, who outsmarts the Raja when he offers her a reward. Rani asks for one grain of rice, doubled each day for 30 days.
Me: He probably had forty in his head and started counting up because he could see forty.

James: He has a good number sense.

Me: Right, he has good number sense but he couldn’t communicate how he got his answer.

Julia: They might not even know that if they used estimation that estimation is what they did.

Learning communities give teachers an opportunity to discuss the teaching professions in relation to pedagogy, mandated supports and curriculum. Their critiques and comments on the clips were primarily about their pedagogy. For example, Julia made a comment with regard to her teaching of the volume formula for a cylinder and stated, “When I was explaining the formula, I should have used the visual more, instead of just pointing to the board” (Group Meeting 4). James was very discouraged by the teaching that was shown in his clip and immediately when the clip had been shown, said that he should not have spent so much time on the topic. Julia expressed further disagreement with the curriculum after a group meeting,

I have mixed feelings about Everyday Math. The structure of it is very helpful with planning, as a 1st year teacher, but some of the things don’t make much sense. For example, I have the top class and they all pretty much know how to multiply 2-digit numbers, but according to EM, they had to learn 3 or 4 methods of this. Most of the kids were bored and jaded and wanted to learn something new. I think if anything, this is helpful to 1 or 2 students who struggle with math, but most need more of a challenge. (Julia, E-mail Correspondence)

Learning communities give participants an outlet to counter the difficulties they experience that are inherent in the schools and, as a result, teaching. The following example involves the mandated curriculum and standards based learning. During Group Meeting 2, I presented the participants with the activity of looking at a couple of lessons that they had taught earlier in the year. In conjunction with the lessons, I also had available the pacing calendar and the Standards. Initially, while looking at the lessons on non-traditional algorithms, the participants began with comments like “ugh, partial sum, it totally messes up kids who know how to
do the algorithm” or “oh, don’t get me started.” As the discussion continued and they began to look at the text more closely, some of the comments showed a greater understanding of the thoughts behind the curriculum, the pacing calendar, and the Standards.

**Jessica:** Now, that I look at this I think that it reinforces place value.

(the participants are all looking at the text, pacing calendar, and the Standards)

**Jessica:** Kids, I feel, still struggle with place value in March and so, I think it is interesting that they don’t put it in…

**James:** But, it is one of the standards though, understanding the place value structure, see it is in line with the New York State standards. *(James is very fluent with the standards.)*

**Jessica:** “Yeah.” *(I am not sure if she was aware of this before the discussion.)*

**James:** I agree with you, that it does reinforce place value, but I would not do the hundreds first, I would get them in the habit of doing the ones first so just how they are doing it here, I would have them start from this side. *(Pointing to a problem in the text.)*

**Julia:** I was just going to say that because that would alleviate the problem.

**Jessica:** And then that is how you add in real life.

**James:** Yeah, without regrouping this is adding without regrouping.

**Jessica:** Right, because does this apply when you regroup? It does, because say this was 3 and 7 it would just be 10 and 9 and 5 would be 14.

**James:** That is why the base ten blocks are good, because 13 tens what do I do with 13 tens I could use one flat and 3 tens, … regrouping without using the word regrouping. … I think it is a strong lesson I would just change it from right to left.

**Me:** Why, why would you change it from right to left?

**James:** So they won’t develop any bad habits when they get into the real algorithm.

**Me:** do you expect them to do use this algorithm later on?
Jessica: Not really.
Me: Never?
James: I kind of want to get away from it.
Me: Why?
Jessica: I mean I think we are biased.
James: I think so.
Jessica: because of how we learned and how everybody learned until *Everyday Math*, so…

The discussion continued with my input about the benefit of using this partial sum algorithm for enforcing estimation but also greater attention to the fluidity of the standards. Toward the end of the conversation, the participants began to see that they actually used the partial sum algorithm informally especially in relation to estimation and how investigation of algorithms was covered in many areas of the standards.

Learning communities are a transforming factor for teachers in relation to their content and pedagogy knowledge. This example of what happened in the community of practice demonstrates the transforming views of the participants at the time of the discussion, but what is even more telling is what happened a month later for James and a couple of months later for Jessica and Julia.

*Everyday Mathematics* is a good program and when you follow correctly, builds strong mathematical foundations for young math learners. I have to continue studying the program and myself to understand why it is that I do what I do. (Does that make sense?) Hopefully, this study will bring me closer to that realization. I had a great follow up to Friday’s lesson today. I taught them the partial-products algorithm and to my surprise, many of the kids liked it. I understand what you meant when we discussed partial sum and partial products. Jessica, Julia, and I were all opposed to it but you noted how it’s important for students’ sense of estimation. I totally saw it today and unbelievably, I prefer this algorithm over all the other ones I have taught thus far. Also, it is the one we can truly do in our heads and used in real life, as opposed to the standard multiplication algorithm. (James’s Reflection after an observation before group meeting 3)
A clip from James’s lesson on the partial products algorithm and mental math was shown at the third group meeting. After the showing of the clip, Jessica made the following comment: “I was looking at mental math because it is one of my next lessons. I was thinking about cutting it out because of [time], but now that I have seen it, I see how beneficial it is…and how it incorporates other skills.”

Julia’s comment was at odds with her relationship with non-traditional algorithms. However, over the summer she took a mathematics course. She stated that “I found myself defending mathematics and why students need to prove why they get an answer, and why it’s important to teach partial sums addition, etc.” (E-mail Correspondence).

**Recommendations**

These participants are engaged in the activity of the community, which leads them to reflect and think more about mathematics, their teaching of mathematics, questioning of their actions, and the structures in which they teach. This reflection is likely to provide a context for change and better teaching in collaboration with other members of the community. More needs to be done to follow through for change. Reflection is a necessary, but not sufficient, condition for change. Professional development may be provided for new curricula or general improvement, but if done in the context of a learning community the change is more likely to be internalized and sustained.

As state education departments and school districts introduce new curricula, professional development for teachers is often provided as a way to ensure that teachers have the skills and knowledge to teach a specific curriculum. Beyond the necessary knowledge, the learning community described in this paper gives many outlets for the new teacher to experience the profession, to interact with peers, and to learn and grow within the profession. Even with an intentionally created community of practice across schools, teaching and learning continues the education and reflective practice of the participants. Most importantly the practice that occurs in a learning community develops from the classroom experiences of the teachers but extends beyond the school and the class attending to the transforming nature of teachers in relation to their content and pedagogical content knowledge. This case puts forward the importance of an additional support system for new teachers in their teaching of mathematics that does not need to be connected to
their school but could be district wide. Obviously, our recommendation is that the model of intentional learning communities, whether in one school or across schools in one content area, represents an important support system that should be used more widely. If, as this case suggested, the process reduces attrition, the cost of sustaining such communities is more than offset by the savings and the provision of higher quality teaching for students.

**Conclusion**

How is this an issue of social justice? As Michelli (2010) describes it, “that we must lead our lives and examine our actions through the lenses of nondiscrimination and nonrepression of others. When we see evidence that these qualities are lacking, we are obligated so speak up and take action.” To make this type of community productive for the participants, they have to have some agency (i.e., the power to act) in what transpires during the community of practice to better themselves in their profession. What topics the discussions covered came not only to the set agenda but more importantly from the participants’ need to speak and take action, informed by professional experience. In the end a learning community of this form helps the participants become teacher leaders in their own school communities. As Stein et al., (1998) state, “placing the study of teacher development in a community of practice framework implies that motivation to learn is tightly tied to teachers’ views of themselves as aspiring members of a reform mathematics community” (p. 38). The crux of these new teachers’ experience is becoming part of the community of teachers. As they continue their practice of teaching and consequently their involvement in a reflective practice, they develop “an increasing sense of identity as a master practitioner” (Lave and Wenger, 2003).

For these participants, their statements about themselves in relation to this project demonstrated that they became more reflective in their teaching, more aware of different practices and more knowledgeable about the mathematics that they were teaching. Julia stated in a reflection. “I now know what I will do differently next time” (Reflection). She stated that the videos enabled her to see the progress in her teaching and that being part of this research has changed her. She says that she is more confident in her teaching and that the study has given her the ability to reflect (Julia’s Reflection). James actually declared that he had become a reflective practitioner (Group Meeting 4) and Jessica saw herself not taking the
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The teachers began to see ways of teaching a topic other than the way the text suggested (Group Meeting 4). And the goals of the learning community don’t necessarily end, for example James found the support helpful in that it made him consistently think about his teaching and made him want to improve his teaching. “Honestly, you put more effort into your teaching. If I did this when [the author] is not here what can I do” or “What would [the author] say about this?” Jessica stated that it made her think about her questioning more instead of asking, “Does everybody understand?” She asks students to explain their thinking more (Group Meeting 4). Julia commented in an e-mail correspondence at the end of the year, “I’m really realizing how much better equipped I feel in regards to being a math teacher.” This learning community enabled the teachers to build that community in which learning occurred and identities were transformed, as they had some commonalities to build from and a shared vision of learning to work with in the structures of the urban schools. This community of practice gave the participants a place to share their issues and problems in a way that they might not have been available elsewhere. Julia noted in a final write up, “I wish this type of professional conversation could continue” (Group Meeting 4).

James is currently in his seventh year of teaching at the same school at which he started. As a new teacher leader in the school, he mentioned in an e-mail correspondence how he has increased his involvement with other teachers in his school in regards to mathematics teaching. Julia is in her sixth year of teaching at the same school at which she started. She has finished her master’s degree and is already thinking about pursuing a more advanced degree in the field of education. At her school, she has been asked to help new teachers acclimate to the community. When last contacted, Jessica was finishing her third year of teaching at the same school at which she was teaching fourth grade. She has completed her master’s degree in childhood education. These teachers have continued in the profession, taken on leadership roles, and maintained a level of enthusiasm and excitement.

This learning community, created across schools, had a specific structure enabling it to be a learning community for the teachers in different schools. The videos and the group meetings helped the participants become situated in the same environment and learn from the events that unfolded in the environment in which they are situated. This case shows that the impact of communities of practice on
the learning and development of new elementary school teachers is a model for induction and professional development that should be further explored. For the participants in this study, communities of practice had a positive affect on their learning and development. Communities of practice dealing with reflection and inquiry increased these new teachers’ confidence and competence with mathematics and their willingness and ability to access resources and continue their journey through the teaching profession.

It is evident from this one case of a learning community that providing the opportunity for teachers to be involved in areas such as exposure to and understanding of resources, opportunities for camaraderie and support, discussion about student learning, pedagogy, policy and the profession has the possibility of lowering attrition of teachers. In lowering attrition, these teachers are transformed in relation to content and pedagogical knowledge therefore becoming teacher leaders in their school. It is a matter of social justice that we do all we can to achieve these ends.
References


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