The Effects of Mismatching Teacher Candidates with Mentoring Teachers

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The majority of teacher candidates are eager to enter the field of teaching for their junior participation to try out methods, such the as Problem Solving Approach, that they have been learning throughout their classes at college. Teacher educators often place an emphasis on the use of Problem Solving Approach because it is natural to children. This approach enables them to exhibit curiosity, intelligence, and flexibility as they face new situations. In science, the inquiry method is emphasized. The challenge for preservice teachers is to build on children's innate problem-solving inclinations and preserve and encourage a disposition that values problem solving. Teacher candidates are encouraged to motivate children to think critically and provide them with opportunities to create, explain, and analyze their procedures. However, different learning environments can either facilitate or impede the implementation of these new strategies. One problem is that of effectively matching teacher candidates with mentoring teachers. In this article we examine the effects of mismatching preservice teachers with mentoring teachers by describing the experiences of four preservice teachers as they attempted to integrate new learnings.

I am an assistant professor of elementary education and reading engaged in the preparation of teacher candidates at a large comprehensive college in an urban center. I teach a field-based course on the pedagogies of mathematics and science in the elementary school. Each semester I work with at least 16 teacher candidates who are primarily in the third year of college, one of whom is my co-author for this article. Our field-based course takes place in a high needs school under the general framework of our Professional Development School Consortium, a collaborative of teachers, professors and principals working together to construct optimal teaching experiences for our elementary teacher candidates. Each semester I emphasize problem solving in mathematics and inquiry in science to lay a foundation for critical thinking in the teaching of mathematics and science. Successful implementation of these approaches by preservice teachers requires an effective match of the preservice teachers with mentoring teachers. In this paper I use the problem solving approach as merely an example of what happens

when there is an effective match or lack of it (mismatch) between the teacher candidate and their mentoring teacher. Teacher candidates are always eager to get in the field for their junior participation. This voice is representative of almost all teacher candidates with whom I have worked.

> As I begin this new semester, one step closer to my goal, I am exited for the semester that lies ahead. I am excited that I finally have the opportunity to teach children two subjects that I love: math and science. I really enjoyed our first classes. I liked the small class and the interaction and discussion between students. I thought the class really generated positive discussions, especially in group work situations. The discussion generated from the articles and the ideas they generated really made me think about how children comprehend material. I really never thought about comprehension on such a basic level before I read the research articles assigned in class…the simple subtraction problems really took on many forms when presented with multiple ways of solving the same problem.

Problem Solving Approach

After studying the body of research (Burns, 2004; Cobb et al., 1991; Evan & Lappin, 1994; Lester et al., 1994; Masingila, 1994; NCTM, 1989, 1990; Scharton, 2004; Van De Walle, 2007; Van Zoest et al., 1994; Taplin, 2006; Van Zoest et al, 1999) that supports the use of problem solving approach in mathematics, I decided to use problem solving as a principal strategy in my methods classes for teaching math. The problem solving approach is based on constructivist theory which emphasizes the idea that learners construct knowledge for themselves. Each learner individually (and socially) constructs meaning as he or she learns. Constructing meaning is learning; there is no other kind. The problem solving approach is distinctly different from the traditional approach. In the traditional approach, sometimes known as "teach, then- solve" or "show and tell" the teacher teaches mathematics; the learner practices it for a while, and then he or she is expected to use the new skills and ideas to solve problems. The "teach, then- solve" or "show and tell" paradigm is strongly engrained in many teacher candidate's culture, partly because this is how they learned mathematics. In order to become successful teachers of mathematics, teacher candidates have to shift their view of mathematics from one that emphasizes only procedural knowledge—knowledge of the rules, symbols and

procedures used in carrying out routine mathematical tasks—to learning mathematics by *doing* mathematics.

Many teacher candidates in method classes I have taught report that rote learning and the use of procedures without a conceptual base have led to their dislike of mathematics. With this in mind, I deliberately design a math methods course that is centered on problem solving. Students in my class are encouraged to design their lessons using this approach. Each semester I have teacher candidates who embrace the problem solving approach with such eagerness that they design most of their lessons around this powerful method. Before they actually try it out in a classroom, teacher candidates conduct research related to the problem solving approach by reading different journal articles and discussing what this approach might look like in an elementary school. The class designs and presents mini-lessons using this approach.

In a problem based classroom, for example, the teacher might (a) present a problem (b) call the children's attention to various materials available (c) ask the students to get into their groups to solve the problem without giving hints about how to get started (d) observe the children's work closely and make notes about the children's thinking (e) answer any questions children have without telling them what to do and (f) conduct a sharing session where students explain how they arrived at their answer. A crucial aspect of the problem solving method is that students have a choice in the approach they use to solve the problems. This choice allows the students to use the methods they feel most comfortable with, and therefore making students more responsible for their own learning rather than letting them feel that the algorithms they use are the inventions of some external and unknown expert (NCTM, 1989; Carpenter, 1989 Lester et al., 1994).

Characteristics of the problem solving approach include:

- Teachers providing just enough information to establish background/intent of the problem, and students clarifying, interpreting, and attempting to construct one or more solution processes (Cobb et al., 1991)
- Mathematical dialogue and consensus among students(Van Zoest et al., 1994) before presenting the cooperative group's solution to a given problem
- Interactions between (a) students/students and (b) student/teacher. (Van Zoest et al., 1994). This happens as the students explain what they did to get their answer, why they did it that way and why they think their answer is correct.

- Teachers knowing when it is appropriate to intervene, and when to step back and let pupils make their own way (Lester et al., 1994)
- Teachers guiding, coaching, asking insightful questions and sharing in the process of solving problems (Lester et al., 1994)
- Teachers accepting right/wrong answers in a non-evaluative way (Van Zoest et al., 1994)
- A further characteristic is that a problem-solving approach can be used to encourage students to make generalizations about rules and concepts, a process which is central to mathematics (Evan and Lappin, 1994; Taplin 2006,; Van Zoest et al, 1994).

A problem solving approach places the focus of the students' attention on ideas and sense-making. The approach is not only fun and powerful, but it also allows an entry point for a wide range of students, i.e. it maximizes the possibility of engaging students who have not been successful in drill and practice environments. The problem solving method has proven to be effective in preparing students for standardized tests, and as more effective in creating interest in learning mathematics than drill and practice methods (NCTM, 1989, 1990). The opposite of problem solving is the drill and practice or the "teach, then- solve" or "show and tell" methods. Teachers who use drill and practice to prepare students for standardized tests feel that they are helping their students and their school district by giving the students the tools they need to do well on these exams. However, research suggests that drill and practice methods are not as effective as many teachers think especially with regards to preparing students for standardized tests (Van De Walle, 2007).

Problem solving differs profoundly from drill and practice because no formula is given to the students. Students can use any method they choose to use, as long as they can explain how they solved the problem. Another huge difference is that communication, group work, and other cooperative learning strategies are used in the Problem Solving Approach. These are not commonly used in the drill and practice method. An important aspect of the problem solving method is that the teacher acts more as a guide and directs learning, rather than explaining everything the students should do. The teacher's role is to give the students background information on the problem before them, and to supply the students with the tools to solve the problem. How the students choose to use these tools is totally up to the students' preferences and

abilities. This makes a cooperative learning environment in which the students learn as much from each other as they do from their teacher. The teacher allows students to discuss the methods they used to solve the problem. This shows their understanding of the method they used to solve the problem, but it also teaches other students the methods they used.

We use the following cases to represent different field experiences of teacher candidates in my classes. Although these teacher candidates worked in the same school, their various classroom environments seemed to either support or impede the implementation of theories they had learned in college.

Case 1: Sam--Placed With an Autocratic, Unyielding Mentoring Teacher

One of the teacher candidates had the desire to demonstrate the power of infusing the problem solving approach to teaching mathematics. He believed he could help elementary students shift their thinking about mathematics away from a dislike and a dread of learning toward confidence in their ability to learn math content. He also wanted to help his students experience enjoyment and a sense of personal reward in the process of thinking, searching for patterns, and solving mathematical problems (Van De Walle, 2007).

Sam designed an excellent lesson for his fourth graders in consultation with the mentoring teacher and myself. While the preservice teacher looked forward to this lesson as I did, it soon became obvious that the mentoring teacher did not fully understand the approach.

The first thing Sam did was to pose a problem that the children were to solve. About 10 minutes into the lesson, the mentoring teacher began to look restless and came to my corner asking if she could intervene. When I asked her why, she said some of the children were coming up with what she considered “wrong answers” and according to the teacher “students were not supposed to be allowed to get wrong answers at this time of the year” (close to exam time). Because this disturbed both Sam and myself, I asked if we could talk about this privately and for a very short time. I was anxious to observe the whole lesson. As soon as we got in the room away from Sam, the mentoring teacher requested that I stop Sam from allowing the elementary students to write down “wrong answers” because the mentoring teacher said very convincingly. “This is what they will remember.” “I know this class, I cannot let this go on” the mentoring teacher insisted. I tried to explain that Sam was going to let the whole group share their answers and a discussion would follow, pointing to that part of the lesson plan.

After what seemed like a long time (in my mind), although this was just a few minutes, we both agreed that the lesson would continue. By now Sam was beginning to sense that the mentoring teacher was uncomfortable. Still he continued to give more time to the children to try their different methods. What followed this phase is something I will never forget. The mentoring teacher yelled at the students she thought had "wrong answers" and told them she would not let this continue. She actually stopped the discussions for a minute or two and gave explanations of what the students needed to do. By then I was in complete shock! Sam collected the white boards the elementary students were using to check what the students were going to discuss. Most of the work was of high quality. The children had solved the problems in their own way. They were enjoying this lesson until the mentoring teacher boldly announced that the groups that were not doing it the mentoring teacher's way were wrong and she was ashamed of them. I could not believe my ears! Toward the end of what seemed like a nightmare, Sam and I quietly moved out of the classroom. I asked Sam to express what he was thinking. He was looking at me in amazement. "I can't believe this," he said, "the children were doing so well. I was doing what we have spent much time discussing in our method class in college. I wanted to really try this approach." I assured Sam that he had neither failed the children nor the problem solving method. We carefully examined the different approaches that came from the various groups. Only one group really needed help. This group did not even get the opportunity to explain their answers. They began to freeze at the reprimanding voice of their mentoring teacher. What could have been a wonderful learning experience for both the mentoring teacher and Sam became a very painful experience. After discussing it for a short time, I asked Sam to go home, relax and write a reflection paper on what had happened. The section that follows is what came from this request.

Sam's Reflection

As a teacher candidate preparing for student teaching, I have learned many new teaching techniques or methods of teaching that might be considered progressive. One of these methods I have most recently been introduced to has been the problem solving method for teaching mathematics. This method not only teaches students mathematical skills, but it also teaches analytical thinking, and skills that can help students in other subjects, and other areas of their lives. The basis of this method is that there is no wrong way to obtain an answer to a question, as

long as it makes sense to the student trying to solve the question, and the student in question can explain how they obtained the answer.

The problem solving method may have an entire lesson centered on a single story problem, and within this story problem the numerous aspects of mathematics can be analyzed by the teacher and the students in a cooperative learning environment. Students learn as much from other students as they do from the teacher. By having the students explain their answers and methods to obtain their answers; students must show an understanding of the techniques they have used, and the mathematical concepts. This also allows students performing at different levels to see and understand how other students solve the same problem. This process gives the students a deep understanding of the mathematical concepts and methods by teaching for understanding, rather than memorization.

The most popular style for teaching mathematics, with which we are all familiar, is drill and practice. This process involves pure memorization of certain methods for solving mathematical problems. The methods that are memorized are not necessarily the only way to solve the problems, but are deemed to be the best way by either the teacher or the makers of the textbook. As teachers, we know that memorization does not necessarily mean that the students have not learned the material, nor does it mean that they truly understand the concept that is being taught. Rather it just means they have memorized the materials and will be able to use it for the brief time that it is required of them. Educators are well aware that for material to be learned by students a deep understanding of the material has to occur, this understanding must make sense to the student. The student must be able to understand why what they are learning happens, and most importantly, it must make sense to them. The problem solving method attempts to achieve all these requirements needed for learning and understanding, rather than just the memorization of equations.

As a student myself, I was fascinated by the problem solving method of teaching and very willing to try it. When my field opportunity arrived, I created a lesson that used both the problem solving method and cooperative learning techniques. The lesson was reviewed by the professor of the class and the cooperating teacher of the class. Both accepted it as a well- written lesson that would help the students understand a mathematical concept. When the lesson was written, it was written to educate my students, but through this lesson, I myself was educated about our educational system. Admittedly, this might have been an extreme situation,

nevertheless this lesson taught me something. I believe all educators, especially those who are dedicated to helping students learn and succeed in school (and in life), can profit from what I experienced.

The lesson is that it is very easy for us to become stagnant and fixed in our ways after years of teaching. It is easy to view the methods that we have used for years as the best way to approach instruction. We are not necessarily against change, but neither are we inclined to give change a chance. This was very evident in the classroom the day the problem solving lesson was taught. Every teacher is different, and they must pick methods that fit into their personality, philosophies, and abilities. It is essential though, no matter what, that student learning come first. So as educators we must be open to new techniques, even if at first we are uncomfortable with using them. There are strict rules of how we assess student learning, but we should also have strict rules of how we assess our own learning as teachers.

How can we truly determine if a method is successful? How do we judge success? Is it judged by test scores? Is it judged by behavior? I would like to think it is judged by the students understanding of a subject and material, but after teaching this lesson, I am no longer sure of how a successful learning is judged in some classrooms today. These doubts in the learning process might prove me naive since I have had very limited experience at being an educator, but I would like to think that there is a better way to educate children and it can be obtained if we as educators decide that students can learn and truly understand a subject like mathematics. Success is not just something that sometimes happens, but rather it has to be expected of all students. This expectation will not only set a classroom's standards high, but students will know this is expected of them and understand that the teacher believes they can succeed.

These thoughts came from observing my mentoring teacher teach, and the effects that this cooperating teacher had on the problem solving method lesson I tried to implement. Now as an objective reader of this paper, the first thing you are thinking is this is a paper a teacher candidate is writing to vent about a bad grade they received for a lesson they taught, or to put down their cooperating teacher. Before I proceed with the rest of this paper I would like to address these thoughts. The professor of the methods class that this lesson was designed for observed the teaching of this lesson. The resulting conversation to grade the lesson brought up feelings from both the professor, and myself that the lesson could have been very successful, if it had been given a chance. This paper is not written with ill will toward anyone. It is written in frustration

that the students in this classroom were denied an opportunity to learn, and were put in a situation in which they were expected to memorize rules. This negativity sent a message to the students that they did not have abilities to learn cooperatively or develop their own methods to solve mathematical equations. Not only was this devastating to my lesson, I feel it was also detrimental to these students' education.

As educators we all have different styles, this can be due to our personalities, our philosophies and our abilities. These styles might be required to change due to the particular class that we are teaching. I will admit that my teaching philosophy greatly differs from the teaching philosophy of my cooperating teacher. No matter what the teachers' philosophy, however their goal should be to encourage learning and understanding in their classroom. I feel it is essential for the teacher to show that they believe in and expect great results from everyone of their students. This attitude should be universal for all educators; I believe this attitude does not exist in the classroom in which I currently work. The philosophy in this classroom is that students cannot do anything unless they are told exactly what to do. Students cannot decide how to solve problems or any other classroom activity because they will either become confused, or do the activity incorrectly. Students have no responsibility for their own actions because they must do things exactly the way the teacher wants. It does not matter if what they are doing is right, it is considered wrong if it is not how the teacher wants it. There is also an overwhelming sense that students will not behave, and must be made to behave, rather than having the expectation that the students will behave if engaged in a learning activity.

One way I can demonstrate that some teachers expect failure from their students is the way my cooperating teacher manages behavior in the classroom. This environment makes it almost impossible to use cooperative learning techniques. Students no longer know how to behave when allowed to talk to their peers, and no sense of self responsibility has been established. Students will not monitor their own behaviors because the teacher has been the sole disciplinary authority. This environment is a negative environment that does not encourage individual learning. Teaching using the problem solving method in this environment proved to be very difficult. The students understood the concept and began completing their work well. The problems occurred when the teacher began telling students their methods for getting an answer were incorrect. Some of the methods the students were using would have gotten them the right answer, but it was not the method the teacher wanted them to use. The students then

became frustrated and confused because they did not want to use the incorrect method. Behavior problems began, and some groups could not get a final answer because they were afraid to be wrong. Everything that happened in this scenario worked against the problem solving technique. The lesson essentially became a failure because students did not get an opportunity to use their own methods, share with their classmates, and learn from each other. The lesson became a lesson in which the students only learned from the teacher, and there was only one method that could be used to solve the problem, the teacher's way.

When attempting to teach using the problem solving method, this teacher broke almost all professional protocol. This breaking of protocol not only hurt my education, but the education of the students, and it showed a lack of professional respect to me and my professor. As a student learning to become a teacher, I do not have enough experience to make judgments on how to mentor a preservice teacher, but there are some simple things I do know about teaching that I try to use in my lessons. Some of these are, I try to let my students figure out their errors and do not tell them the answers. I do not interrupt my students when they are speaking even if what they are saying is wrong, I do this because I respect their opinions, and if I do not listen, or stopped them, they might not speak the next time the opportunity presents itself. The main thing I have learned through my limited teaching experience is that if you show your students respect, and expect good work from them, then they will show you respect and try their best to do good work. These rules should apply to all teachers, no matter if they are teaching elementary school children or teacher candidates.

Case 2: Michelle–Placed With an Average, but Caring and Supportive, Mentoring Teacher.

Michelle described her experience as challenging, but rewarding. She seemed to know when the mentoring teacher was not giving the needed instructional leadership:

> I will be honest about the experience at school X; it has been a challenging but also rewarding and valuable learning experience at the same time. I have truly enjoyed working with you as well. Teaching lessons has been at times challenging but never frustrating . . . I enjoy participating in this particular school because there is never a dull moment or shall I say "typical" day at School X. Teaching at this school has given me the opportunity to see the "behind scenes" that you see and hear about in the news about issues and concerns that urban

> schools are faced and challenged with. It has truly been an eye opener. I feel concerned for some of the children and their families. I can not express how honored I feel to work with some of these families and their children at least two days a week. Some of the children have even shown their gratitude toward my willingness to work with them and that is why I know I am doing the job right. Teaching is about making an impact on a child's life. I feel as though I have made a difference as a teacher candidate in the classroom and that is all that matters. I have observed teachers being faced with some challenges and how they handled these challenges on a day –to day basis. I felt as though this particular experience helped boost my confidence in the classroom. When the problem solving approach was used the proper way, the majority of the children benefited from it, however there are times it was used incorrectly.

Case 3: Theresa--Placed with a Mentoring Teacher who graduated from same college as the teacher candidate

Theresa's class was different. Her mentoring teacher is a graduate from the same college as the teacher candidate. This urban school has three mentoring teachers from this same college. Theresa was given every opportunity to try out strategies we had discussed in class at college. However Theresa's mentoring teacher was also struggling with mandates from the district. The mentoring teacher had nothing to hide. She and Theresa would meet to discuss each of her lessons before implementation. When she disagreed with the district expectations, she was sure to point that out to Theresa where and why her disagreements were. Theresa would invite me to watch her teach as many times as she could. Sometimes I found myself not having time to watch all her lessons, but Theresa understood that I had 15 other teacher candidates to observe. Each time I went to observe Theresa, she was prepared, confident, and happy and looked forward to our teacher conference. This is Theresa's voice, representing a third of teacher candidates that had been mentored by this teacher.

> After becoming more familiar with the problem solving approach, I was sold on its value to help students become better learners. I became very concerned once in the classroom when I realized how scripted the lessons and school day was. The wonderful creativity that teachers generally possess was being stripped by

> mandates, testing, and prefabricated lesson plans that were strictly enforced…As a teacher candidate I was allowed leeway in my lesson plans by my mentoring teacher (MT), but my MT was responsible for implementing a certain amount of material in a limited amount of time. Teachers were literally policed by the proponents of various curriculum packages to teach…In an environment like this how can a teacher become skilled at implementing a true problem solving approach? Professor, you know I really want to make a difference!"

Case 4: Julia--Placed With an Excellent Supportive Mentoring Teacher with Several Years of Teaching Experience

Julia was in a class she describes as excellent, with an effective mentoring teacher who cared about her elementary classroom, and was well prepared each day for her class. Julia had a special arrangement where she discussed each of her lessons with the MT before I saw them. Their relationship with the MT can be described as professional. Julia said she was motivated and wanted to be like this MT.

> My experience in EDU 312 was very rewarding. In the classroom setting at this school, I learned many new ways of teaching as well as classroom management techniques. I was very fortunate to have an amazing cooperating teacher who was a great role model . . . I tried many strategies that we discussed in college. I am ready for student teaching . . . I am very glad that I chose this school to do my EDU 312 class.

Reflections

Each of these teacher candidates represents a certain type of experience. Sam was placed with a highly autocratic, insensitive mentoring teacher who embraces a very rigid instructional approach. Sam's experience, therefore, was heart wrenching. One wonders how many teacher candidates would respond the way Sam did? Is there a possibility of destroying a teacher candidate's career by such an encounter? Michelle seems to have been placed with an average, but caring and supportive mentoring teacher. She, however, "learned how to understand the urban situation and the "behind scenes" that normally one hears about from the media!" Theresa was placed with a mentoring teacher who graduated from the same college as herself. Theresa

seemed very comfortable with her placement. Perhaps it was because of the fact that she and the mentoring teacher shared something in common-coming from the same college. Their discussions related to the district's mandates were very interesting. She was the happy and confident teacher candidate every instructor would look forward to meeting every Monday morning. Julia had an excellent positive role model from whom she undoubtedly learned strategies of becoming an effective teacher. Teacher candidates face these unique experiences semester after semester.

Problem Solving Approach

I was pleasantly surprised by how much the preservice teachers had learned over a very short period of time about the Problem Solving Approach. Sam's reflection paper demonstrated a deep understanding of the problem solving approach he was about to use. He wrote:

> This method not only teaches students mathematical skills, but it also teaches analytical thinking, and skills that can help students in other subjects, and other areas of their lives. The basis of this method is that there is no wrong way to obtain an answer to a question, as long as it makes sense to the student trying to solve the question, and the student in question can explain how they obtained the answer. The problem solving method may have a whole lesson centered on a single story problem, and within this story problem the numerous aspects of mathematics can be analyzed by the teacher and the students in a cooperative learning environment. Students learn as much from other students as they do from the teacher, by having the students explain their answers and methods to obtain their answers.

He went on to explain how drill and practice is a popular method being used by traditional teachers despite its inherent weaknesses. Michelle wrote "When the problem solving approach was used the proper way, the majority of the children benefited from it, however there are times when it was used incorrectly." For Michelle reflections included knowing when she thought the teacher was being an instructional leader and when she thought that was not happening. She describes the experience as challenging but also rewarding and valuable. Theresa was given every opportunity to try out strategies she had learned including the problem solving approach.

Her conflict arose when the teacher used prescripted programs. Julia was in a perfect classroom and everything was working for her. She was very happy to have come to this school.

Can Teachers Stop Growing As Professionals?

In his reflection, Sam argued that "it is easy for us to become stagnant and fixed in our ways of teaching. It is easy for us to view the methods that we have used for years as the best way to approach instruction. We are not necessarily against change, but neither are we inclined to give change a chance. This was very evident in my classroom the day the problem solving lesson was taught." Sam also argued that every teacher is different, and so they must pick methods that fit into their personality, philosophies, and abilities. Still it is essential, no matter what, that the student learning should come first. He also argued that educators must be open to new techniques, even if at first they are uncomfortable with certain approaches. There was a feeling that because the teacher had not been exposed to this method, there was no way she could guide the preservice teacher. There seemed to be a feeling of inadequacy on the part of the mentoring teacher. Sam pointed out that teachers should assess their own learning. The mentoring teacher's perspective was different from the philosophy expressed by the preservice teacher.

Does the Mentoring Teacher's Philosophy Make a Difference?

Sam argued that his philosophy of teaching was the exact opposite of the mentoring teacher's philosophy. He wrote:

> I will admit that my teaching philosophy greatly differs from the teaching philosophy of my cooperating teacher. The philosophy in this classroom is that students cannot do anything unless they are told exactly what to do. Students have no responsibility for their own actions because they must do things exactly the way the teacher wants. It does not matter if what they are doing is right, it is considered wrong if it is not how the teacher wants it. There is also an overwhelming sense that students will not behave, and must be made to behave, rather than having the expectation that the students will behave if engaged in a learning activity.

Michelle suggests that although her situation was challenging and even frustrating, "I enjoy participating in this particular school because there is never a dull moment or shall I say 'typical' day. Teaching at this school has given me the opportunity to see the 'behind scenes' that you see and hear about in the news about concerns that urban schools are faced and challenged with. It has truly been an eye opener." In all her reflections Michelle implies that her classroom is average, but she is happy that she has had an opportunity to experience some challenges. Michelle feels that she has "made a difference as a teacher candidate in the classroom and that is all that matters . . . I have observed teachers being faced with some challenges and how they handled these challenges on a day –to day basis. I felt as though this particular experience helped boost my confidence in the classroom." For Michelle what matters is whether the children are learning or not. She gave the impression that she did not pay much attention to the teacher's philosophy.

Theresa's reflections focused on questions she had about mandates from the district. She did not have any problems discussing or trying out any strategies we had discussed in class. This gave her an opportunity to concentrate on important questions. For example she wondered why the district had heavily scripted some lessons for teachers while at the same time appreciated that her mentoring teacher was understanding.

Julia was in what she called a "perfect classroom." She was happy to be at this school. In fact she always referred to her situation as a classroom where you had the perfect role model for instructional leadership.

Ward and Wells (2003) contend that "preservice teachers must learn and grow from all of their experiences, the trying ones as well as the exhilarating ones." Remembering this was helpful in Sam's experience. When things get tough or feelings are hurt, asking the university to move a field-based student to another setting is not the solution. Most teachers do not want someone who was unsuccessful in another class; however, in Sam's experience trust had been destroyed by the mentoring teacher's actions. Painful as it may be, there are times when preservice teachers learn what not to do in their experiences. What followed for the rest of the junior participation period were detailed discussions of each lesson taught by the preservice teacher, however this did not change the fact that Sam no longer had the confidence and trust he had walked with into this situation. Caruso (1998, 2000) found that student teachers normally set high standards for themselves and are excited about having an opportunity to practice teaching;

however some teacher candidates may experience a sense of disappointment with mentoring teachers who do not show great interest in working with or who are not effective role models. "Students may feel caught in the middle if they are encouraged by the supervisors to plan and develop experiences for children that are not valued in their field placements" (p. 77). I got the impression that Sam was going through this phase.

Conclusion: How Do Different Mentoring Teacher's Philosophies Support or Not Support Teacher Candidates?

The lesson from these teacher candidates' different environments is intriguing. Perhaps this paper raises more questions than it answers. Is it fair that Sam remained in his classroom after the incident? Should Sam be told that his mentoring teacher represents a small number of teachers in the field of education and every so often some teacher candidate comes across such a placement? Is it helpful to be in this kind of class? We really don't think so. But the reality is that there are times when the teacher candidates have to accept that they will learn most about what not to do. As Ward and Wells (2003) point out in the *Top Ten Tips for Preservice Teachers,* "Even in situations when the cooperating teacher is inefficient, a preservice teacher can learn a great deal." Should these seemingly inefficient teachers supervise students? We think they should not. However, methods instructors may not really know mentoring teachers until they have placed a preservice teacher in their classroom.

Each teacher candidate's experience in this paper raises the question of "fairness" or equity of access in placements for junior participation. How will Sam's, Michelle's, Theresa's and Julia's junior participation experience impact their perspective on Student Teaching the following semester? Will Sam walk away with feelings of inadequacy? Will Michelle learn to dismiss as unimportant the mentoring teacher's contribution to her performance while Theresa and Julia are ready for Student Teaching because their placement was excellent? The answers to these questions call for further research on effectively matching teacher candidates with mentoring teachers.

References

Burns, Marilyn. (2004). *About teaching mathematics: A K-8 resource* (3rd ed.). Sausalito; CA: Math Solution Publications.

Carpenter. T. P. (1989). Teaching as Problem Solving. In R. I. Charles & E. A. Silver (Eds). *The Teaching and assessing of mathematical problem solving* (pp. 187-202). USA: National Council of Teachers of Mathematics.

Caruso, J. J. (1998). What cooperating teacher case studies reveal about their phases of development as supervisors of student teachers. *European Journal of Teacher Education, 21*, 119-132.

Caruso, J. J. (2000). Cooperating teacher and student teacher phases of development. *Young Children*, 55(1), 75-81

Cobb. P., Wood. T. & Yackel, E. (1991). A constructivist approach to second grade mathematics. In E. V. Glaserfield. (Ed). *Radical Constructivism in Mathematics Education* (pp. 157-176). Dordecht. The Netherlands: Kluwer Academic Publishers.

Cunningham, J. W. & Ballew, H (1983). Solving word problem solving. *The Reading Teacher* 36 (8), 836-839.

Evan, R. & Lappin, G. (1994). Constructing meaningful understanding of mathematics content. In Aichele. D. B. & Coxford. A. F. (Eds.), *Professional Development for Teachers of Mathematics* (pp.128-143). Reston. VA: National Council of Teachers of Mathematics.

Lester, F.K.Jr., Masingila, J.O., Mau, S.T., Lambdin, D.V., dos Santon, V.M. and Raymond, A.M. (1994). Learning how to teach via problem solving. In Aichele, D. and Coxford, A. (Eds.) *Professional Development for Teachers of Mathematics* (pp. 152-166). Reston. VA: National Council of Teachers of Mathematics.

National Council of Teachers of Mathematics. (1989). *Curriculum and Evaluation Standards for School Mathematics*. Reston. VA: National Council of Teachers of Mathematics.

Scharton, Susan (2004). I did it my way: Providing opportunities for students to create, explain, and analyze computation procedures. *Teaching Children Mathematics.* January, 278-283.

Taplin, M. (2006*). Mathematics through Problem solving.* Retrieved at htpp//www.mathgoodies.com/articles/problem_solving.html

Trafto & Midgett (2001). Learning through problems: A powerful approach to teaching mathematics; *Teaching Children Mathematics*, May, 532-536

Van De Walle, J. (2007). *Elementary and middle school mathematics*. *Teaching developmentally*. New York: Pearson.

Van Zoest. L., Jones G & Thornton, C. (1994). Beliefs about mathematics teaching held by Preservice teachers in a first grade mentorship program. *Mathematics Research Journal*, 6(1), 37-55.

Ward, M. J & Wells, T. J (2003). Gate ways to experience: Guests in the classroom, top ten tips for Preservice teachers. *Kappa Delta Pi Record*, 40 (1), 42-44.