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From the Margins of the Classroom to Mattering: How Community College Education Students Develop Future Teacher Identities

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ABSTRACT

This paper discusses the effects of an experimental fieldwork course. The course incorporated cultural responsiveness and action research to impact the future teacher identity of students in a teacher education program at an urban community college. Elements of future teacher identity were discovered for all students; however, the experimental group showed significantly more growth in four elements. A theoretical model of how these elements may lead to a greater commitment to the field is proposed.

Teacher shortages in large urban areas throughout the United States have long been of concern to policy makers (Sutcher et al., 2016). Recruiting and retaining culturally competent and diverse teaching faculty is similarly challenging (Dilworth & Coleman, 2014). Becoming a teacher requires a commitment to a profession fraught with low levels of retention (Gray & Taie, 2015; Riggs, 2013; Zheng & Zeller, 2016). Research on the development of pre-service teachers has exclusively focused on teachers nearing certification, enrolled in bachelor's degree or master's degree programs (Welsh & Schaffer, 2017). This paper examines how the capstone fieldwork course of a community college teacher education program can support students in developing a future teacher identity by attending to the unique needs of this student population, which is under-represented within the teaching field.

Community College Student Identity

The majority of research on students attending community college has focused on general rates of retention and achievement using large-scale studies (Baum et al., 2013). Research has shown that community college students' beliefs in their own academic ability is in a constant state of flux in relation to various forms of feedback and experiences. Students who meet challenges during college and can overcome them with support are most likely to experience positive outcomes (Bickerstaff et al., 2017). First generation and other underrepresented college students are more likely to have low academic self-efficacy than traditional college students (Majer, 2009; Sedlacek, 2004; Yeager & Walton, 2011).

Self-efficacy is a psychological factor that refers to someone's perceived ability to learn or perform at a certain level, or influence their environment through their behaviors (Bandura,

1993; Schunk & Mullen, 2012). The Community College Research Center found that institutional factors of community colleges either support or hinder students' college achievement and retention (Karp, 2011). Therefore, the socio-cultural context of college experiences may influence self-efficacy among community college students.

One construct measuring how community college students' institutional experiences is related to their psychological perceptions is that of "mattering versus marginalization" (Schlossberg, 1989; Tovar, 2013). *Mattering* as described by Schlossberg (1989), is conceptually consistent with non-cognitive factors related to academic achievement (Pascarella & Terenzini, 2005). Whether students experience themselves as mattering as opposed to marginalized is directly tied to students' experiences in college. Schlossberg identified four dimensions to mattering: attention (a student feels as if someone has noticed them), importance (a student feels cared about), ego extension (a student believes that someone will be proud of their accomplishments and disappointed by their failure), and dependence (a student feels needed). Although few studies of community college student identity exist, one, examining community college transfer students in four-year schools, found tensions and conflicts predominated the students' perception of their identities at the 4-year college (Rodriguez & Kerrigan, 2016).

Unlike traditional 4-year college attendees, community college students are more likely to have experienced prior academic failure (Baum et al., 2013; Rodriguez & Kerrigan, 2016) and are therefore more at-risk for establishing an identity based on low self-efficacy, and a sense of marginalization. Therefore, we hypothesized that a context beyond the college classroom, that is connected to their career goals, might provide a catalyst for positive identity development.

Prior research on pre-service teachers has shown them to have an idealized professional identity based on a fantasy view of the field (Friesen & Besley, 2013; Nichols et al., 2016; Pillen et al., 2013). Encountering conflicts during teacher training can lead to a more reality-based perspective. Given their lack of experience, pre-service education students likely hold idealized fantasies of teaching. Olsen (2010) suggests that a focus on the development of beginning teachers' professional identity could be helpful in dealing with tensions that arise between the fantastical expectations and reality-based experiences of teaching.

Research on 4-year college student professional identity development reflects a consensus that developing a professional identity during college is crucial to students' later career success (Gilardi & Lozza, 2009; Jackson, 2017). Program elements that facilitate career identity development include: encouraging critical self-reflection, work-embedded activities, and connections between course content learning and the professional environment (Gilardi & Lozza, 2009; Jackson, 2017). Pre and in-service teachers with high self-efficacy related to their teaching ability were found to have a higher commitment to entering and remaining in the field (Klassen & Chiu, 2011). Pre-service teachers' motivation and commitment to the profession have been found to relate to their teaching self- efficacy, perceived autonomy and social support during their practicums (Yuan & Zhang, 2017). This suggests that professional motivation and commitment among pre-service teachers is impacted by their early experiences in the field.

Teacher's self-efficacy has also been related to their performance in the classroom, especially for teachers of young children (Buss, 2010; Henson, 2001). A recent study found that during early practicum experiences, classroom fit significantly predicted the pre-service teacher's self-efficacy in the classroom and their overall satisfaction with the practicum experience (Van Schagen Johnson et al., 2017). Self-efficacy has been shown to vary with the extent to which individuals possess the requisite skills and knowledge to succeed in the relevant area (Klassen & Chiu, 2011). For pre-service teachers this includes understanding key pedagogical concepts

underlying major teaching practices (Irie et al., 2018). In addition, critical self-reflection has been found to be a significant factor in both pre-service and novice in-service teachers' effectiveness in the classroom (Sharma et al., 2011; Yuan & Zhang, 2017).

We hypothesize that future teacher identity development is comprised of those elements found to be salient for both academic and professional identity development among students. During practicum pre-service teachers develop their professional identities as they encounter the realities of the classroom, develop a perspective on their own competence and make connections with key concepts related to effective teaching methods. Therefore, these elements were expected to be among those that emerged as relevant to our students' future teacher identities. Research suggests that practicum experiences where students are able to connect theory to practice and develop reflexivity in relation to their role in the classroom are significant in strengthening future teacher identity (Fraser, 2018; Gilardi & Lozza, 2009; Jackson, 2017; Rodrigues et al., 2018). Accordingly, we decided to focus our work on a change to two related elements that we expected would increase our students' sense of mattering, and self- efficacy.

Changes to the Supervised Practicum

We chose to vary two key elements of the supervised practicum to determine whether these elements in combination would have an impact on our students' future teacher identity development. We expected that having students conduct action research within a culturally relevant practicum placement practicum site would enable each of these elements to have a greater impact than if either one had been implemented in isolation.

Action Research

Action research is a collaborative process that allows for an exploration of classroom practices that can be improved or changed, thereby increasing pre-service teachers' critical self-reflection (Cardelle-Elawar, 1993; Ferrance, 2000). We hypothesized that making positive changes in their practicum classrooms would increase students' feelings of mattering, and strengthen their self-efficacy.

Multicultural Service Learning (MSL)

Multicultural service learning (MSL) is working with schools whose student populations are linguistically, racially, and socioeconomically under-represented (Boyle-Baise, 2002). Studies have shown that multicultural service learning can improve pre-service teachers' understanding of cultural diversity, challenge negative stereotypes, and increase students' ability to work with children from diverse socio-economic, ethnic, racial, and linguistic backgrounds (Baldwin et al., 2007; Chang et al., 2011; Ladson-Billings, 2004). One study found that the positive impact of participating in MSL was most significant for pre-service students who were themselves from disadvantaged, minority backgrounds (Chang et al., 2011). This finding suggests that rather than solely being useful as a form of "cross-cultural" exposure for white middle-class teacher candidates, MSL can provide benefits for teacher candidates of color and from low-income backgrounds.

We expected that a culturally diverse practicum in which our students' felt that they belonged and where they were given the opportunity to make a difference through action research would have a major impact on their feelings of mattering as opposed to marginalization. Had we only implemented one of these changes without the other, we believe the impact would not have been significant enough to counteract the low self-efficacy and sense of marginalization that many of our students demonstrated prior to the practicum. Therefore, we treated the experimental practicum as a combination of both factors rather than attempting to tease out the impact of each element separately.

Theoretical Framework

According to sociocultural theory learning is inseparable from the identities of learners engaged in meaningful social activity. Especially relevant to the present study is the concept of learning as participation in communities of practice (Lave & Wenger, 1991). According to this view, novice learners develop skills and knowledge through supported participation in the central tasks and practices valued by their community.

To discover elements of our students' future teacher identity we used grounded theory deriving themes from authentic data sources. These sources included naturally-embedded coursework artifacts. In this way, we considered our students' future teacher identity to be "hiding in plain sight" within the preexisting education coursework. Using data generated by students, professors, and cooperating teachers (CT), we found themes that emerged consistently across various contexts. This approach, triangulation of methods, involves the combination of data drawn from disparate sources and contexts and has been recommended for strengthening the reliability of findings drawn from qualitative analysis (Denzin & Lincoln, 2005).

We hypothesized that by placing students in classroom communities that were more culturally relevant to them and by engaging them in action research we could increase their feelings of mattering and strengthen their future teacher identity. To test this theory, we designed a semester where half of the students followed the traditional practicum placement and coursework, and the other half participated in the MSL, action research-infused practicum experience.

The research questions we addressed in our analysis included:

1. What dimensions of students' future teacher identity development during practicum were discovered across all data sources?
2. How were dimensions of students' future teacher identity impacted by the experimental practicum experience as opposed to the traditional practicum?
3. To what extent are these dimensions related to students' future commitment to teaching?

Method

This research used a quasi-experimental design, where students were placed into either the traditional or experimental practicum. Students were assigned to practicums based on their

home addresses. There were no systematic differences between students in each group which allowed us to compare outcomes according to practicum type.

Participants

The total sample consisted of 60 pre-service early childhood teacher education community college students. Among the students, 30% were African American, 50% were Latino 17% were Asian and 3% were White. All but one identified as female. More than 80% were first-generation college students with family incomes below the poverty line.

Program Context

At the 400-level, students are required to complete 90 hours of practicum and the coursework is on curriculum. The capstone project includes planning two structured learning activities with one conducted by the students in the practicum classroom. This lesson is video-recorded and students complete a reflection assignment based on the recording. At the end of each semester, the cooperating teacher is asked to complete an evaluation of their student and send it directly to the professor. Students are observed by their professor 3–4 times each semester, wherein the professor takes observation notes and discusses them with the students in a post-observation conference.

The traditional group $(n = 30)$ completed their placements at affluent private and public schools and completed the traditional assignment. The experimental group $(n = 30)$ was placed in a public school with a high concentration of children living in poverty. All coursework for the traditional and experimental cohorts was identical except the capstone project. The experimental cohort conducted an action research project, where they sequentially: 1. Assessed the needs of their cooperating classroom; 2. Wrote a detailed plan for a change to that classroom 3. implemented a change to that classroom; 4. Led an activity both before and after the classroom change which was videotaped each time; and 5. Assessed the impact of the classroom change on the effectiveness of the lesson, the children's responses and the overall classroom functioning. The experimental group of students developed a proposal for the classroom change in collaboration with the cooperating teacher and professor. The proposals included mini-grants of up to $250, which were funded by our grant through the Kellogg Foundation.

Data Sources

To analyze differences between the experimental and traditional cohort we analyzed coursework artifacts that included the write-up of their capstone project, specifically *Part C* that required self-reflection on the activity/lesson plan that was conducted with the class and *Part D*, that required an analysis of the impact of their classroom action research (for the experimental group) or lesson plan (for the traditional group) and a separate Teaching Belief Statement. Additional data sources described above included: Student journal entries, the cooperating teacher evaluation and the professor observation notes from their field work visits.

Data Analysis

We used inductive analysis to identify what elements of our students' developing future teacher identity were most salient across all data sources. Rich descriptions (Denzin & Lincoln, 2005) from multiple data sources that included the voices of the students and the cooperating teachers enabled us to increase reliability and garner insights from an insider perspective (Steier, 1991). Once we had established distinct themes, we considered differences between the traditional and experimental groups of students using those themes as analytical categories.

We engaged in a reflexive coding process, which emphasized awareness of our own pre-conceptions and positionality in the research process (England, 1994; Malterud, 2001; Steier, 1991) Our collaborative process of data analysis has been shown to increase objectivity of qualitative analysis (Barry et al., 1999). We established an initial list of 32 codes, by looking for patterns that occurred in the students' Teaching Belief Statements and the part C and D commentaries. The professor observations and cooperating teacher evaluations yielded codes that were similar to those found in coursework although the prevalence of each varied significantly. We refined our codes until 100% agreement of code definitions and meanings was reached. To be included codes needed to be either explicitly stated, i.e., "developmentally appropriate practice" or clearly defined. If a term or concept came up in more than three different data sources, we kept it as a code. Codes used less than three times or in less than three data sources were removed from further analysis. We coded for both positive and negative references to each code. For example, if a student was described as being either highly engaged or disengaged, we counted this as engagement and noted whether positive or negative. After discussion and refinement of initial codes, we collapsed them into the 8 most distinct and reliably determined. We consider these to reflect dimensions of our students' future teacher identity.

Results

Q. 1. What Dimensions of Students' Future Teacher Identity That Developed during Their Pre-Service Practicum Were Discovered across All Data Sources?

Table 1 provides examples of the dimensions discovered in the data. The left column lists the data sources that demonstrated this theme and how it was defined in each data source. The right column provides examples of the theme drawn from one of the data sources. The codes are listed from most to least prevalent in terms of how many students showed evidence of the code across all data sources. They are as follows: Personal Connection with Children, Active Engagement, Student Taking on Teacher Role, Integrating and Adapting to the Class/Familiarity with Class, Cooperating Teacher Guidance, Understanding and Applying Complex Concepts of Teaching and Learning, Critical Self Reflection, Connecting Fieldwork to Broader Issues of Teaching.

Q. 2. How Did the Experimental Practicum Impact the Students' Future Teacher Identity Development?

Table 2 lists the four codes that differed significantly between the experimental and traditional groups: Engagement, Identifying with Teacher Role, Understanding Key Pedagogical Concepts,

Table 1. Coding examples-positive.

Theme	Example
1. Personal Connection with Children: Described in cooperating teacher evaluations, professor observations and student journals as-having emotional connections with individual children and responding to individual children's needs.	The entire time you worked with this student, you remained on eye level and despite how exhausting the activity was and how frustrated the student became, you remained very calm, composed, and kept smiling. (Professor Observation Notes)
2. Active Engagement: Described in cooperating teacher evaluations, professor observations and student journals as- students taking initiative and being central to the class or passive and functioning as an observer; students described themselves as either leading activities and helping to manage the class or on the outskirts observing.	In the 25 minutes that I observed your classroom, you never stopped moving for more than 30 seconds. You were on your feet, down on the floor while working with children, back up to help a student get their belongings together, and then working on something for the teacher. At no point did I see you take a break or look anything less than truly engaged. (Professor Observation Notes)
3. Student Taking on Teacher Role: Described in cooperating teacher evaluations and professor observations as functioning as another teacher/ member of the team, student journals as having authority with the children and in classwork artifacts as "thinking like a teacher" and also addressed using techniques to help solve problems with children or to lead the class.	Helping (child in class) with her math assignment made me feel like I was really a teacher for the first time. I sat with her and we worked through the problem together and she got it. She was able to do it again the next time be herself. Right then I felt like I was actually a teacher and I could make a difference. (Student Journals)
4. Integrating/Adapting to Class, Familiarity with Class: CT evaluations, professor observations, student journals and coursework artifacts. Defined as: fitting in easily with the class routines and changing to match the needs of the class (or not); familiarity and ease in the classroom and with their role or feeling out of place; adapting to students' needs and being flexible with curriculum/schedule.	She is apt to follow any teacher direction, and at times is able to fill in the gaps around the classroom when needed. For example, at snack time, she often walks around looking to see if anything needs to be filled up, fixed, or cleaned up. It is very helpful of her to do these things. It's as if she feels this classroom is her own. (CT Evaluation)
5. Cooperating Teacher Guidance (cooperating teacher and professor) and Understanding Children (student response) described in evaluations and professor observations as students being open and responsive to teacher guidance. Student journals mentioned seeking guidance from the teachers. *Understanding Children* was described in professor observations as students appearing to understand children in terms of individual differences and development. Student journals mentioned using information to understand the children better and wanting to understand children.	She (CT) really helped me. I feel like we really connect, and she was interested in helping me become the best teacher I can be…I learn so much from her. (Student Journal) One of her strengths is her ability to acutely observe situations and interact with the children in a meaningful and developmentally appropriate way. She genuinely understands childhood development and helps them deepen their play by using reflective language and reinforcing the positive elements of their constructive work. (CT Evaluation)
6. Understanding and Applying Complex Concepts of Teaching and Learning This was demonstrated in coursework artifacts through the degree and accuracy with which students referenced the major concepts. teacher evaluations, teachers described students understanding their curriculum and/or methods.	Codes Most Referenced the Teaching Belief Statement: Differentiated Instruction: I will be sure to change up the activity plans I do with my class so that each one meets the needs of the more advanced but also the struggling learners. (Teaching Belief Statement) Family Collaboration: It's important reach out to parents and caregivers and try to get them involved in our class and school community.… it's important to work as a team. (Teaching Belief Statement) Developmentally Appropriate Practice: The activity plans I came up with for the past couple of semesters have incorporated topics that are developmentally and culturally appropriate to the children in my classes, allowing them to explore and learn from their own experiences. The children will have the ability to express themselves without being pushed too much at a young age. (Commentary C)

Teacher as Facilitator: A teacher's job is to create learning experiences with the children that encourage them to step back take charge of their own learning. (Teaching Belief Statement)

Inquiry Methods: The teacher would use questions that would help them (the students) think creatively on real life situations that may have occurred and come up with their own solutions to these problems. Then she would build classroom activities that relate to the questions. (Student Journal)

Teaching Skills in Isolation: Children need to learn basic skills like ABCs and counting in the early grades, flashcards, and repetition can help with that. (Commentary D)

Safety: A perfect teaching situation to me is acknowledging the children's feelings and having them feel comfortable and safe in the classroom. (Teaching Belief Statement)

I realized this because while answering questions it gave me an opportunity to self-evaluate if I in fact accomplished what I wanted to and if the purpose was clear. Although an activity can give children a chance to show prior knowledge it is important to expand on that knowledge and engage children in learning. I could have asked more questions to challenge the children and expand on their thoughts. (Commentary C)

I could relate what I've learned from this project to my future classroom planning as a teacher by becoming more attentive to what I'm planning and how I can make it so that it meets every child's needs. I could also say that not everything is going to work out the first time around but several times after, it is easy to see what really does help the children. I'm convinced that there is no such thing as a perfect teacher but a teacher that tries her/his hardest goes a long way. Putting effort into the planning definitely leads into implementing better ideas into children which in the long run they will benefit from. (Commentary D)

7. Critical Self Reflection Critical self-reflection was apparent in coursework artifacts, showing whether students reflected on their own experience, critiqued their effectiveness and analyzed how they could improve. Student journals mentioned areas needed for growth in relation to teaching practice. Teacher evaluations described seeking and learning from feedback. Professor observations mentioned adjusting approaches to children based on feedback from teachers, themselves, or the children's responses.

8. Connecting Fieldwork to Larger Issues of Teaching This was apparent in coursework artifacts, which demonstrated understanding of all the complex issues that affect classroom functioning. Journals mentioned relationships between broader issues of teaching and their experiences during practicum. Teacher evaluations mentioned students understanding and acknowledging challenges and adapting to them. Professor observations described students showing awareness of multiple issues occurring in the classroom and of keeping the needs of the whole class in mind while working with small groups or individuals.

Table 2. Comparison of traditional and experimental cohorts.

	Commentaries	Trad.	Exp.	Student Journals	Trad.	Exp.	Teaching Belief Statements	Trad.	Exp.	Teacher Evaluations	Trad.	Exp.	Professor Observations	Trad.	Exp.
Engagement	N/A			Described Self as central to the classroom	53%	90%	N/A			Student central to the classroom, highly engaged and leading activities	71%	87%	Depicted as highly engaged, active, and responsive/ interactive with children	71%	87%
Identifying with Teacher Role	N/A			Described feeling like a "real teacher"	50%	93%	Described role in the classroom as teacher/facilitator	11%	25%	Mentioned the student being part of the teaching team	7%	41%	Described student functioning as another teacher in the class	29%	69%
Understanding Key Pedagogical concepts	Used course concepts accurately	18%	40%	N/A			Accurately described key concepts	13%	40%	Students understood curriculum, philosophy of classroom or school	36%	68%	N/A		
Critical-Self Reflection	Provided details and insight in their self- assessments	36%	93%	Described self as wanting to learn from experience	18%	21%	Explicitly discussed the importance of self- reflection	21%	34%	Teaching Evaluations Described as learning from feedback	18%	28%	Observed adjusting based on feedback from children and adults	36%	53%

and Critical Self-Reflection. The percentages are broken down by experimental and traditional groups, showing the differences in prevalence of codes between them for each artifact. The greatest differences in artifacts between the experimental and traditional students were in the students' journal responses. The greatest difference of codes between the two groups was in the area of critical self-reflection. The experimental students' coursework showed a much higher degree of critical self-reflection by providing details and insights that were largely absent from the traditional students' commentaries. Each code is discussed below with quotes from the data:

Engagement

Professor observations and cooperating teacher evaluations described the experimental group as taking the lead in the classroom by initiating conversations with children and helping manage larger groups. The traditional students more often worked with individual children or small groups.

> *"It appears that you have quickly become an integral part of this classroom and that the students really respond to you. I was pleased to see you lead a read-aloud to the group and begin the follow-up activity so that Ms. Denise could do reading assessments. You seem to have established your role in the classroom and have become very skilled at managing behavior without disrupting the class's activity."* (Professor Observation Notes to Experimental Group Student)

> *"Sonya spent time working with individual students, small groups, and on occasion the whole class doing read-alouds. I was able to give her a small group of students, and she would work with them on a particular skill."* (CT Evaluation, Experimental Group)

The traditional group was described as more hesitant to take initiative, waiting for teacher directions or for a child to seek them out.

> *"As the children sat down for snack, you seemed a little nervous to just jump in and offer help. Snack time is a good time to offer support to the teachers and establish your role. It's also a good time to get to know the children. Kneel down next to them and ask questions about what they're eating or what they did over the weekend. At this point in the semester, I'd hope that you feel some sense of ownership over the classroom and a connection with the children."* (Professor Observation Notes, Traditional Group)

> *"Ines did not establish a strong connection with many of the students, and she becomes frustrated when they do not listen to her directions or answer her questions. Ines responds to this by shutting down or going back to work with the few students she knows well."* (CT Evaluation, Traditional Group)

Professor observation notes more often described traditional students as observing at the periphery or helping with teacher-assigned or menial tasks rather than engaging with children's learning. Similarly, in the student journal responses, the experimental students depicted themselves in a more central role within the classroom, while the traditional students felt they did not fully belong in the classroom. One student wrote. *"When I'm with my students, nothing else matters. I can turn everything else off and be totally focused on them. That's how I know I made the right choice in my profession"* (Student Journal, Experimental Group). While another wrote, *"Children mostly ignore me when I speak to them and don't really answer my questions or follow my instructions."* (Student Journal, Traditional Group)

Identifying with Teacher Role

Students in the experimental group began to develop a more salient and clearly defined teacher identity, which was evident from the triangulation of data. The cooperating teachers made comments about the students in the experimental cohort like, "… you can really get a sense of the teacher she is becoming" and "The children in my class see her as a teacher, no different from myself or Ms. Gabby." The cooperating teachers of the students in the traditional cohort commented more often about the personal connections their students made with the children. For example, they made comments like, "The students really adore her and get excited when Graziela plays with them." This contrast between emphasizing the experimental group as a future teacher yet describing the traditional group as simply an extra adult in the classroom was repeated throughout the CT evaluations.

The experimental group of students regularly commented that they were "starting to feel like a teacher," and had "gotten a real sense of what it meant to be a teacher and be responsible for the inner workings of a classroom." Another student described how the "children look for me to answer their questions and help them when they have problems."

The experimental students' coursework showed an understanding of key challenges that all teachers face and that reflect a growing awareness of the realities of teaching. For example, students wrote about the possibility that what children actually learn may not match the goals of the teacher and the challenge of having enough time for planning and meeting very diverse needs within a single class.

> *"Planning is essential, and something like bookmaking cannot be taught immediately, it must be taught in stages. What I learned from working on this project is that a teacher must take a lot of things into consideration before planning a center. Space, furniture, supplies, flow of the classroom, etc."* (Commentary, Experimental Group).

On the other hand, traditional students wrote general ideas about the future that lacked insight: "I think the most important thing is for a teacher to be organized and prepared. I will be well prepared with interesting activities for the children to work on every day." (Teaching Belief Statement, Traditional Group). The traditional students did not address the challenges of teaching and how that affected their activities.

Understanding Key Pedagogical Concepts

The experimental students referenced and accurately described the following concepts of teaching and learning in their coursework artifacts: Differentiated Instruction, Family Collaboration, Developmentally-Appropriate Practice, Teacher as Facilitator, and Inquiry Methods. Of those, Differentiated Instruction (DI) showed the greatest differences in that the experimental students described and explained DI as an important part of being an effective teacher at a much higher rate than the traditional students. This concept is critical to both passing the teacher certification exams and being effective in diverse classrooms.

Spontaneously referencing DI in their teaching belief statements indicates that the experimental group may have been more engaged with course concepts and more able to see connections between learning theory and practice in the classroom. The other concepts they referenced significantly more than the traditional group are related to research-based concepts of how young children learn best. Citing child development, teacher as facilitator, and inquiry-based methods of instruction reflects the idea that the experimental practicum enabled

students to more deeply connect these concepts to their experiences in the classroom. For example:

> *"A center should be able to stand alone and yet be part of the bigger room. Also, children will not know what to do with a center unless they are taught into it. For example, a lesson must be taught that requires the use of that center, then the teacher should review the contents in the area and show the students how to use the tools that are there"* (Commentary, Experimental group).

Conversely, the traditional group emphasized the importance of learning skills in isolation while the experimental group did not. This shows that for the traditional students, neither the nature of their classrooms (all classrooms were child-centered) or the coursework made an impact on their prior beliefs about teaching methods for young children.

Furthermore, teacher evaluations mentioned more often that experimental students, as opposed to traditional students, understood their class and school curriculum and philosophy. "She genuinely understands child development and helps them deepen their play by using reflective language and reinforcing the positive elements of their constructive work" (CT Evaluation, Experimental Group). A different teacher wrote, "Her (intern's) instinct is to intervene at any sign of distress. Here we believe in giving the children time for problem solving and getting answers for themselves" (CT Evaluation, Traditional Group). This supports the idea that the experimental students were better able to apply course concepts to practicum.

Critical Self-Reflection

Within the commentaries following implementation of their activity plans, traditional students wrote primarily positive and idealized assessments of their teaching. A comparison of their written reports with videos of their activities showed a significant lack of acknowledgment of their own moments of ineffective teaching or referenced the children's behavior as the main reason for the activity's lack of success. Some of the students made extremely negative statements regarding their activity immediately after completing it. However, these negative self-assessments were not turned into critical self-reflections in the write-ups: "…when I asked them (the children) at the second part to participate in building the spaceship they refused, and I didn't do the friendship bracelet activity at all. I didn't feel supported to carry out that activity" (Commentary, Traditional Group).

Consistent with this, the majority of traditional students had a superficial level of self-reflection. For example: "In the future I will think about the way the students are sitting, because there were two friends (children) getting distracted very easily. I move children who are easily distracted. I will also think about my time management because I ran out of time" (Commentary, Traditional Group).

The traditional group did not connect issues with their activity plans to broader teaching skills they could work on and improve. The experimental students did make detailed criticisms of specific methods they could have changed for a more effective lesson: "I would relate what I've learned from this project to my future classroom planning simply by taking more time developing a better lesson plan, formulate more challenging questions to really focus on the main concept, and making sure it was something the students could relate to personally" (Commentary, Experimental Group). The experimental students explicitly mentioned the value of self-reflection in terms of improving teaching practice in their teaching belief statements:

"The project taught me that teaching isn't easy, but you need to be able to analyze what you've done and what you need to change based on doing a lesson the first time and how to improve it for the second time around. I firmly believe that I benefited from this experience because I was able to see what works for me and what doesn't. I was able to critique myself and switch it into something that meets the children's needs" (Commentary, Experimental Group).

Additionally, the experimental students were perceived by both professors and cooperating teachers as more often adjusting/learning from feedback while engaged in their practicum.

"I was impressed by how well Janey took feedback and suggestions and ran with them. She was not afraid to hear constructive criticism about her approach to dealing with children, and she improved tremendously because of it." (CT Evaluation, Experimental Group)

"When planning a lesson for our children, the other teachers made suggestions more in line with our school philosophy. She (the intern) became visibly upset, unwilling to engage in a discussion about the lesson. Planning as a team is something we do regularly here, and we expect that the interns become part of the process." (CT Evaluation, Traditional Group)

In addition to the content of students' writing, the experimental students wrote more, using lengthier sentences with more analysis. The traditional students' response to prompts asking for analysis and reflection were brief, for example: "I have learned that teachers need to be organized and tidy to make the classroom work well; I would like to be remembered as a good teacher to the kids; I see my job as a future teacher as a caregiver and a second mother." In terms of content, for example, within the teaching belief statements, the traditional students wrote in more vague and general terms and did not refer back to specifics of classroom experiences or course content. "My professional growth will focus on being kind to everyone and never letting a negative experience deter me from being a caring human being and teacher. I will reach these goals by continuously interacting with children and forming positive bonds with people I work with." (Traditional Group, Teaching Belief Statement)

This superficial style is consistent with a general disconnect from broader issues of teaching and learning and a lack of critical self-reflection. Conversely, students in the experimental group regularly looked at themselves and their role in the classroom more critically, as demonstrated here:

"I could relate what I've learned from my practicum to my future classroom planning as a teacher by becoming more attentive to what I'm planning and how I can make it so that it meets every child's needs… Putting effort into the planning definitely and being reflective, leads into implementing better ideas, and in the long run the students will benefit from this" (Experimental Group, Teaching Belief Statement).

"Although an activity can give children a chance to show prior knowledge it is important to expand on that knowledge and engage children in learning. I could have asked more questions to challenge the children and expand on their thoughts" (Experimental Group, Commentary C).

Q. 3. To What Extent Are These Dimensions Related to Students' Future Teacher Identity and Commitment to the Field?

The experimental group of students uniquely showed the ability to: A) critically reflect on their own teaching ability, B) acknowledge realities of teaching they had not realized previously, and C) connect their experience to general teaching practices and concepts. We believe that

these developments came from the shift from feeling 'marginalized' to 'mattering.' This shift developed out of participation in meaningful activity in conjunction with working with children whom they were more able to identify with than those from affluent backgrounds. Rather than feeling marginalized as outsiders, they recognized the impact they could have in their practicum classroom.

Figure 1 depicts the theoretical model of how the dimensions of future teacher identity are tied to the broader psychological traits. Mattering made them more likely to take on challenges, as observed both by cooperating teachers and professors. Confronting challenges led to experiencing how effort leads to increased competence, thus supporting a growth mindset. As the students became more engaged in enacting the role of teacher, they were increasingly able to identify with that future role and to consider the complexities it entailed. Their ability to connect the lessons they learned during practicum to general teaching practice suggests a greater understanding and commitment to both the academic and practical aspects of becoming a teacher.

In nearly every pre-assessment, students wrote about how they wanted to be a teacher because they had both supportive and unsupportive teachers in elementary school and about problems from their childhood. Implicit in these descriptions was the belief that teachers have the most impact when students are struggling. During classroom discussions, it was clear that the student interns in the high-poverty school perceived the children in their practicum site as struggling and the affluent children as free of struggles. In the familiarly diverse, low-income
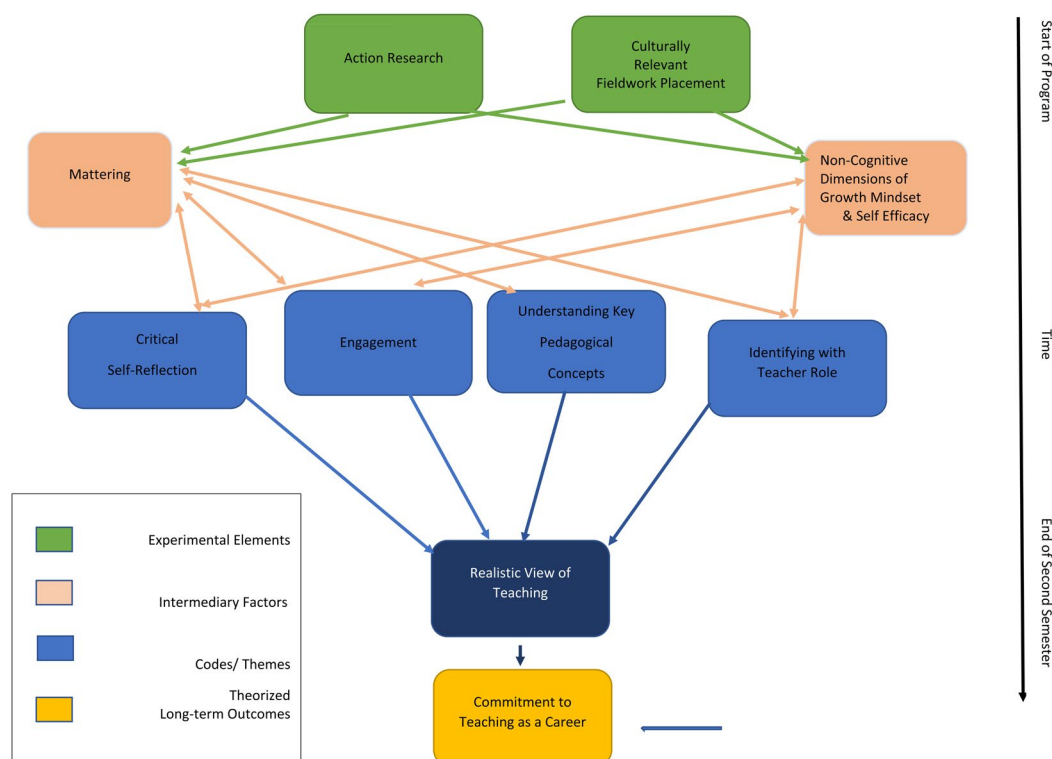

Figure 1. Mattering framework.

socio- cultural context, they became highly engaged and able to enact the identity of a teacher as "someone who makes a difference."

The belief that their actions in the classroom made an impact made it possible for the students to look critically at their own teaching skills and to consider how they might improve. This strengthened the development of a growth mindset along with self -efficacy for teaching practice. The action research enabled them to see their teaching as part of a cycle of experimentation, reflection, and improvement. This cycle connected them to the broader field, heightened their ability to identify with the teacher role, and motivated them to focus more deeply on the key concepts related to effective teaching. Their ability to connect what they learned during practicum to general teaching practice further supported their development of a more reality-based perspective on teaching.

The dimensions of critical self-reflection and understanding of pedagogical concepts related to a shift toward a realistic view of teaching. In response to questions about their practicum work, the experimental students focused on the long-lasting impact of their projects on children and general classroom functioning. This demonstrated how aware they had become of the realities of teaching during their practicum. For example, differentiation is a key concept that highlights the complexity of teaching to many different learning styles, strengths, and needs within a given class. The finding that only the experimental students considered this concept in relation to their overall beliefs about teaching shows that they had developed a more complex and realistic understanding of teaching practice.

Discussion

Future teacher identity is highly complex and context specific. To understand the development of this identity over the course of pre-service training, it is necessary to consider that dimensions of identity may vary, including at the mid-way point in student's preparation, as was assessed in this study. Student perceptions of their experiences in the classroom are important, but they do not offer a complete picture of their future teacher identity development as teachers or their overall growth. Multiple sources of information must be considered.

The two components of the experimental practicum would be considered confounds if their impact was assessed separately. However, we treated the combined impact of both variables as the experimental condition. The results of the study support the idea that elements of students' future teacher identity were impacted in different yet related ways both by the culturally relevant nature of the experimental practicum and by the action research assignment. The "engagement in practicum" and "identifying with teacher role" codes both appeared to be impacted by students feeling that they belonged and were important due to the familiarly diverse socio-cultural context of the practicum placement and the fact that they perceived the children from low income families as needing them. This came across clearly in journals where students described feeling comfortable much earlier in the semester than the traditional group as well as during professor observations where experimental students seemed far more at ease and integrated within the classroom than the traditional ones.

We believe that it was only within this more familiar and welcoming practicum context that students were able to fully implement their action research projects. Given that the projects put them in a central role within classroom decision making, it would have been extremely challenging if not impossible to do this without the students experiencing themselves as an

important member of the classroom community. Critical self-reflection, understanding pedagogical concepts, and developing a realistic view of teaching were all directly impacted by the action research projects as demonstrated through coursework and teacher evaluations.

We maintain that for this population of students to overcome the obstacles they will face in pursuing a teaching credential, they must first experience themselves as mattering. Practicum placements that are connected to students' personal socio-cultural contexts of schooling are necessary for these developments to occur.

Implications and Further Research

Improving the future teacher identity of community college students can ultimately support more culturally and socio-economically diverse teachers in entering public school classrooms. Teachers who have experienced inadequate K-12 educations and have felt marginalized within educational institutions are well positioned to become advocates for students with whom they identify. Ideally, the shift toward mattering will extend beyond their own college education experiences and support their role as teacher advocates for their future students. This work elicits as many questions as it addresses. As we expand this work, we hope to test the impact of the culturally diverse practicum setting separately from that of the action research project. We also anticipate this becoming part of a larger project with a partnering four-year college who also serves predominantly nontraditional first-generation college students and pre-service teachers of color. This would enable us to track student trajectories through formal student teaching and certification to determine the long-term impact of the intervention.

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