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Transformative learning in teacher education: building competencies and changing dispositions

Erin Curran¹ and Mary Murray²

Acquiring a repertoire of competencies for creating and maintaining successful parent partnerships is an exceedingly important yet difficult task for pre-service educators. This mixed-methods study compared non-traditional and traditional approaches to transforming undergraduate student dispositions and competencies toward parent/professional partnerships. Results suggest that embedding parents of children with disabilities in the classroom, together with the use of activities that promote regular discourse, reflection, relationship building with professionally-relevant partners, transformed student dispositions toward parent/professional partnerships and increased student competence. Implications for teacher education programs are discussed.

Keywords: transformative education, teacher education, alternative teaching/learning strategies

I. Introduction.

Many professionals in the field of education recognize the need for parent/professional partnerships to facilitate student success in the classroom, yet establishing a repertoire of competencies that allow an educator to create effective parent partnerships is an exceedingly difficult task (Epstein, 2005; Forlin and Hopewell, 2006; Murray, Curran and Zellers, 2008; Hoover-Dempsey, Walker, Jones and Reed, 2002). Murray, Curran and Zellers (2008) found that pre-service special educators near graduation perceived themselves to be generally unprepared to collaborate successfully with parents; moreover, they perceived parents of children with disabilities to be relatively uneducated, uninvolved in the educational process, and obstacles to achieving student success. According to the policies, practices, and guidelines set for educators by organizations such as the National Council for Accreditation of Teacher Education, National Association for the Education of Young Children, Council of Exceptional Children, however, for preK-12 education to be most successful, educators must view parents as equals in the decision-making process, develop empathy for the challenges faced by parents in the current educational arena, and welcome the contributions of parents to the collaborative process. Due to the complexities involved in the development of the requisite dispositions (e.g., empathy and perceptions of parity) and competencies (e.g., conflict resolution and negotiation) for successful parent/professional collaboration, more than just informational learning is required; learning that is transformative in nature must often be achieved.

However, few teacher education programs provide students with opportunities, such as extensive and intensive interaction with parents, to truly develop or transform their perceptions

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about parent/professional collaboration (Epstein, 2005; Epstein and Sanders, 2006; Hedges and Gibbs, 2005; Hoover-Dempsey, Walker, Jones and Reed, 2002). Educators who are not provided with transformative learning opportunities may engage in more hierarchical relationships with parents and, consequently, limit successful outcomes for students. Thus, preparation that includes both informational and transformational learning opportunities at the pre-service level is needed to equip teachers with the dispositions and skills to effectively partner with parents.

This manuscript explores the impact of an innovative approach to pre-service teacher education that engaged students in potentially transformative learning experiences in the context of a college classroom. The unique 400-level course in which students participated was designed to engage students in a transformational learning process through extensive and intensive interactions with parents of children with disabilities. Using both quantitative and qualitative measures in a pre/post-test design, changes in student dispositions towards parents and parent partnerships, as well as student perceptions of their own partnership competencies, are examined.

II. Review of Literature.

Typically, pre-service education programs incorporate the use of highly qualified faculty members, research- and case-based textbooks, and field experiences to facilitate student learning about the field and process of education (Epstein and Sanders, 2006; Hedges and Gibbs, 2005; Witmer, 2005). These approaches are perceived to be effective approaches to facilitating informational learning by students. It is not well understood, however, how to best facilitate transformative learning, a type of learning that may empower students to change their existing and often negative and inaccurate dispositions toward parent/professional collaboration.

A. Transformational Learning Theory.

Andragogy is distinctly different from pedagogy in that the study of adult learning takes into account that adults have amassed a body of experiences and have developed specific frames of reference through which they perceive and define their worlds. This understanding has led researchers and theorists of adult learning to assert that in order for adults to internalize and appropriately apply professionally relevant concepts, skills, and strategies, learning must be a transformational, rather than simply informational, experience (Baumgartner, 2001; Merriam and Clark, 1993; King 2004; Mezirow, 1997). Perhaps most notable in describing this process is Mezirow (1997, 1998) who asserts that through the transformational learning process, individuals may free themselves from unexamined or distorted ways of thinking and engage in more rational assessment and action. Transformational learning is especially relevant to andragogy in that adults, by virtue of having both depth and breadth of life experience, have already formed particular frames of reference through which they interpret the world around them. Perceptions that are inconsistent with the original frames of reference, whether valid or invalid, are typically rejected (Mezirow, 1997).

Learning that is transformative in nature takes place, however, when adults encounter situations (often referred to as disorienting dilemmas) that cause them to question currently held frames of reference and, as a result, alter them to reflect their acquisition of understanding and knowledge (Mezirow, 1994). It is not just additional information that is acquired; it is a new perspective, or frame of reference, through which experiences are filtered, evaluation is conducted, and action occurs.

For adults to effectively engage in a learning experience that is transformational in nature after encountering a disorienting dilemma, critical reflection and rational discourse are essential. Critical reflection is the process through which adults evaluate their frames of reference by assessing their credibility validity in light of new experiences or information (Cranton, 2002). Mezirow (1997) defined rational discourse as a dialogue in which individuals defend reasons supporting their beliefs and examine evidence supporting and refuting competing interpretations. Participants in this type of dialogue intend to set aside their biases, share and evaluate their experiences, and reach common understanding (Mezirow, 1991). Both processes require a learning environment that is challenging, safe, and empowering while fostering collaboration, feedback and respect among adult learners (Cranton, 2002; Mezirow, 1997).

In facilitating the transformational learning experience, educators must expose adult learners to other perspectives within the context of a trusting environment, and encourage them to move beyond the relative safety of their own world views (Cranton, 2002; Taylor, 2000). This process entails acknowledging the values, beliefs and feelings related to course content held by students (Taylor, 2000). However, Mezirow (1998) cautions educators not to prescribe to learners what they should think, learn or feel; through discourse and activity they should assist adults in learning to think for themselves. Educators must keep in mind that their goal is to assist learners to function as more independent, rational, socially responsible thinkers (Mezirow, 1997).

B. Transformative Learning in Higher Education.

Transformative learning is of particular importance to programs for preservice education programs. The education of education professionals extends beyond knowledge and skill acquisition; pre-service education professionals' biases and assumptions must be recognized and, if necessary, shifted during their preparation programs (Mountford, 2005). This view is shared by Posner, Strike, Hewson and Gertzog (in Boling, 2007) who write that it is the role of the teacher educator to introduce new concepts and ideas in ways that create cognitive dissonance and transform the images and beliefs that their students already hold. Specific activities and environments that facilitate transformational learning within educational contexts, however, continue to be under investigation.

Several researchers have identified activities and contexts that facilitate transformative education, Boling (2007) conducted a qualitative study that followed 25 pre-service elementary teachers through a literacy methods course which employed hypermedia video-cases and reflective journaling. Brown (2006) also investigated specific techniques to foster transformative learning in preparation programs for educators. This researcher found that cultural autobiographies, life histories, diversity workshops, cross-cultural interviews, educational plunges, diversity panels and presentations, activist assignments and reflective analysis journals were effective in impacting students' dispositions toward underprivileged students, students of diverse backgrounds and students with disabilities Eisen (2001) examined peer learning partnerships as a specific vehicle for transformative learning in a professional development program for community college teachers and recommended peer learning partnerships, joint and self-reflection, peer feedback, modeling, role reversal and peer-supported experimentation as strategies for encouraging transformative learning.

C. Transformative Learning for Professional Educators.

Like Eisen (2001), King (2002) examined transformational learning in the context of professional development for practicing educators and preservice education students. Specifically, this mixed-methods study explored how educators enhancing their skills in technology could also experience changes in their perspectives teaching practices. Participants were 175 teachers and pre-service educators enrolled in educational technology courses. The results of this study indicate that a vast majority of the participants, which included both preservice education students and educators seeking professional development, experienced perspective transformation as a result of their experiences in the transformative classroom.

These results are supported and extended by a recent study (King, 2004) that sought to provide educational institutions and their personnel with an understanding of the kinds of professional development activities that could transform educators. Analyses revealed that a majority of the participants experienced perspective transformation during the study; moreover, participants cited changes in attitudes towards themselves and others, in their reflective orientations, and in their understanding of others. These changes, as indicated by participants, were most influenced by professor support, professor challenges, discussions, journals, class activities and personal reflections.

This study explores the transformation of student dispositions and perceived competencies as a result of their participation in an innovative pre-service teacher education class where they were provided intensive and extensive collaborative opportunities with parents of children with disabilities; moreover, it compares the experiences of these students to a control group who participated in a more traditional version of the same course with the same professor. Specifically, the researchers investigated whether the dispositions and perceived competencies related to parent/professional partnerships of students in each classroom changed as a result of their experiences, whether one group was more likely than the other to indicate learning that was transformational in nature, and what was the impact of non-traditional class structure on the learning process for students?

III. Method.

A. Context of Study.

This study was implemented across two sections of the same 400-level undergraduate course required for students seeking licensure in K-12 special education at a medium-sized, midwestern university. Both sections of this discussion-based course, entitled *Consultation and Collaboration with Colleagues and Families*, were to be taught by the same faculty member in the Fall of 2006. Both sections were roughly the same size, had similar student compositions, were structured around the same measurable, performance-based standards, and utilized identical syllabi, readings and assignments.

In recognizing the complexity of helping students build dispositions and competencies for effective practice as K-12 educators, however, licensure program faculty acknowledge the need to reach beyond traditional instructional strategies in and provide students with learning opportunities that are both experiential and potentially transformative in nature. Thus, program faculty collaborated with the director of a large urban social service agency on how to best meet the challenge of preparing educators who possess the knowledge, skills and dispositions required

for effective parent/professional partnership; together, they decided to recruit a group of parents of children with disabilities to participate in the course (the “embedded parents”), as well as a parent of a child with a disability to co-teach the same section of the course.

The co-teacher’s primary role was to model, with the faculty member, egalitarian parent/professional partnership throughout each 3-hour class. The six embedded parents, who were not required to pay for the course, were asked to attend each class, keep up with assigned readings, participate in both small- and large group class discussions, and play an active role in small-group projects with students. The community agency agreed to pay a small stipend to the parents for each class attended and a modest salary to the parent co-facilitator.

In effect, the primary difference between the two course sections was that one section, the “traditional” section, adhered to conventional instructional strategies (including case studies, small- and large-group discussions, assigned readings and individual and small-group assignments); the other, the “non-traditional” section, included all of the traditional instructional strategies, but was also co-taught by a parent of a child with a disability and included the insights and lived-experiences of six parents of children with disabilities in each and every class.

B. Participants.

Students. The students participating in this study formed a relatively homogeneous group, as is typical for students in the identified major fields of study at the university where the study took place. A majority of the 29 students who participated in the traditional class and 28 students in the non-traditional class were female, between 18 – 25 years of age, Caucasian, Juniors or Seniors in college, and majoring in either Intervention Services (mild/moderate) or Early Childhood Education (see Table 1).

Descriptively speaking, a greater percentage of students in the traditional classroom reported prior *professional* experience with children with disabilities or their families, while the proportion of students reporting prior *personal* experience with children with disabilities or their families was roughly equal across the two sections of the course.

Parents. Six parents of children with disabilities and a co-facilitator were recruited to participate in the study using typical case sampling (Creswell, 2005). These parents were specifically chosen to represent the spectrum of parents of school-aged children with moderate to intensive disabilities served by the social service agency involved in the study. These individuals were primarily female, Caucasian, and between the ages of 31 and 46; their children possessed a broad range of disabilities including Down syndrome, Autism, Cerebral Palsy and Fetal Alcohol Syndrome.

C. Course Context.

Both sections of the course followed a discussion format where students were required to prepare for class by completing assigned readings; they then discussed, in both small- and large-group settings, the content as it applied to case studies and their own experiences. In the non-traditional learning section, students also discussed course content with the embedded parents, as it related to their real-life experiences. Each discussion was facilitated by the professor and, in the case of the non-traditional section, the parent co-instructor.

Aside from several minor individual assignments in the course, there were two major collaborative projects assigned to students. The first major assignment was a called the *Virtual Family*. In this longitudinal case-study assignment, teams made up of five students

Table 1. Demographic Characteristics of Students: Traditional and Nontraditional Classrooms .

Characteristic	Traditional		Non-traditional	
	Number	Percent	Number	Percent
Gender				
Female	26	89.7	23	82.1
Male	3	10.3	5	17.9
Age				
18-20	12	41.4	10	35.7
21-25	17	58.6	16	57.1
26+	0	0.0	2	7.2
Race				
Caucasian	29	100.0	24	85.7
African American	0	0.0	2	7.1
Hispanic	0	0.0	2	7.1
Class Status				
Junior	21	72.4	17	60.7
Senior	8	27.6	11	39.9
College Major				
Intervention Services: Mild/Moderate	19	65.5	17	60.7
Early Childhood Education	6	20.7	3	10.7
Deaf Education	1	3.4	4	14.3
Other	3	10.2	4	14.3
Prior <i>professional</i> experience with children with disabilities or their families?				
Yes	18	62.1	14	50.0
No	11	37.9	14	50.0
Prior <i>personal</i> experience with children with disabilities or their families?				
Yes	10	34.5	11	39.3
No	19	65.5	17	60.7

hypothetically (e.g., virtually) birthed or adopted a child with a given disability. Each team's child 'grew' throughout the semester and the teams were required to address, and frequently resolve, the medical, educational, family and service oriented issues that the Virtual Family encountered.

In the non-traditional section, however, one parent was also assigned to each student group. The assigned parent actually used their own child, and their own lived experiences, as the model for their group's Virtual Family. In essence, the parents transcribed the highly personal, intricate stories of their children and their families, and identified the specific issues that the students would research and respond to throughout the semester. The fact that the "virtual"

family was, in reality, the family of the participating parent was not revealed to students until after students read and responded to the initial case study.

The second major assignment was a Community Presentation Project, addressed to meet a need in the community for parents and professionals working with families of children with disabilities. For students in the non-traditional section, one parent was also assigned to each student group. The small groups collaborated closely, sharing ideas, resources, and strategies to develop the presentations both in and outside of class.

D. Instruments and Data Collection.

Family/Professional Partnerships Survey. On the first and last day of classes during the semester, students were asked to complete the Family/Professional Partnership Survey (FPPS). The purpose of the FPPS was to identify changes in student perceptions of their own knowledge, skills, and dispositions toward family/professional partnerships. This survey contained 50 items: Part I contained 12 items related to the student's own knowledge base regarding family/professional partnerships that allowed for measure of information acquisition; Part II contained 19 items related to what students think families of children with disabilities expect from professionals; and Part III contained 19 items related to what students think professionals should provide to families of children with disabilities. Each of the 'expectation' sections allowed for a measure of dispositional or transformational change. Every item on the FPPS required students to respond using a 5-point likert scale, ranging from 1 (Strongly Disagree) to 5 (Strongly Agree).

Learning Objectives and Activities Survey. To further assess the extent to which students experienced a transformational change within the context of the class, students were asked to complete the *Learning Objectives and Activities Survey* (LOAS) at the conclusion of the semester. The LOAS contained three parts; the portion of the LOAS that is relevant to the examination of transformational change, Part II, was adapted from the Learning Activities Survey (King, 1998). In Part II of the LOAS, students were asked to think back over their experiences in the course and select any of the 12 change statements that described their experience; selecting a change statement suggests that the student has encountered a disorienting dilemma, which is a pre-requisite to learning that is transformative in nature, within the context of the class. Examples of change statements include the following: "I had an experience that caused me to question the way I normally act," and "As I questioned my ideas, I realized I no longer agreed with my previous beliefs or role expectations. (See King (1998) for a full discussion of this instrument.)

Student Focus Groups. Focus groups were conducted with nine of 27 undergraduate students enrolled in the non-traditional section of the course during the first and last weeks of classes to examine how course activities and environments impacted student competencies and dispositions regarding parent/professional partnerships. The nine focus group student volunteers consisted of 6 females (66.7%) and 3 males (33.3%). Each of the nine Non-Latino, white participants were 18 to 25 years of age and indicated that they had limited experience with individuals with disabilities and their families. In nearly all respects, these students were demographically similar to students across both sections of the course.

Each focus group lasted between 1.5 – 2.0 hours and was led by an outside researcher trained in qualitative data collection techniques; the course co-facilitators were not present at either focus group discussion. While the pre-intervention focus group data is not relevant to the

research questions posed in this paper, post-intervention focus group questions, adapted from the Learning Activities Survey (King, 1998), included: *Thinking back over your experience in this class, was there a time when you realized that your values, beliefs or expectations about family/professional partnerships had changed? Can you describe the event, activity or interaction that lead to the change in your values, beliefs or expectations about family/professional partnerships?*

IV. Data Analysis and Results.

A. Family/Professional Partnership Survey.

To determine whether the dispositions and perceived competencies related to parent/professional partnerships of students in each classroom changed as a result of their experiences, the Wilcoxon Signed Ranks Test was applied to the ordinally-scaled pre- and post-intervention data collected using the Family/Professional Partnerships Survey. The data from each class were analyzed separately and a statistically significant result indicates stronger agreement with the statement at the conclusion of the semester than at the beginning.

The second portion of the FPPS contained 19 items that asked students to identify their own ideas about what families expect in their partnerships with professionals. (Part I of the FPPS examined content/informational gains; all results were statistically significant indicating increased knowledge as a result of class experiences.) Students in the traditional classroom expressed stronger agreement with just two of these items at the conclusion of the semester, including *“Families expect knowledge and understanding of the family’s culture”* and *“Families expect facilitation of family-to-family support and networking.”* Students in the non-traditional classroom expressed stronger agreement at the end of the semester with five of these items (Table 2, statistically significant results in bold). The items that solicited a significant change in perception (students were more likely to agree with the statement) from the beginning to the end of the semester for students in the non-traditional classroom included *“Families expect acknowledgement of parental expertise,” “Families expect personal questions about the child and family,” “Families expect complete and unbiased information,” “Families expect knowledge and understanding of the family’s culture,”* and *“Families expect emotional support from professionals.”* These results suggest that the format of the non-traditional classroom may have had a more wide-ranging impact on students’ understanding of family expectations than the format of the traditional classroom.

Finally, the Wilcoxon signed ranks test was used to identify changes in students’ expectations of professionals in family/professional partnerships, as measured by the FPPS, as a result of their participation in the class. At the conclusion of the course, students in both classrooms were significantly more likely to agree that *“Professionals should provide families with acknowledgement of parental expertise.”* However, students in the non-traditional classroom were also significantly more likely to agree that professionals should provide families with *“detailed information about their child,”* and *“personal questions about the child and family”* (Table 3).

Table 2. Wilcoxon Matched-Pairs Signed-Ranks Results: Family Expectation Items, Pre-FPPS to Post-FPPS.

<i>I think families expect...</i>	Traditional Class		Non-traditional Class	
	Z	<i>p</i> ≤	Z	<i>p</i> ≤
1. Answers to their questions.	-0.905	0.366	-0.250	0.803
2. Specific strategies for working with their child.	0.000	1.000	-0.243	0.808
3. Detailed information about their child.	-0.258	0.796	-0.890	0.374
4. Identified strengths, weaknesses of the child.	-0.277	0.728	-2.413	0.016
5. Acknowledgement of parental expertise.	-0.784	0.433	-1.616	0.106
6. Personal questions about the child, family.	-1.647	0.100	-2.082	0.037
7. Complete confidentiality.	-1.155	0.248	-1.645	0.100
8. Explanations of the purpose of testing.	-0.074	0.941	-0.333	0.739
9. Fully explained test results.	-1.121	0.262	-0.302	0.763
10. A ‘true’ picture of the child.	-0.346	0.729	-1.364	0.172
11. Complete and unbiased information.	-0.915	0.360	-1.964	0.050
12. Support for the whole family.	-1.348	0.178	-1.468	0.142
13. Mutual collaboration about appropriate intervention and services.	-0.546	0.585	-1.033	0.302
14. Knowledge, understanding of family’s culture.	-3.164	0.002	-2.147	0.032
15. Facilitation of family-to-family support and networking.	-2.687	0.007	-1.616	0.106
16. Emotional support from professionals.	-1.830	0.067	-2.035	0.035
17. Programs and services that provide financial support.	-1.217	0.200	-1.408	0.159
18. Care that revolves around needs identified by the family.	-1.217	0.224	-0.164	0.870
19. <i>Decision making authority over child’s care.</i>	-0.021	0.983	-0.801	0.423

B. Learning Objectives and Activities Survey.

To identify indications of a transformational learning experience, the one-way Chi Square was used to compare frequencies of response between the two class sections on the 12 change statements, or indicators of a disorienting dilemma, provided on the Learning Objectives and Activities Survey. A statistically significant difference between the traditional and nontraditional classes was observed on the first change statement: “I had an experience that caused me to question the way I normally act.” ($\chi^2[df = 1] = 4.49, p = 0.034$). On this change statement, the non-traditional class was more than twice as likely to agree (14, 56.0%) than the traditional class (8, 27.6%). On all of the other change statements, however, patterns of response between the two classes were similar (e.g., statistically non-significant). This would generally indicate that one class was no more likely to have engaged in a learning experience that could be classified as transformational than the other. However, an independent samples t-test reveals that on average, students in the non-traditional class selected a greater number of change statements ($M = 5.44, sd = 2.72$) than students in the traditional class ($M = 4.06, sd = 2.01$) ($t(52) = 2.12, p = 0.039$). This result suggests that students in the nontraditional classroom were more likely to have

Table 3. Wilcoxon Matched-Pairs Signed-Ranks Results: Professional Expectation Items, Pre-FPPS to Post-FPPS.

<i>I think professionals should provide families with...</i>	Traditional Class		Non-traditional Class	
	Z	<i>p</i> ≤	Z	<i>p</i> ≤
20. Answers to their questions.	-0.632	0.527	-1.897	0.058
21. Specific strategies for working with child.	0.000	1.000	-1.155	0.248
22. Detailed information about the child.	-0.378	0.705	-1.999	0.046
23. Identified strengths, weaknesses of the child.	-0.632	0.527	-1.732	0.083
24. Acknowledgement of parental expertise.	-1.987	0.047	-1.977	0.047
25. Personal questions about the child, family.	-0.790	0.430	-2.153	0.031
26. Complete confidentiality.	-0.447	0.655	-0.879	0.380
27. Explanations of the purpose of testing.	-1.633	0.102	-0.535	0.593
28. Fully explained test results.	-0.707	0.480	-0.333	0.739
29. A ‘true’ picture of the child.	-0.728	0.467	-0.943	0.346
30. Complete and unbiased information.	-0.447	0.655	-1.428	0.153
31. Support for the whole family.	0.000	1.000	-1.822	0.068
32. Mutual collaboration about appropriate intervention and services.	-1.134	0.257	-1.604	0.109
33. Knowledge, understanding of family’s culture.	-1.072	0.284	-0.688	0.491
34. Facilitation of family-to-family support, networking.	-0.329	0.742	-0.022	0.983
35. Emotional support from professionals.	-1.151	0.250	-0.025	0.980
36. Programs and services that provide financial support.	0.000	1.000	-0.878	0.380
37. Care that revolves around needs identified by family.	-1.538	0.124	-0.206	0.837
38. <i>Decision making authority over child’s care.</i>	-0.326	0.745	-0.727	0.467

experienced a disorienting dilemma, and thus may have been more likely to have had a learning experience that could be classified as transformational.

C. Post-Intervention Focus Group.

In order to examine the impact of the embedded parents and classroom structure and environment on the learning process for students in the non-traditional class, post-intervention focus group data were analyzed using thematic data analysis procedure. To facilitate data analysis, focus group discussions were recorded on audio tape and transcribed verbatim. The results of the data analysis identified two themes indicating the components of the class that facilitated a transformational learning environment and the students’ reaction to it.

Theme 1: Parent Presence Serves as Disorienting Dilemma. The students signed up for the course thinking it would be taught in a traditional manner, using the lecturer, text, and case studies as primary resources. At the first class meeting the students were told that they would be co-taught by a father of a child with a disability and that six mothers of children with disabilities would be participating in every class together with them. They were also told that the course would be a discussion-based course and that lecture would be minimal. Students who participated in the focus groups shared that they felt intimidated and scared with the very presence of the parents in the class. One student stated, “With the parent in my group I was really, really intimidated. I don’t know as much as she did.” Another student shared “I was

mostly scared...I did not want to say something that would piss them off..." Having parents in the class was a shock; another student shared, "It was intimidating, you expect professors, not parents!"

In every class period, students in the non-traditional class were afforded opportunities to listen to the embedded parents share their insights about what it means to be a parent of a child with a disability. The parents answered the students' questions and regularly discoursed with students around course topics. There was time in each class period devoted to reflective practice; parents and students, facilitated by the co-teachers, took the final 20-minutes of nearly every class to discuss and reflect upon content and issues encountered through their learning experiences. These discussions and reflective opportunities helped bring theory into practice for students in the non-traditional class as they began questioning their old beliefs and practices. One student stated:

It was very helpful to have those parents in there, though. I don't think it would be the same if those parents weren't in there. To see, like, especially when they just said, told their stories; that was like the biggest thing I think I'll always remember. Hearing those stories and working directly with the parents that we were reading about are true, like, they dealt with that. They made me see that it was not just a dumb case study again.

Another student described her experience listening to the parent stories as the turning point in her learning experience:

One time that I felt really like, that made me really realize that, you know, things were changing is when we heard the parent stories... When they sat up there at the parent panel and talked about their kids, their spouse, or the single life and just went into their whole life that really opened my eyes it was like, wow, you know. Things are different.

Students' interactions with parents throughout the class developed into the kinds of parent/professional partnerships that they will experience once they are practitioners. One student described it as "I learned through all the discussions of the parents that how important it is for the parents and the professionals to be working towards the same goal. We actually worked together like we will when I am a teacher." Another student described the interaction with parents as her first awareness of a change in her orientation toward parent/professional partnerships:

To me when it first changed was knowing that the parent was willing to work with us, like, she did a lot for us over the period of the semester like, gathering us all together and sharing her information with us and us sharing information with her and how we were going to do it. So it was that like, the whole transition between the parent and us was a great experience for me to actually participate in this.

Theme 2: Cooperative Projects Facilitate Transformational Change. The Virtual Family and Community Presentation assignments provided intensive and extensive opportunities for parents and students to work closely together. These projects provided the mechanism through which the parents, by virtue of developing trusting and respectful partnerships with the students, were able to bring about change in students' beliefs and dispositions toward parent/professional partnerships.

The first cooperative assignment was five Virtual Family scenarios which presented the real-life situations of the parents embedded in the class. The assignment was not another case study, but the real-life situations of the embedded parents who disclosed the intimate details of their lives as parents of a child(ren) with a disability. The parents presented their own stories to the students and helped them through the reflection process during each class meeting. One

student described it as an experience that changed his perception of the role of parents in the partnership process:

When we got them [Virtual Family descriptions] I thought it was a case study and they said, 'Well, actually, you know, the student you're writing about right now is my son'... I think that just flip-flopped my whole mind, cause I was just like, these parents are totally here to help us, not to scare us... They're putting their whole personal life out there for us to analyze and give our opinions - like we had any sort of sense of knowledge of what they've been through.

This statement was echoed by the other students in the focus group who stated that the experience of having families of children with disabilities in the class, sharing their family stories, facilitated a long-lasting change in their disposition toward parents of children with disabilities. One student shared:

When I first got the Virtual Family I thought... 'What is this? Stupid.' Maybe I should just say 'Who cares and that's all.'... I tried to take it seriously and I was like, 'This is ridiculous. No one's ever gone through this - ever!'... And then after my parent said, 'Yeah, this is what happened to me.' I'm just like...like I cannot believe what I just wrote and I can't believe I said I would put the baby up for adoption. So I mean, I learned a lot within that fifteen minutes. A lot more than I probably learned in three years here.

This student followed up the previous statement with possibly one of the strongest indicators of the type of transformative education that students in the non-traditional classroom were exposed to: "The Virtual Family just did it for me. I can't think of families the same any more."

Developing relationships is a key component to forging effective partnerships; it is also the mechanism through which transformative learning often takes place. Through a small-group, semester-long project students worked with the embedded parents to develop a presentation that was given to families of children with disabilities and professionals who serve those families in an urban community. Through the longitudinal nature of this project, as well as the multitude of occasions for rational discourse and reflection provided, students were allowed opportunities to change their perceptions and beliefs about the partnering relationship. One student described the importance of getting to know the parents as "we're gonna have to understand where the parents are coming from so we can work with them." Another student described the experience of working with parents on the Community Presentation Project as meaningful on a personal level:

I think this whole experience of just working with the parents in the classroom and outside the classroom for group meetings was personal. Like, as personal as I've ever had it. You know, I hope I can get to know all of my parents like this.

The Community Presentation Project paved the way for these students to have informal, rather than simply academic, interactions with the embedded parents. Parents invited the students into their homes; occasionally the students met with the parents in the community (e.g., restaurants, student union, and parent's place of employment). These informal meetings helped students know the parents more holistically and intimately; moreover, students, in a constructivistic manner, were able to learn alternative strategies for developing partnerships and connecting with parents. One student described her personal interaction with parents as one she would like to emulate when she is a teacher:

We all one night actually got to hang out with several of the parents and the professors and we got to know them personally... I think that would be a great way for like, if we are future educators to you know, if you don't want to sit down and talk about your son's IEP let's go grab lunch or talk about other issues and get to know each other ...

V. Discussion.

Recent empirical evidence suggests that pre-service special educators often view parents of children with disabilities as obstacles in their child(ren)'s education, relatively uneducated, and frequently uninvolved (Murray, Curran, and Zellers, 2008). Developing appropriate and empathic dispositions toward parents, then, requires a shift in students' frames of reference toward parents and their role in the partnership process. If pre-service education programs are able to effect this transformative change, students will be better equipped to engage in family-centered practice successfully as education professionals. Consequently, investigation into potential andragogical techniques for facilitating a transformational learning environment in pre-service education programs is warranted.

The quantitative results from analysis of the Family/Professional Partnerships Survey, Part I, indicate that students in both sections felt they successfully engaged in learning that was informational in nature; in other words, their knowledge about disabilities, families, services and resources for families of children with disabilities increased as a result of their participation in the course, regardless of course structure (traditional vs. non-traditional). This result indicates that embedding the parents in the class was not measurably more effective than the traditional classroom environment in assisting students to gain content-related knowledge.

The analysis of quantitative results from Parts II and III of the FPPS, however, indicate that students in the class of the embedded parents experienced a significant shift in understanding of family expectations, as well as professional obligations, in more than twice as many areas as students in the traditional class. Through the relationships that these students developed with the embedded parents, and the resulting trust, respect and understanding that was generated, students came to understand that families want (and can handle) complete and unbiased information about their child(ren); families expect professionals to develop cultural competency; most importantly, families desire to develop relationships with professionals who provide care for their child(ren) on a personal level. Additionally, students in the nontraditional classroom were more likely at the conclusion than the beginning of the course to feel it was a professional's obligation to acknowledge parental expertise in matters related to the child and give parents detailed information about their child(ren) while developing relationships that reach beyond service provision with those children and their families.

The structure of the non-traditional class, including the embedded parents, the co-teaching relationship that modeled effective parent/professional partnership, and the authentic, longitudinal learning activities that required collaboration and reflection appear to have helped students think, evaluate, learn, and act with insight into the experiences of parents of children with disabilities. As is consistent with Mezirow's theory, all of these entities worked together to take students out of their comfort zone of the traditional classroom and into an environment where students could begin question previously held beliefs and values.

While there was statistically significant change on three FPPS items for students in the traditional classroom, change was not indicated on any of the items related to knowing and understanding the families on a personal, rather than purely professional, level. Students in the traditional classroom were no more likely at the conclusion of the course to indicate that they value parents as equal partners in professional practice. This result may have occurred because students in the traditional classroom did not have the benefit of learning partnerships, rational discourse, critical reflection and the opportunity to build relationships with parents of children with disabilities. This result suggests that it may be more difficult for students in the traditional

classroom to demonstrate the competencies and dispositions cited by national and international educational organizations for effective family-centered practice as practitioners; these students, while knowledgeable, may be less likely or able to engage parents and families as true collaborators or primary resources in a child's education.

The quantitative and qualitative results of this study are consistent with those of Boling (2007), Brown (2006), Eisen (2001) and King (2002, 2004) who found that a combination of alternative teaching/learning techniques presented in a way that creates cognitive dissonance for students, discussion, and critical reflection were effective in creating a learning environment in which perspectives were transformed. Students in the non-traditional classroom (which integrated many alternative teaching/learning techniques) appear to be impacted in a more broad, transformative sense by their experiences than students in the traditional classroom; examination of analyses related to the Learning Objectives and Activities Survey and post-intervention focus group help illuminate why. On the LOAS, students in the non-traditional classroom were significantly more likely to indicate that they had an experience that caused them to question the way they would normally act and selected, on average, significantly more change statements than students in the traditional class. The focus group data indicate that it was a combination of the presence of the embedded parents, which served as a disorienting dilemma for many students, the personalization of the Virtual Family assignment, and the longitudinal and cooperative nature of the Community Presentation Project that helped students understand and internalize the importance of parent partnership in service provision.

Teacher education programs can offer students an education that extends beyond knowledge and skill acquisition (Mountford, 2005); as Mezirow (1997, 1991), Cranton (2002), and Taylor (2000) have implicated, dispositions can be transformed through carefully constructed challenges offered in the context of a supportive, collaborative, and reflective learning environment. Through the use of longitudinal collaborative engagements (such as the Virtual Family, community presentations and collaboration with the embedded parents) students who are given opportunities to develop relationships with peers and professionally-relevant partners (in this case, parents of children with disabilities) will better understand their own world views; in the safety of these respectful and supportive, yet constructive, relationships and environments students will be enabled to develop the dispositions and competencies that are necessary for successful practice in education.

This study implemented an innovative approach to teacher education that, through the generation of cognitive dissonance via the introduction of parents of children with disabilities to the classroom and activities designed to promote regular discourse and reflection, facilitated transformational change in student dispositions and competencies regarding parent/professional partnerships. Although this study did not utilize strict experimental controls in the comparison of the two classrooms and the study was implemented throughout just one semester with two classes, preliminary results are promising. The inventive approach to education used in this study helped raise the consciousness of pre-service education students toward the complexity of effective family-centered practice. It appears that the non-traditional classroom structure described in this study had a broad and significant effect on student dispositions and competencies regarding parent/professional partnerships. For future inquiry, longitudinal follow-up with studies that implement transformative educational techniques will illuminate the long-term potential of these strategies in effecting change.

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