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Dear Colleagues:

The Eastern Educational Research Association and the *JRE* consulting editors are pleased to offer you seven refereed articles of interest to our readership. While this issue was supposed to be a themed issue on disabilities, we were able to accept the Allen, DeLuca, and Napoli article on deaf children. Special thanks to our Carol and Marshall Strax who proposed this special issue.

Topics in the 17<sup>th</sup> issue of the *Journal* include professional development issues. Roskos, Brown, Krosnick, Lenhart, Jarosewich, Rosemary, Savery, Salzman, and Collins discuss methods of delivery while McCormick, Boyd, and Scaife address partnerships as a means to professional growth. Williams, Brindley, and Morton research teaching as a second career. The remaining three articles discuss issues researched in elementary and secondary schools. Booker examines programs to assist adolescent mothers. Enright, Knutson-Enright, Holter, Baskin, and Knutson offer a follow-up study from an earlier *JRE* special theme issue on peace. They have done research on forgiveness. Shores and Shannon tackle reasons for failure in elementary mathematics. This issue presents something interesting for our broadly based readership.

Finally, this is the 4<sup>th</sup> year I have had the privilege of being the editor on the *Journal of Research in Education*. My term of office has ended and I am pleased to announce that Dr. Michael T. Miller, Professor and Chair of the Department of Rehabilitation, Human Resources, and Communication Disorders at the University of Arkansas will be the next editor of the *JRE*. I would like to thank the *JRE* Board, the Consulting Editors, and the EERA Board for their assistance and support. Special thanks also go to the *Journal's* editorial associate, Colleen Wildenhaus, for carefully preparing these last four issues for publication. It is always a pleasure to serve my profession and read the latest scholarship in education. Thank you for the opportunity.

Sincerely,  
Darla Twale  
Editor

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## When You Just Need to Talk: An Evaluation of a School-based Program for Adolescent Mothers

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*Despite a decrease in the number of adolescent pregnancies, there remains a need to provide teenage mothers with effective academic and social support during pregnancy and after the birth of the child. Programs for adolescent mothers focus on life skill development and also provide an environment for the safe expression of personal and academic issues. This evaluation study examines the experiences and perceptions of pregnant and parenting teens participating in a school-based life skills program. Interviews, surveys, and observations were conducted with students, parents, and administrators to evaluate the effectiveness of the program and explore areas for improvement. Results show that the program is effectively meeting its goals, but there is an increased need for economic resources. Classroom community in this sample was largely influenced by positive and encouraging relationships between teachers and students. Effective programming for pregnant and parenting teens is discussed.*

Although the teenage pregnancy rate has declined since the 1980s and 1990s, the issue of adolescent pregnancy continues to be a source of concern for members of the health care, mental health, social work, and education communities. The United States has the highest teen birthrate among comparable industrial nations (Henshaw, 2004). In 2000, over 800,000 adolescent pregnancies occurred in the United States. While approximately one-third ended in abortion, over one-half resulted in a live birth (Alan Guttmacher Institute, 2004). Whether teen mothers keep their child or pursue adoption, this statistic highlights a substantial number of young women who, for at least the duration of the pregnancy, must combine the role of both expectant mother and student.

Despite recent decreases in American teenage pregnancy rates, the number of children who are born to adolescent mothers in the United States remains higher than any other industrialized country (Alan Guttmacher Institute, 2004). Media

influences, transient families, fragmented curricula, and changing economics, have been linked empirically with the problem of adolescent pregnancy (Corcoran, 1999; Klerman, 1993; Schultz, 2001; Spear & Lock, 2003). The monetary cost to society for teenage pregnancy is enormous, with over \$7 billion dollars of taxpayers' money going to the problem (National Campaign to Reduce Teen Pregnancy, 1997). The personal and emotional costs to teens and their families are equally as substantial (Arenson, 1994; Hoffman, Foster, & Furstenburg, 1993; Pillow, 1997). The stress of an unplanned pregnancy can adversely affect an adolescent's self-esteem, self-competence, identity, and future goals. With respect to educational attainment, the ability of a teen mother to complete high school is also jeopardized, as new mothers combine the demanding roles of both parent and student.

### *Education and the Adolescent Mother*

The educational experiences and degree attainment of adolescent mothers are rather dismal. Research shows a strong relationship between childbearing and non-completion of high school (Manlove, 1998). Barely over one-third of teenage mothers graduate from high school (National Campaign to Prevent Teenage Pregnancy, 1997). Despite the desire to finish high school, many pregnant and parenting teens find it difficult to do so. School support, family dynamics, and economic issues all influence the ability of a teen mother to complete high school (Corcoran, 1999; Stevenson, Maton, & Teti, 1998). In light of this, a significant impetus for educators is to provide comprehensive academic and social support to pregnant and parenting adolescents.

Nationally, many teenage pregnancy prevention and intervention programs exist to provide adolescents with the information, skills, and knowledge to make informed decisions about the consequences of sexual behavior. Studies of these programs yield contradictory results with some showing positive results and others showing less favorable outcomes. In contrast, little is known about the success or failure of educational programs intended to provide current pregnant and parenting teens with the life skills and knowledge to prepare for a safe and healthy delivery (Philliber, Brooks, Lehrer, Oakley, & Waggoner, 2003). This evaluation study may add to the understanding of such intervention programs.

Research on the educational experiences of pregnant and parenting teens explores outcomes such as degree attainment, years to degree, and school importance (Manlove, 1998; Prater, 1992). Although teen mothers may wish to complete high school, economic, health, familial, and other personal problems can oftentimes prevent degree completion (Debolt, Pasley, & Kreutzer, 1990). The presence of a newborn, in addition to the complicated tasks of adolescence, can set the stage for a severe conflict between a teen

mother's dual roles as caretaker and student. With the overwhelming demands of a baby, an adolescent's job as student oftentimes is relegated to secondary status, which is reflected in the higher probability of a teen mother dropping out of high school rather than completing her degree (Anderson, 1993).

In considering the precursors to an adolescent mother dropping out, school engagement and motivation have been shown to be significantly related constructs (Scott-Jones, 1991; Stevenson, Maton, & Teti, 1998). When examining school and classroom characteristics, several studies have centered on ethnic composition, perceptions of ability, and socioeconomic differences in predicting which teen mothers finish school and which do not. However, little research exists that investigates teen mothers' experiences as members of an in-school curricular program that focuses on life and parenting skills for impending and current mothers (Marsh & Winick, 1991; Philliber et al., 2003). This paper adds to the literature by exploring the sense of belonging shared by members of a teen parenting program and how its participants constructed an identity as a parent, student, and part of the classroom community.

### *Classroom Belonging*

As aforementioned, a purpose of this study is to explore student perceptions of community in a program for pregnant and parenting teens. Many terms exist for classroom community, including but not limited to, *school belongingness*, *relatedness*, *engagement*, and *connection*. Generally, classroom community refers to a student's perception of himself or herself as an active and vital member of a common group of participants (Osterman, 2000). Community includes not only people (e.g., teachers, peers, classmates, coaches, administrators), but also the nature of the interactions among those groups. Positive interactions and meaningful connections between students and teachers promote high



levels of community and relatedness. In contrast, negative or non-existent interactions can have deleterious effects.

Research on classroom community and sense of belonging indicate that these factors can significantly augment motivation, self-esteem, peer relations, self-efficacy, and lowers levels of dropping out and school withdrawal. In the case of pregnant and parenting teens, social support, both in and out of school, is exceedingly important to their academic success and personal well-being (Barth & Schinke, 1983; Morgan, Chapar, & Fisher, 1995; Turner, Grindstaff, & Phillips, 1990). For many adolescent mothers, the birth of a baby is a trying and stressful experience that requires reliance on members of their immediate social network. In this study, the immediate social network is the lead teacher of a life skills course and other teen mothers involved in the class.

As related to these goals, the evaluation questions investigated in this study include: (a) What is student perception of the amount and nature of the support provided in the program? (b) How can the program be improved to provide greater impact for student participants and their families? (c) How does a teacher create a sense of community in a class for pregnant and parenting adolescents? and (d) What is student perception of this classroom as a community for themselves and others making the transition from student to pregnant student to student-parent?

## Method

### *Setting and Context*

The GRADS Program (Graduation, Reality, and Dual Skills) has been in existence for 3 years at a large public high school in the southeastern United States. The program is based on a curriculum that promotes personal growth, educational competence, and economic self-sufficiency for pregnant and parenting teens (Office of Educational Research and Improvement,

1999). As established, GRADS is an elective course taught over the entire school year. Students can take the course over the full 36 weeks of the school year, or can begin in the spring semester. Students receive one half credit per semester for successful completion of the program. Some of the students are also in special education courses.

Currently, the program is not officially funded; however, the coordinating teacher does have access to other human resources. In addition to the coordinator, the GRADS Program is supported by the high school's on-site nurse, The Resource Mother's Program, and local agencies such as the Alliance for Families and Children. As described by the program coordinator and lead teacher, GRADS has specific goals of decreasing repeat pregnancies, promoting high school graduation, fostering family ties, promoting the health of mother and baby, and supporting pregnant and parenting teens wherever needed.

This study took place over the course of 2 semesters at a large public high school in the southeastern United States. The school has an enrollment of over 1,390 students, with a 12:4 student per teacher ratio. Twenty percent of the student body receives free lunch. The racial breakdown is as follows: 70% White; 28% Black; 1% Hispanic; 1% American Indian; <1% Asian.

### *Sample and Procedure*

The present program evaluation examined the perceptions of participating students, parents, and administrators associated with the GRADS program. This mixed method study utilized individual interviews, surveys, and formal observations as the primary data collection methods. Upon Institutional Review Board approval, the author solicited students to participate in the project. Recruitment involved a presentation to all GRADS students during class hours. They were then asked to share

information about the evaluation project with their parents.

Student participants were drawn from a class that focuses on life skills, educational competence, and economic self-sufficiency for young women who are pregnant or are already parenting. The course provides services to teen mothers and their children such as well child checkups, prenatal care, home visits, transportation, counseling, and employment training. The class is an elective course and students can take it for credit toward their diploma. During the length of time the course has been in existence, only one male father has ever participated. Most of the students are adolescent females and the class rarely has more than eight students per semester.

Seven female students agreed to participate in the study. Five students were Caucasian and 2 were African American. All students were at various stages of pregnancy or currently parenting infants or toddlers. Students ranged in age from 15 to 18 years old. Most had learned about the GRADS Program from their guidance counselor or another teacher. Due to the small number of individual cases, every participating student's background will be presented separately. Each young woman has been given a pseudonym to protect her identity.

- Brianne is 18 years old and scheduled to graduate on time. Her daughter is 16 months old and has many medical problems stemming from juvenile rheumatoid arthritis. She is Caucasian.
- Donna is 16 years old and is straddling the ninth and 10<sup>th</sup> grades based on an insufficient number of credits. Her favorite subjects are math and biology and she lives with her mother. She is Caucasian.
- Karis is a 17-year-old 12<sup>th</sup> grader with a temperamental relationship

with her child's father. She makes mostly A's and B's and lives with both of her parents. She is African American.

- Kim is 17 years old and has a 3-month-old son. She is Caucasian.
- Michelle is in the 12<sup>th</sup> grade with a baby due in 2 months. She is 17 years old and African American.
- Arrianna is a 16-year-old 10<sup>th</sup> grader with an 8-month-old son. She lives with her mother, father, and grandmother. Her father is out of work on disability and her mother works full time. She is Caucasian.
- Sally is a 15-year-old ninth grader with an 8-month-old daughter. She lives with both her mother and father. Her father works full time and her mother does not. She is Caucasian.
- Ms. Michaels is the coordinating teacher of the program and has been a family and consumer science teacher for over 20 years. She has been employed at this particular high school for 13 years and has spent 3 years as program coordinator and lead teacher.

To obtain more information about the effects of the program, parents of the GRADS students were sent a survey asking them to comment on the program and their perceptions of its success or failure in various categories. Twelve parents or guardians, out of a possible 18, returned the survey. Individual interviews were conducted with key school administrators: the principal, guidance counselor, and school nurse. The principal, a Caucasian male, had been at the high school for 4 years. The guidance counselor, an African American female, had been at the high

school for 12 years, and the school nurse, a Caucasian female, had been at the school for 13 years. Each of these interviews was scheduled during the school day and lasted approximately 30-40 minutes.

Once parental consent was obtained and student assent attained, each student was interviewed for approximately 40 minutes during the course of the GRADS class period. Interview questions were designed to elicit information about the teen mothers' experiences as a student and parent. Questions explored peer relations, feelings about their classmates and coordinating teacher, as well as goals for the future. Students also completed a survey rating the ability of the GRADS Program to provide certain services (e.g., prenatal care, money management, employment options). The author also interviewed the coordinating teacher and completed four formal classroom observations over the course of the school year. Observations were designed to elicit information about the GRADS curriculum, instructional practices of the coordinating teacher, and the nature of peer interactions in the classroom. All survey and interview items were developed based on theoretical underpinnings (Manlove, 1998; Spear & Lock, 2003), existing literature on programs for parenting teens (Marsh & Winick, 1991; Philliber et al., 2003), and specific information requests of program administrators. Please see the Appendix for a list of sample survey and interview items.

### ***Analysis***

Survey responses were tabulated and open-ended questions were coded for predominant themes. Classroom observations provided another point of corroboration, or triangulation, of findings based on student, parent, and administrator responses. Results will be presented by key findings in each study sample (e.g., Students: Survey; Students: Interview, etc.). All interviews were audio taped with participant permission. Interviews were then transcribed

in preparation for coding. The purpose of coding is to reduce data into manageable, yet meaningful units for analysis (Miles & Huberman, 1994). The method employed in this study was inductive coding, which allowed for codes to evolve directly from the data (Johnson & Christensen, 2004). All interview data were read and then re-read for common codes. These codes were assigned descriptive themes to highlight important findings and pertinent information. By using multiple data collection methods and eliciting information from different groups pertinent to the program, the presented findings were corroborated and triangulated.

## **Results**

### **Students: Survey**

With respect to survey findings, overwhelmingly, most students felt that the GRADS Program was successful in providing them with accurate information about contraceptive use, prenatal care, academic success, pediatric care, parenting help, and future employment plans. Many felt well prepared to handle the tasks of parenting after completing the GRADS Program. One student said, "It's been very positive. I've learned how to take care of my baby." All students said that the GRADS Program is very effective in helping them manage their pregnancy and impending motherhood. In particular, students felt their ideas, beliefs, and opinions were respected in the classroom and among other students. One student remarked, "The teacher and classmates are really supportive emotionally. We all talk our problems out in the open." Another commented, "When you are sad or unhappy about something or just need to talk, you can talk about it and feel very comfortable."

Continuing along that same line, students felt a great deal of support from the GRADS Program coordinator. All students completely agreed that she is helpful and

encouraging. Sample quotes included, "She tells us everything in vivid detail and demonstrates it when she can." Another commented, "If you are behind in another class, she will let you make it up. She tells you everything about parenting and about how to be a parent. What we need to know." This finding is evident in the survey result that showed all students enjoyed their time in the GRADS class [100% responded completely agree].

### *Students: Interview*

The following section will review the two key themes uncovered in the interview and observation data. These themes explicate the process of classroom belongingness experienced among these participants as well as their perceptions of the classroom as a community. Despite asking students pointed questions about their educational experiences within the specific life skills program, a sense of classroom community and support pervaded the students' responses. It is for this reason, the focus of this section will be on the predominate themes that emerged in the study. The major themes are: (1) the role of the coordinating teacher as an agent of community and (2), the importance of social support from classmates. Direct quotations from students and the coordinating teacher, data from classroom observations, and related empirical literature will be provided to elaborate on the thematic findings.

#### *"We Can Talk to Her about Anything": Teacher as an Agent of Community*

Upon completing the first observation of the classroom, it was clear that a sense of belonging existed among members of the class. Student desks (two students sit together per desk) were lined up one behind the other. Kim came in to class. She has long blond hair and is thin. Ms. Michaels talked to her while another student, Brianne, came in and sat down. The students appeared to get along with one another oftentimes asking about their children and

other family members. In her individual interview, Ms. Michaels remarked that Brianne has "come a long way" since she has known her. In her interview, Ms. Michaels expressed Brianne was habitually truant and would come to her crying "on what seemed like a daily basis," but now she has "drastically" improved. Ms. Michaels credits some of her social and emotional development to participating in the GRADS Program.

In their parenting class, they all talked about how they are doing in other "academic" classes. Kim updated Ms. Michaels that she is barely passing her math class. Ms. Michaels talked with her about the math class, the upcoming statewide assessment, and reviewed a test from the previous week. Together, they problem solved how to plan the rest of her day so she can spend more time working with her math teacher. Ms. Michaels offered the students a snack (granola and Jello). Only Kim accepted it.

Ms. Michaels has a good rapport with the students. She knows what is going on in their lives and is familiar with the parents, grandparents, and significant others in each student's life. She maintains close contact with students both inside and outside of the classroom. Most of the students' guardians are on a first-name basis with Ms. Michaels. Kim commented that her son is beginning to talk. She said it sounds like he is saying "igloo" and "good." She said he moves his eyebrows a lot. Ms. Michaels explained that he is entertaining himself by making different expressions with his face and mouth. In an individual interview, Ms. Michael conveyed, "The best thing I can do for these girls is to let them know someone cares. I am an advocate for them in this building. I exhibit integrity and am someone they can trust. I have built that [trust] through being a good listener, being supportive, making time for them, and being flexible."

Kim relayed that she is thankful to have a supporter of her like Ms. Michaels. "It's [the course] real educational when you learn about kids. My mom didn't even have this. Ms. Michaels comforts you. It's better to talk about it and not let it blow up." Other students echoed Kim's sentiment and expressed gratitude to have an adult, other than a parent or guardian, who was able to serve as confidant and advisor. Karis remarked:

What my parents don't tell me or what I don't know I can just ask Ms. Michaels or whatnot and she'll help me out...all of us [students] out in many ways. Everything that Ms. Michaels does has helped us so much. She loves to do what she does. I can just call Ms. Michaels and she can help me with things.

In a course on parenting and family dynamics, the students and Ms. Michaels frequently discussed healthy relationships and effective communication. Although a few of the young mothers are romantically involved with their children's father, none are married. The pregnancy or birthed child also presented problems for the teens in the program. They used class time as a way to vent, complain, argue, and help one another. Ms. Michaels was usually at the fore of such efforts.

During one observation, Ms. Michaels began the class by asking the students to work on an assignment about the danger and warning signs to look for in dating relationships. She asked the students to think about their child's father or significant other. While the teens worked on their assignment, Arrianna talked to Ms. Michaels about her boyfriend's father who drinks a lot. She will not let her son Devin around his grandfather because of his excessive drinking. "I told him I'd hurt him," she says. In the same class setting Donna, a very shy and soft-

spoken teen, confessed that her boyfriend has a habit of grabbing her by her face when they argue. She lamented, "That worries me...like he gets mad at me when I start talking. The other day...he grabbed me by the face and he busted my forehead." Clearly disturbed, Ms. Michaels emphasized that babies learn by modeling so the teens should be mindful of what they do in front of their baby once it arrives. In the midst of the assignment, Ms. Michaels called on each student, making certain everyone participated and was engaged. The girls talked openly about their experiences. After the class ended she commented, "My greatest challenge on a whole, is dealing with so many family issues that affect these girls. I feel like I'm fighting an uphill battle and that what I'm doing in the classroom is only but a drop in the bucket in their lives."

***"They're Backing Me up 100%": The Importance of Social Support from Classmates***

A key component of classroom belonging lies in the relationships and interactions students have with one another. In this particular program, because all of the young women are (or will eventually become) mothers, there is a distinct sense of camaraderie among the classmates. Each teen mentioned the significance of having a peer reference group during her pregnancy and while parenting. Sally is a quiet teen whose boyfriend, and child's father, comes to class every day and walks her to her next class. While talking with her, she expressed a desire to one day marry her boyfriend and make a life together for her then 8-month-old daughter. She noted that she is no longer close with many of the friends she had prior to becoming pregnant. Of her classmates in the program she observed, "A lot of us can relate to each other because we've all been through the same thing. Then, if you have a problem they can like help you out with it. Most of us are close." Kim conveyed, "It helps out if you're pregnant to talk about things with other students. Plus, everything's confidential." Much of this is

by design. Ms. Michaels stated, "I give them time to talk to me and each other and use craft time to help build community in the classroom. I try to be nonjudgmental as that allows them to be open and responsive. I encourage the students to be nonjudgmental of each other as well."

The evidence of a strong support system among the teen mothers was clear during the aforementioned observation. Still concerned about her relationship with her child's father, Donna told the group that her mother said that men always change after a baby is born. "I already told him if he's going to leave after the baby's born, then I don't care," she communicated to her classmates. Ms. Michaels reminded her and the rest of the young mothers, "You can make the decision yourself [to leave the relationship]. You don't have to wait for him." Donna was worried when her baby arrives, no one would care for the baby. Karis interjected, "I say leave so you won't be stressed about it. That can harm the baby...but that's just me [my opinion]." Feeling for her friend and classmate, Sally suggested that Donna ask her family and her boyfriend's family to sit down and talk about finances and who will take care of the baby. Clearly wavering over whether to leave or not, Donna finally asked the group, "How is it that you fall in love with someone who hates you so much?" Ms. Michaels then began talking with the teen mothers about the difference between love and infatuation.

The adolescents in this life skills course have a bond with one another that their peers without children are not able to understand or appreciate. This consequence is apparent in their interview responses. One student shared:

My relationship with the people in this classroom is good because we all just get along. I am friends with everyone and I really like talking to the teacher. I like

that I can talk to the teacher and it stays between us. You can feel free to talk about anything and get a lot of good advice.

Arrianna commented, "We all love and understand each other because we're all in the same boat. The teacher and classmates are really supportive emotionally. We all talk our problems out in the open." Kim, who has a problematic relationship with her entire family, including extended kin, shared, "We all became really close friends. We could talk to Ms. Michaels about anything. My peers and I could tell each other things that we did wrong and so they would try not to make the same mistakes."

### Parents

The results of the parent survey seemed to mirror those of the student survey. Many parents were pleased with the GRADS Program and its focus on contraceptive use, pediatric care, and academic success. All parents *completely* or *somewhat agreed* with the statements, "My teen has learned a great deal about prenatal care in the GRADS Program" and "My teen is well prepared to handle the tasks of parenting after completing the GRADS Program." All parents completely agreed that they were confident in their teen's ability to provide appropriate health care for their baby after completing the program. One parent remarked, "This class influenced her to complete school even though she got pregnant at an early age. The class and students get very involved with each other. I think the class was terrific." Another parent noted:

The GRADS Program is an excellent tool for young expecting mothers. It prepared my daughter in

ways I may not have thought of. She is and will continue to be a wonderful mother to her new baby and the GRADS Program played a large part in that. It's comforting to know that my daughter has people she can go to for information.

### *Administration*

In individual interviews, administrators were asked nine questions regarding the GRADS Program including, but not limited to, the purpose of the program, the resources available to the program and ways the program can be improved in the future. One overwhelming theme was the emotional support the program provided. The principal noted:

They get a support group, because it has to be tough [being in that position]. Students don't get to hang out like other students their age. The support is very beneficial. The teacher is good for them. She is very caring and she stays with them afterward. She provides good support and follow-through.

Echoing this sentiment, the guidance counselor commented, "A lot of those students lose that [self-esteem] while they're pregnant. They don't have anyone to talk to. Most of their friends are out doing what normal kids do. Plus, they learn about careers and get basic parenting information." The school nurse, who partners with local agencies regarded the program as a burgeoning place for parenting resources. She maintained, "Students gain knowledge and develop rapport with their teacher so that they feel they have resources. They can ask her about anything. It is a good mentoring relationship."

The coordinating teacher of the program observes, "I think my biggest challenge concerning the girls in the program is raising their self-esteem and self worth. This is such a major issue, and for many, the reason why they have gotten pregnant in the first place." The coordinating teacher is very dedicated to the GRADS Program, often using her own time, money, and resources to provide enriching opportunities for her students. She makes home visits, buys arts and crafts supplies for her students and helps the teens pay for childbirth classes. She notes, "Of course there are never enough resources for this type of program as the needs are great."

### *Discussion*

The GRADS Program is designed to give pregnant and parenting teens an opportunity to prepare emotionally, physically, mentally, and academically for their child. With a sound focus on prenatal care, money management, relationship issues, family dynamics, pediatric health care, and many other topics, the program gives students a comprehensive view of young parenthood. Participants in the program are very happy with its management and few parents, students, or administrators would change the basics of the program. There is a definite need for increased funding, both for current students, but also to expand the program to reach other populations of students. As the coordinating teacher notes, "I see a need for more prevention in the middle schools; that is not really a function of GRADS, but a great need nonetheless."

This study highlighted the perceptions of belongingness among a group of students and lead teacher in a program for pregnant and parenting teens. Findings revealed that student sense of community was related to positive interactions and the support facilitated between teacher-student and student-student. Individual interview and observation data showed that the teen mothers in this study encountered feelings of

alienation from other peers, stress from family members and personal relationships, as well as conflict from their dual roles as student and parent. However, in light of these difficulties, they found a source of support and encouragement in the members of this program. For these young mothers, their teacher and classmates provided a safe and confidential place to express personal and academic problems and pressures.

This research extends our understanding of classroom belonging by exploring such a construct in a sample of pregnant and parenting adolescents. In discussions of school belonging in general adolescent populations, teen mothers are often excluded from empirical investigations. It is important for studies of school engagement and belonging to incorporate the perspectives of these teens. Previous research has shown that pregnant and parenting teens have responsibilities inherent to being both a mother and a student. Varying levels of comfort with these roles can isolate students and subsequently prevent completion of high school (Manlove, 1998; Turner, Grindstaff, & Phillips, 1990). Perhaps this disengagement can be ameliorated if pregnant and parenting adolescents have the social and academic support necessary to achieve.

Evidence points to the need for this group of students to share a sense of community based on their common experiences (Scott-Jones, 1991). Because school belonging is so entrenched in the daily interactions students have with one another and their teachers (Osterman, 2000), the results of the present study underscore the social and psychological needs of parenting teens. Many of the student participants discussed how difficult it was to maintain the "juggling act." In spite of this conflict, many looked to one another as sources of validation. This sentiment was echoed by administrators and parents who noted the social benefits of the program as well as the academic support.

Members of this class have demands on them that are significantly more difficult than those of a typical teen so the need for increased social support and a sense of belonging are critical. Students of all backgrounds and experiences need to feel they are valued and respected members of their school environment. For parenting teens, in particular, this is a necessity in light of their transition from student to pregnant student to student-parent. Curricular programs that provide skill training and services to this group of students should focus on not only helping them with the tasks of parenthood, but also assist them in establishing a sense of community and shared experience with other in-class peers.

### *Limitations*

One drawback of the present study is the absence of a longitudinal design to track classroom belonging over time. Although this study occurred over 2 semesters, individual students and the coordinating teacher were only interviewed on a single occasion. Because student sense of belongingness can ebb and flow over time, it would be beneficial to have additional data to draw from in subsequent studies.

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Appendix

Sample Survey and Interview Items

Student Survey

1. I feel well prepared to handle the tasks of parenting after completing the GRADS Program.
2. I feel a great deal of support from the GRADS Program Coordinator.
3. How has the GRADS Program helped you?

Parent Survey

1. I am confident in my teen's ability to provide appropriate health care for her baby after completing the GRADS Program.
2. My teen has learned a great deal about prenatal care in the GRADS Program.
3. My teen is well prepared to handle the tasks of parenting after completing the GRADS Program.

Student Interview

1. What is your biggest challenge as a student? As a parent?
2. What are your goals for the future?
3. What have you learned in the GRADS Program?

Administrator Interview

1. Why was the GRADS Program created? What purpose does it serve?
2. How is the GRADS Program monitored?
3. What do students gain from participating in the GRADS Program?

**Professional Development in Reading First-Ohio:  
Comparison of Four Methods of Professional Development Delivery**

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*This study examined the outcomes of professional development training related to the topic of scaffolding via four different modes: (a) traditional classroom, (b) Power Point presentations, (c) group facilitated e-learning, and (d) individualized e-learning. Teachers' preferences, knowledge gains, and commitment to implement newly learned skills were compared among the four methods of training. Analyses of participant surveys showed statistically significant differences in participants' intent to apply their learning, with the Power Point, traditional instruction, and group e-learning modalities higher than individual e-learning. Despite the differences in reported intent to apply their learning, 92% of respondents reported positive perceptions of training. In terms of final levels of teacher knowledge, pre- and post knowledge tests showed no statistically significant differences between the four training modalities. The study, conducted as part of a research agenda related to developing and delivering online Teacher Professional Development (oTPD) across a state, confirmed teachers' general levels of comfort with the oTPD training, more so in group e-learning than in individual e-learning, as well as positive outcomes in knowledge gain and intent to apply the learning in practice.*

## Introduction

Ohio received a 6-year Reading First grant in 2003 to implement Reading First, a K-3 classroom reading instruction program that is a part of the No Child Left Behind Act of 2001. The goal of Reading First is to help states, school districts, and schools ensure that every child can read at grade level or above by the end of third grade. A central goal of the state's Reading First plan is to expand professional development in scientifically research-based reading instruction. Professional development is offered through The Reading First-Ohio Center for Professional Development and Technical Assistance in Effective Reading Instruction (Center), a partnership between the Cleveland State University, John Carroll University and The University of Akron. The University of Akron arm of the Center is charged with designing online professional development resources and providing online professional development in research-based effective reading instruction to Ohio's teachers.

The Center developed two online Teacher Professional Development (oTPD) modules for use in the state's professional development program for K-3 classroom teachers, referred to as the State Institutes for Reading Instruction (SIRI). The modules represented the state's initial foray into online teacher professional development on a relatively large scale.

The move to online learning modules reflects an emerging position that e-learning is a convenient option for statewide reach, appeals to the large urban districts and remote rural districts, and contains sufficient content value for teachers. In fact, online teacher professional development has swept into the professional education arena and continues to grow at a tremendous rate (Mandinach, 2005). Similar to the perception of Ohio's educators, it seems to be the right venue at the right time, offering a myriad of benefits in times of severe fiscal constraints (Brown & Green, 2003; Carter, 2004). oTPD, is seen as convenient and efficient, incorporating new, emerging

technologies, online learning communities, modeling, and coaching – all with the added advantage of “anytime, anywhere” participation geared to individual teacher work schedules and needs (Carter, 2004; Harlen & Doubler, 2004). In the fast-paced, media saturated world of today, oTPD seems to be a promising newcomer with high hopes for transforming professional development from “now and then” for some to an integral part of teaching practice for all – and at a reduced price (or so it seems). E-learning SIRI will allow for widespread distribution of professional development in reading instruction principles and practices based on scientifically based reading research.

In order for oTPD to be a worthwhile, long-term investment on the part of states, districts, schools, and individual teachers, oTPD must do what traditional PD has long tried to do: help teachers learn. Although the technology for robust oTPD is at our fingertips (and ubiquitous), far less is known about how to use it to advance teacher thinking, reasoning and instructional skill through professional development (McCombs & Vakili, 2005). Barab, Kling, and Gray (2004), for example, cite how little we really know about how to build online learning communities that both inform teachers, and also help them solve practical problems of instruction. Further, different configurations of oTPD including elements such as length of training, instructional methods used in the training, blended approaches that include both face-to-face and online components can have different impacts on learners (Bernard et al., 2004; Sitzmann, Kraiger, Stewart, & Wisher, 2006). Research has shown that oTPD can compete effectively with traditional models of professional development; that is, oTPD is not less effective than classroom instruction. However, examination of the specific elements of the oTPD modules should show that the instructional methods used in the learning object do, in fact, meet student learning needs.

### Evaluation of Online Learning

A paucity of literature addresses the questions of how to design courses to be taught at a distance and what models will inform design efforts (Duffy & Kirkley, 2004). Bernard et al. (2004) conducted a meta-analysis that evaluated research comparing classroom instruction with distance education. The authors noted that while similarities exist between the two methods of instruction, the wide variability between measures and a dearth of information in the literature do not allow for strong conclusions and recommendations for practice and policymaking. The authors reported overall effect sizes of nearly zero on measures of achievement, attitude, and retention outcomes. Similarly, Sener (2004) discussed the difficulty of identifying significant differences between online instruction and direct instruction using comparison studies because of the complexity of establishing equivalence between the two methods of instruction.

Considerable research is needed to ground and guide the future of oTPD, especially at the design level. The American Psychology Association's (APA) learner-centered principles of constructivism for higher levels of teacher learning (APA, 1993; Bonk & Wisner, 2000; Bransford, Brown, & Cocking, 2000) suggest that the power of e-learning resources (tools, web technologies, multimedia) should connect with the elements of multimedia used in a course. Strong instructional designs that best represent how people learn are key for supporting optimum matches between e-learning technologies and learning for diverse educators with different needs. A synthesis of cross-disciplinary research on human learning, the How People Learn (HPL) framework (Bransford, Brown, & Cocking), proposes three learning principles: (a) prior understandings influence new learning; (b) new understanding requires development of factual knowledge and conceptual frameworks; and (c) self-monitoring and reflection strategies support learning with understanding. Applying these principles to instruction calls for a learning environment that is learner-centered, building on what learners already know; knowledge-centered, emphasizing

authentic achievement and mastery (Newmann & Associates, 1996); assessment-centered, offering multiple means for monitoring learning progress; and community-centered, encouraging social networks and collaborative teams that support learning (Schlager & Fusco, 2004). As part of the development process of the oTPD modules, the Center examined several of these elements in its oTPD courses to ensure effective learning objects and environments.

### The Center's Research Agenda

The Center has engaged in a research agenda to observe and monitor the impact of the oTPD modules, to allow for modifications in the early oTPD modules and to inform further construction of oTPD modules. Formative research is a type of developmental research that sets a pedagogical goal (e.g., effective oTPD courses) and tracks what is required of materials, organizations, and technologies to reach that goal (Newman, 1990; Reigeluth & Frick, 1999). The research attempts to identify effective instructional design features of oTPD that result in positive outcomes and preferability of the method of instruction, that is, the extent to which design features are effective, efficient, and appealing to participants. Sometimes referred to as "field testing" or "usability testing," the goal is to generate theory and models that support the design of higher-performing instructional resources for more powerful teaching-learning interactions.

Formative research has been used effectively to examine the organizational impact of computers (Newman, 1990), designing computer-based simulations (Shon, 1996), and educational systems design (e.g., Naugle, 1996). It seemed a well-suited method to examine the broad goal of whether the modules provide effective oTPD in an emerging statewide professional development system for effective classroom reading instruction for kindergarten through third grade teachers. This study describes one of a number of field studies that examined the development, design and implementation features of the e-learning modules. The research concern was the preferability of the online module to more

traditional approaches in terms of effectiveness (the degree to which the module achieved its goals), efficiency (the human time, effort and energy required), and appeal (how enjoyable the resulting design was for people) over other ways of delivering the instructional content.

The current study examined the following research questions: (a) Was oTPD as effective in state-wide professional development as other modes of delivery for professional development training: traditional classroom, PowerPoint presentation, group-facilitated e-learning, and individualized e-learning? (b) What were the differences in teachers' preferences for different modes of professional development delivery (Level 1 - participants' reactions; Guskey, 2000)? (c) How effective were the four methods of professional development in increasing teachers' knowledge (Level 2 - learning)? and (d) What were participants' intentions to apply the knowledge gained in the different modes of professional development (Level 3 - intentions)?

## Method

### *Description of the Online Module*

This study examined the first module that the Center developed, Scaffolding in Action (SA). The course provides instruction about scaffolding processes, which are at the core of effective instruction and one area of focus of the state's Reading First professional development system. Scaffolding processes represent higher order teaching skills needed by beginning and experienced teachers for effective teaching of reading. The course attempts to prepare teachers to recognize, critically analyze, and use the scaffolding process effectively in the classroom. Text, video and interactive graphics are used to present the content and help participants answer four questions: (a) What is scaffolding? (b) What does scaffolding look like when implemented effectively in the classroom? (c) How does the scaffolding process work within the Assess, Plan, Teach instructional model? and (d) How can teachers use the scaffolding process to improve the quality of reading instruction in their classroom?

The University of Akron Center staff collaborated with Teachscape Incorporated, a producer of online professional development programs, to develop the 6-hour professional development e-course. Center staff provided the content expertise. Teachscape, a web-based professional development services company, was contracted to assemble, produce, and deliver the online course.

The course utilizes video commentary and insights by an expert on the topic and many classroom video examples that allow participants to observe and reflect on teachers' scaffolding practices in the classroom. The text supports the graphics and video. For example, a written transcript is available with each video. In addition to video and text, graphics are also frequently used to support new concepts. Activities lead users to apply what they are learning in their own classrooms and an online learning group consisting of teachers participating in the e-learning module provides opportunities for reflection and collaboration with colleagues.

Participants navigate through the module using a navigation bar on the left side of the screen. The bar, which is available at all times, bookmarks the participant's location in the module and enables the participant to control his/her own learning by moving from section to section of the module. Each section and sub-section is labeled so that participants can follow their progress in the course.

### *Participants*

The participants in the study were 794 teachers in Ohio's Reading First Program from a wide geographic area and from a range of urban and rural districts. Of the sample, 782 teachers provided information regarding gender (93.9% female) and 731 provided information regarding ethnicity (12.7% African American; 82.4% European American; 3.4% Hispanic). Almost half (48.1%) of the subjects reported more than 15 years' experience teaching and only 12.3% reported less than 4 years' experience. In terms of education, over half (55.9%) of the subjects reported having a graduate degree.

A chi square analysis indicated that the sample was more diverse than would have been expected when compared to National Education Association (NEA) teacher demographic data ( $\chi^2 = 60.339$ ;  $p < .001$ ), and in comparison to the ethnic composition of the state ( $\chi^2 = 8.8$ ;  $p = .03$ ). The proportion of female subjects in the study was greater than would be expected when compared both with data presented by the NEA regarding the gender ratio of teachers ( $\chi^2 = 35.915$ ;  $p < .001$ ) and data provided by the Ohio Department of Education regarding the gender ratio of teachers in Ohio's elementary schools ( $\chi^2 = 22.090$ ;  $p < .001$ ). In terms of experience and education, the proportions in the present sample were not significantly different than those that would have been expected based on the NEA data.

### *Procedures*

Kindergarten through third grade teachers in Reading First schools across the state of Ohio participate in professional development training in reading for 180 minutes each month. The training related to the topic of scaffolding examined in this study occurred during one of the school-based professional development sessions in the spring of the school year. The study used a stratified random sampling in which schools were randomly assigned to one of the four conditions while ensuring relatively equal distribution of geographic location and urban/rural designation in each of the four groups. Teachers participated in professional development via one of four different modes: (a) traditional classroom, (b) Power Point

presentations, (c) group facilitated e-learning, and (d) individualized e-learning. The Center provided all of the training materials to all schools. The content and length of professional development were the same for all four modes of delivery and the professional development was delivered in a standardized fashion (i.e., there was high fidelity to the mode of delivery).

Table 1 outlines the differences in the four modes of delivery including the methods by which the content was delivered, the ability of participants to interact with one another, and the level of instructor-facilitated learning. A Literacy Specialist, a staff member with training in literacy instruction working in each school as a part of the Reading First grant, facilitated the first three modes of instruction. In the traditional learning condition, the Literacy Specialist presented teachers with the professional development information in a traditional classroom setting using handouts and overhead slides. In the Power Point condition, the Literacy Specialist presented professional development material using a Power Point presentation with a complementary interactive video. In the group facilitated e-learning condition, the Literacy Specialist facilitated the presentation of the Scaffolding in Action multimedia e-learning module. In the final condition, individualized e-learning, teachers engaged in the material individually via the online Scaffolding in Action multimedia e-learning module. In this condition, teachers were required to interact with one another through online learning and discussion groups.

Table 1

*Methods of Instructional Delivery*

Mode of delivery	Salient features
Traditional classroom	<ul style="list-style-type: none"> <li>• Facilitated by trained Literacy Specialist</li> <li>• Lecture format using transparencies and handouts</li> <li>• Text based-no video</li> <li>• Delivered in one-time pd session</li> <li>• Group discussion activities</li> </ul>
Power-point presentation	<ul style="list-style-type: none"> <li>• Facilitated by trained Literacy Specialist</li> <li>• Structured presentation with limited video</li> <li>• Delivered in one-time pd session</li> <li>• Group discussion activities</li> </ul>
Group facilitated e-learning	<ul style="list-style-type: none"> <li>• Facilitated by trained Literacy Specialist</li> <li>• Greater integration of audio and video resources</li> <li>• Delivered in one-time pd session</li> <li>• No online postings; group discussion activities</li> </ul>
Individualized e-learning	<ul style="list-style-type: none"> <li>• Online facilitation; no face-to-face component</li> <li>• Total individualized e-learning with greatest flexibility in access and repetition of materials</li> <li>• Requirement to interact with peers statewide in online guided discussion groups</li> </ul>



### Instruments

Three measures were developed to collect data about the primary research interests (a) participants' satisfaction with the mode of training they received, (b) changes in the participants' knowledge following training, and (c) participants' intention to apply the material. Participants' satisfaction with the mode of training was assessed at the conclusion of the professional development program with a survey that contained five questions that participants rated on a 3-point scale (*strongly agree* to *strongly disagree*). The reliability for the items for this sample of participants was adequate ( $\alpha = .7$ ). The knowledge test consisted of 14 multiple choice items that participants answered as a pre-test immediately prior to participating in the professional development and as a post-test immediately following participation in the professional development. The items for this test were constructed by a group of experts in the content domain (scaffolding) of the professional development program. The scale did not measure a unitary construct; therefore, internal consistency was not calculated. Finally, participants' intention to apply the material was measured using a 14-item instrument. In the current sample, these items produced a strongly reliable scale ( $\alpha = .86$ ).

### Data Analysis

Item means and standard deviations were calculated for each survey item and three standard multiple regression analyses performed. Multiple regression analyses were conducted in order to show the influence of the independent variables on the dependent variable. The first analysis examined the relationship between the dependent variable of satisfaction and the independent variables of pre-test and training modality. The second analysis examined the relationship between the dependent variable of post-test score and the independent variables of pre-test, satisfaction, and training modality. The third analysis examined the relationship between the dependent variable of expressed intent to

apply the training and the independent variables of satisfaction, post-test, and training modality.

### Results

The results of multiple regression analysis indicated that participants expressed statistically significant differences in their satisfaction with the mode of professional development delivery ( $F_{3,544} = 11.134, p < .001$ ). While these differences were statistically significant, training mode accounted for only 5.5% of the variance in subjects' satisfaction, and the greatest difference between the groups was 1.5 points on a 15-point scale. Participants in the PowerPoint mode reported the highest levels of satisfaction ( $M = 3.67, SD = 2.29$ ), followed by group e-learning ( $M = 3.44, SD = 2.05$ ), traditional ( $M = 3.02, SD = 2.86$ ), and individual e-learning ( $M = 2.17, SD = 2.70$ ).

The second question examined whether the mode of delivery resulted in differential gains in teacher knowledge. Statistically significant differences in pre-training knowledge were found in the four training conditions ( $F_{3,526} = 12.45, p < .001$ ). Participants in the individual e-learning condition had the highest pre-test scores ( $M = 9.68, SD = 2.11$ ) followed by participants in the Power Point ( $M = 9.28, SD = 2.13$ ) and traditional ( $M = 8.72, SD = 2.18$ ) modes. Participants in the group e-learning condition had the lowest pre-test scores ( $M = 8.23, SD = 2.18$ ). Given the statistically significant differences, pre-test scores were co-varied in the remaining analyses of post-test score changes. The results of multiple regression analysis indicated that pre-test scores accounted for a significant amount, 16.2%, of the variation in the post-test scores ( $F_{1,513} = 98.99, p < .001$ ). Satisfaction also accounted for a significant, albeit small (1.3%) amount of variance in post-test scores ( $F_{1,512} = 8.07, p = .005$ ). Training modality did not account for a significant amount of variance in post-test scores ( $F_{3,509} = .222, p = .881$ ). The greatest difference, 4 points on a 14-point scale, in post-test score means was between the individual e-learning (highest) and PowerPoint conditions.

The final question in this study was whether the mode of delivery made a difference in teachers' intentions to apply the knowledge. Overall, the vast majority (98.9%) of the subjects reported at least a minimally positive intention to apply the material, and 11.5% of the sample provided the maximum possible positive score reflecting intention to apply the material. The regression analysis indicated that satisfaction scores were significantly related to subjects' expressed intention to apply the material, accounting for 15.4% of the variance in expressed intention ( $F_{1,545} = 99.181, p < .001$ ). Likewise, post-test knowledge accounted for a significant amount of variance (2.4%) in expressed intention to apply the material over and above the variance that could be accounted for by satisfaction with training modality alone ( $F_{1,544} = 15.611, p < .001$ ). Finally, training modality accounted for an additional 2.2% of the variance in subjects' expressed intention to apply over and above the variance that could be accounted for by satisfaction and post-training knowledge levels ( $F_{1,541} = 4.965, p = .002$ ). The full model accounted for 20% of the variance in subjects' expressed intention to apply the material that they had learned in the professional development program. Participants in the PowerPoint mode reported the greatest level of intent to use the material ( $M = 23.99, SD = 6.53$ ) followed by the group receiving instruction in the traditional mode ( $M = 23.02, SD = 6.14$ ), those in the group e-learning mode ( $M = 22.11, SD = 6.52$ ), and those in the individual e-learning mode ( $M = 20.17, SD = 6.59$ ). The intention scores were, on the whole, positive and the greatest difference between group means (PowerPoint and e-learning) was approximately 4 points on a scale with a 60-point range.

### Discussion

This study addressed differences between the outcomes of online and classroom instruction by examining different modes of delivering content while holding content relatively stable (Sener, 2004). As Bernard et al. (2004) have pointed out, it is inherently difficult to isolate the effect of the media involved because the media tend to serve different functions in the different modes of training.

However, the present study, with four different methods of instruction, allowed for a finer-grained analysis of the impact of the addition of different levels of media and online interactivity than would have been present in a simple comparison of oTPD with instruction in a traditional classroom environment. The study examined teachers' satisfaction, learning outcomes, and intent to apply learning of a professional development course offered in four different modalities. Participants engaged with course materials either through (a) a PowerPoint presentation, (b) group facilitated e-learning, (c) traditional classroom, or (d) individual e-learning. The content of the professional development was the same for all participants, only the mode of delivery varied. The vast majority of the participants reported positive perceptions of the training that they had received but small statistically significant differences in participants' reactions were evident in the different modes of training.

### Participant Satisfaction

In the present study, participants in the PowerPoint classroom instruction, group e-learning, and traditional classroom presentations had higher satisfaction scores than did the participants in the individual e-learning conditions. This result is consistent with the meta-analytic work of Bernard et al. (2004) who found "a small but significant effect on overall attitude outcomes in favor of classroom instruction" (p. 405). In the three favored methods of instruction, a trained Literacy Specialist provided full instruction in the PowerPoint and traditional instruction modalities and supported learners' use of the e-learning module. In the individual e-learning situation, participants could ask questions of an instructor through online discussions but there were no built-in opportunities for face-to-face interactions with the instructor or with other class participants.

It is possible that in the preferred methods, instructors were better able to facilitate student interactions and to support co-construction of meaning. Facilitating online discussions that help participants construct knowledge in

asynchronous environments requires sophisticated instructor involvement and guidance of discussion boards (Larreamendy-Joerns & Leinhardt, 2006). This study did not examine interactions between participants, participants and instructors, and participants and course materials in the asynchronous online discussions, which might have provided insights into one element of satisfaction with the course.

### Effectiveness

The design aspects, media, and activities in the online course were designed to address specific learning goals and tailored to facilitate the acquisition of the course content. The individualized e-learning condition was designed to allow the most flexibility for learners, providing multiple venues for accessing the content and facilitating the repetition of content when desired. Despite the opportunities for additional review of course content and individualized learning for the individual e-learning participants, the study found no significant differences between the four training modalities in regard to post-training knowledge when pre-training scores were taken into account. This finding is inconsistent with the findings of Sitzmann et al.'s (2006) meta-analytic review, which suggested that participants in web-based instruction who had a high level of control of the material learned more than participants in classroom situations. Sitzmann et al.'s study further reported that low levels of control of online material, as in the group e-learning course in the present study, did not affect outcomes. However, the studies in the meta-analysis did not take into account the knowledge that learners had at the start of the course, which the current study did.

In terms of Guskey's (2000) model, effectiveness could also be considered in terms of participants' intent to apply what they had learned to classroom instruction. In the present study, there were statistically significant differences in the subjects' intentions to apply the training material based on the mode of training that they received. Similar to the pattern observed in satisfaction with the course,

participants who received training through Power Point presentation, traditional classroom instruction, and in group e-learning indicated stronger intent to apply their learning than participants in the individual e-learning group.

Previous research has suggested that instructional design rather than the media used to deliver the instruction accounts for greater differences in learning (Bernard et al., 2004; Sitzmann et al., 2006). Consistent with that finding, the four means of delivering the same instructional content with similar instructional designs produced similar outcomes in learning and intent to apply learning in this current study. The findings suggest that instructor-supported oTPD is a viable option for presenting professional development in the statewide training plan but that further research into elements that could help improve satisfaction with and intent to apply knowledge gained in individual e-learning courses might be beneficial.

### Efficiency

Efficiency reflects the time, effort, energy, and expense associated with the delivery of professional development. Bernard et al. (2004) indicated that one of the strengths of distance education is its potential to reach students who would otherwise not have access to training. The authors go as far as to suggest that, in some cases, the comparison should not focus on distance learning versus traditional classroom, but instead on the difference between distance learning versus no intervention. The strength of oTPD as a modality is its flexibility and its capacity to be available to students across diverse settings. Contrary to the other modes of delivery described in this study, individualized e-learning was the only modality that did not require the students to gather in a single location for the training. Subjects who participated in the individualized e-learning accessed the course material from a variety of locations and at a variety of times. It was clearly the most flexible of the modalities. The knowledge gains of the individual e-learning group were comparable to those of the other groups but this modality was associated with lower level of satisfaction and

intent to apply the knowledge. However, given the comparable efficacy of individual e-learning and the efficiency of this method of professional development, the study suggested that oTPD is a salient method of delivery of professional development to teachers across the state. The importance of online learning for students who might not otherwise have access to educational opportunities is emphasized by Larreamendy-Joerns and Leinhardt (2006) who suggested that the profound effect of making knowledge accessible should be considered as an important factor when comparing online instruction with face-to-face instruction.

### ***Implications of this Study for Reading First Professional Development***

This first study of the effectiveness of the oTPD module in a large-scale, statewide reading professional development system provides insight to guide the Center's continued work. One of the most salient factors of this study is that while individualized e-learning produced similar outcomes in terms of knowledge, teachers are not as satisfied and report lower levels of intent to apply their learning. In order to take advantage of the benefits of oTPD in terms of its flexibility and opportunities for individualized instruction, the courses that the Center has subsequently developed have been deployed in a blended learning environment. That is, several sessions of the course, including the introduction, middle, and ending sessions occur in classroom sessions to allow participants face-to-face interaction with other students and with the instructor. Between these whole-group sessions, students interact with the oTPD course on their own, with full control of the timing and amount of learning in which they engage. Students have access to online postings and are able to interact with their classmates and instructors by posting questions and using email. Participants in the same school also have the opportunity to meet with their peers to work on projects and discuss class content. Rather than being delivered completely online, the traditional face-to-face and computer-based delivery systems complement one another (Dalton, Hannafin, & Hooper, 1989) and provide the strengths of teacher led instruction as well as

the opportunity for student-led pacing and student-led engagement with materials (Sitzmann et al., 2006).

Based on this study, the Center has engaged in additional research to examine various elements of the oTPD modules. Current research includes examining the pedagogical elements of the courses, efficacy of the discussion boards, aspects of successful instruction, and activities that are relevant for learners and assist instructors in assessing student learning.

### ***Limitations***

A potential limitation of the study is the timing of the research. The module is the last of a series of professional development modules delivered to Reading First teachers over the course of a school year and some of the content in the professional development module may have overlapped previously presented content. Measuring changes in content knowledge in a domain in which the subjects have received considerable training and professional development is challenging.

Also, the present study is confined to the first three levels of Guskey's (2000) model of evaluation for professional development. The ultimate goal of the professional development is change in teacher instructional practices and ultimately in student achievement. The present study offers proximal indicators for the goal of changed practices but the observed changes in knowledge may not have led to changes in behavior.

### ***Directions for Future Research***

Bernard et al. (2004) and Sitzmann et al. (2006) as well as the findings of the current study identify moderators that affect the outcomes of web-based versus classroom instruction and suggest that it is premature to discontinue comparison studies. Given the variability of the effects reported in the literature, it is essential that new distance education programs demonstrate their relative effectiveness. It is unwise and unmerited to assume that distance education is equally

efficacious as more traditional classroom methods without evidence to support this for a given program.

As suggested by Bernard et al. (2004) and Sitzmann et al. (2006) the instructional design of a course is as much related to outcomes as the media used to deliver the course. The Center's research agenda includes examining the design element of online modules to ensure that the oTPD modules have high levels of cognitive demand, high interaction, and appropriate sensorial designs. Identifying the most effective design elements and the most effective ways to incorporate those elements into a module within budgetary and time constraints is important for oTPD developers and for entities that wish to use oTPD methods (Larreamendy-Joerns & Leinhardt, 2006).

Another concern in research studying the effectiveness of professional development within a content domain is that measuring changes in knowledge may not be the most effective means to demonstrate that the professional development will be used as intended. Motivation and self-efficacy may also be salient variables when considering predictors of application. Including constructs that are related to application of new knowledge in practice within research studies may provide additional insight into how participants apply knowledge gained in professional development to their daily practice. Finally, as the Center moves from pilot studies to providing oTPD to a statewide audience, research on effective ways to inform learners of oTPD opportunities, selecting and training instructors, analyzing the effectiveness of the online discussion system, and ensuring high rates of participant completion will be avenues of relevant research.

Bernard et al. (2004) suggested that we educators need to move beyond simple comparisons of oTPD and face-to-face instruction to determine "in which content domains, with which learners, under what pedagogical circumstances, and with what mix of media the transformation of courses and programs to Distance Education is justified" (p. 383). Simply put, there is much work to be done

to determine when, where, how, and with whom these new forms of learning are most beneficial.

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## Second Career Teacher Candidates: Who Are These People and What Were They Thinking?

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*Global teacher shortages have presented a conflict for colleges of education, as the need to quickly prepare teachers for the elementary classroom juxtaposes with the responsibility of preparing quality teachers. One university in the southeastern United States responded to this challenge by developing a Masters of Arts in Teaching Program designed to attract second career teachers who wanted a bona fide graduate experience rather than a shortcut into the profession through district provided alternative certification. Following qualitative procedures for narrative inquiry and guided by Hycner's (1985) suggestions for analysis, data were collected from student program applications including essays and reflective memos in order to profile. Results indicated that these students represented a wide range of diversity in experiences and former careers, but they were similar in their stated rationale for joining the teaching profession. The resulting themes guide implications for honoring the myriad of prior experiences that second career teachers bring to preservice teacher preparation.*

There are increasing signs of a developing teacher shortage worldwide. In the United States 2.2 million teachers are required within the decade (U.S. Department of Education, 2000); Ontario and other Canadian provinces report insufficient numbers of teachers as well (Ingersoll, 2002; National Center for Education Statistics, 1999). Similarly, in Europe urgent warnings speak of an aging workforce with more than 50% of the teachers over 40 years of age, and significant shortages in Belgium, England, the Netherlands, and Sweden (Santiago, 2001). Elsewhere, a scarcity of teachers is documented in Kenya and much of Africa, New Zealand and Australia (Grimmett & Echols, 2001).

In the United States, a common response to this teacher shortage has been increased

recruitment not only for traditionally prepared educators but also for second career teachers, a population that is attractive to potential employers due to previous education and experiences. Additionally, researchers have indicated second career teachers bring strengths to their teaching (Chambers, 2002; Mayotte, 2003). Consequently, universities and school districts have offered several options for teacher preparation ranging from emergency licensure and minimal training, to high quality preservice teacher programs. (Darling-Hammond, Wise, & Klein, 1999). Many alternative teacher training programs only provide a few weeks of instruction, or episodic workshops, before placing novices into classrooms in a "sink or swim" effort (Gilles, Cramer, & Hwang, 2001). This earn-as-you-learn approach, is "completed



during the course of teaching rather than prior to its initiation" (Darling-Hammond, 1990, p. 136), and has had mixed results nationally with continuing concerns raised about substandard training and competence (Holmes, 2001) and high attrition rates (Graziano, 2005).

Jelmborg (1996) compared academic credentials, teacher performance, professional courses, and practicum supervision between university prepared and alternatively prepared teachers and found that college based teacher education teachers were more child oriented while the alternative teachers were more influenced by job availability. Jelmborg further states, "26 of the 27 significant differences found in this study favored college-based teacher education programs" (p. 62). Additionally, some alternative models of teacher preparation have been shown to result in an unsuccessful experience and an early exit from teaching. Berry (2003) reported that up to 66% of alternatively trained teachers leave the classroom within the first 3 years. Jenne (1997) asserted that

assumptions made about the positive traits [second career teachers] bring to their new profession may be overstated and false. Those same traits, that may make second career teachers attractive to potential employers, also contribute to their conserving influence and the maintenance of the status-quo in schools. (p. 447)

Further, Jenne concluded that second career teachers have "mastered the form of teaching while remaining ignorant or naïve about the substantive issues of teaching and learning" (p. 467). Given this predicament it is crucial that teacher-educators recognize the need for comprehensive and deliberate preparation for second career teachers and that it is equally critical to distinguish between this effort and other forms of alternative preparation widely available.

### Our Comprehensive Pathway

We define "alternative" in this southeastern state to mean reduced training offered to temporary teachers seeking state certification while already beginning to teach in the elementary classroom. These "alternative" teachers need a baccalaureate degree in *any* field and must pass the state teacher certification exam. At that point they may enter the classroom as a teacher. This model of an alternative route to certification has been described by Masci and Stotko as a "quick fix" (2006, p. 47), and by Weiner and Newtzie as "fast-track" (2006, p. 155). We recognize the value associated with these alternative routes to teacher certification (Stafford, 2006; Weiner & Newtzie, 2006) but need to emphasize the distinction between these pathways to teaching and the MAT at our university.

The MAT program described in this study is *not* by definition, *alternative*, rather it is *comprehensive*, and we strongly resist the classification of MAT programs in the literature (see Zeichner & Schulte, 2001) with state and school district sponsored alternative programs taught beyond the purview of the university. In this state our MAT students are required to take 9 hours of English to Speakers of Other Languages (ESOL), 12 hours of literacy education, and 3 hours each in content methods in science, mathematics, and social studies, classroom management, measurement and assessment, and psychological foundations of learning in addition to two internships.

Recognizing that the only existing option to alternative preparation as defined above was for candidates to enroll in a second baccalaureate degree or complete a lengthy combination of undergraduate and graduate courses, the university and local school districts collaboratively agreed that a preferred method of attracting individuals would be to create a *graduate level* initial-certification program for second career teachers. Within this context, the Master of Arts (MAT) in Elementary Education Program was initiated.

This 53 credit hour MAT program aligned university course work with 2 semester-long field based experiences and was designed to be completed in 4 semesters (16 months) by the full-time student. The program was tailored to meet the specific needs of the prospective second career teacher while maintaining the high expectations and integrity of university work and meeting state mandates for elementary certification.

As the planning phase of the program progressed, a statewide newspaper reported this new option in preservice teacher education. The response was extraordinary and unanticipated. The program coordinator received over 350 phone calls requesting information about the program, and 106 applications for admission to the program followed. Some of the prospective candidates withdrew their applications when they realized that they could not invest the time, energies, or monies required of the program. Others did not meet the admissions criteria for the program that included an undergraduate GPA of over 3.0 and successful completion of the GRE. Fifty students met the standards for admission and although our original plan anticipated a cohort of 25-30 students, we admitted all 50 eligible candidates in order to meet this high demand.

We notified the members of the cohort via telephone. When informed of acceptance into the program, most candidates responded with great enthusiasm. Comments such as "I've been waiting for a program like this," and "teaching was something that I've always wanted to do," were typical; however, as we began to plan with the first cohort of students we grew increasingly curious about the people who had responded to this invitation to change careers.

It immediately became apparent to us that second career preservice teachers in our new program brought distinctly different life

experiences than most undergraduate students and held very different goals for their own teacher development and expectations for the teaching profession. Undergraduate preservice teachers are typically drawn to the profession for primarily philanthropic reasons (Spencer, 2001), citing various motives such as love of children or an interest in a specific content area. Previous studies of career switchers indicate that individuals who enter the teaching profession later in life, after spending years in other career fields, report that orientations toward teaching have always been present, and hold beliefs that they can be positive role models for children and make a constructive contribution to society (MacDonald & Manning, 2002; Mayotte, 2003). We wanted to determine the backgrounds of our entering MAT students and find out why they were drawn to leave their previous career fields to seek a teaching qualification. As we documented our experience with these career switchers we wondered in what ways they would be similar to or different from our "traditional" undergraduate preservice teachers. Specifically, we questioned *who* these people were and *why* they would want to enter the teaching profession.

### Method

In order to examine this career switching phenomenon, we recognized the position taken by particular researchers (i.e., Clandinin & Connelly, 2000; Gudmundsdottir, 2001) that it is important for teachers to tell their stories. Because the role of the teacher is culturally mediated, and images of schools and teachers influence novices, we viewed these preservice teachers at the entry point to their professional preparation. We believed that by capturing the fundamental nature of their orientations toward children and teaching we would establish a better understanding of who these people *were*. The need to grasp the personal practical philosophy of each student's social experience (Clandinin &

Connelly, 1994; Powell, 1996) and their personal life history (Carter & Doyle, 1996) was paramount. As Chambers (2002) states, "Understanding how prior experiences influence teacher development can inform teacher educators, preservice teachers, and beginning teachers about the kind of teacher education curriculum that can facilitate the transition from teacher-education student to second career classroom teacher" (p. 148). Based on these underpinnings we purposefully pursued this study within the theoretical framework of narrative inquiry and collected archival data aware that these artifacts would shed important light on the culture surrounding MAT program participants (Patton, 2002). We knew as soon as we initiated the MAT program that these students were different, and we had to find out *who* they really were and subsequently used this theoretical frame to guide us.

Data were collected from three sources: The 50 students' narrative applications, a self-reflective essay written at the initiation of the program by each student prior to his or her full immersion, and from audiotaped conversations and analytical memos from the MAT instructors. This provided a triangulation of sources and perspectives. Specifically, we examined the students' two to three-page narrative applications to the program for demographic information, university and employment histories, and personal interests. In addition, as part of their application students wrote an essay describing motivations for applying to the program, and more generally, why they wished to join the teaching profession. The data were then organized according to archival considerations within the context of "three-dimensional narrative inquiry space" (Clandinin & Connelly, 2000, p. 131). Our analytical memos from the beginning of the program assisted in situating the data. Explicitly, the data reflect the experiential context of the students at the very onset of their program, and is representative of their attitudes and expectations, preconceived notions and competencies prior to formal

instruction in research and practice in elementary education. Given the intensive nature of program planning and initial delivery, we met on a daily basis. Inevitably those conversations included collaborative analysis of the data, in part to ensure consistent peer debriefing and in part, to confirm that program planning reflected the needs of the students.

We adapted Hycner's (1985) guidelines for data analysis. Having read all the narratives in order to familiarize ourselves with the data set, we then delineated units of general meaning. Once we were in agreement about these general meanings in the narratives we used our research questions to identify units of relevant meaning. Continuing peer debriefing served as a reliability check to verify the units of relevant meaning. Once repetition and redundancies were eliminated, units of relevant meaning were clustered to determine emergent themes that captured the essence of the students' rationale for switching careers.

## Results

The results are conveyed in two sections. The first section identifies the backgrounds of the students using both demographic data, and specific narrative examples of students' lives before teaching. These results indicated the wide variety of educational and vocational experiences that helped to shape these students. The second section explained the students' rationale for entering the teaching profession, providing us with several emergent themes regarding their motives for radically changing their life routines.

### *Who Are These People?*

Fifty adults were accepted into the first student cohort in the MAT program. Their gender and ethnicity were similar to the "mostly female almost exclusively white" demographics of public school teachers in general (Jorgenson, 2001, p. 64). This ethnic

composition was also reflected in a local school district where 1,411 of the 1,639 (86%) elementary school teachers were White (Florida Department of Education, 2007). In our MAT Program, there were 46 women and 4 men aged from 20 to 52 years old, with a mean age of 35 years old. The

vast majority were Caucasian (41 students) with the remaining 9 students representing African American, Hispanic, and Asian/Pacific ethnicities. All the students were second career teacher candidates who had earned a bachelors degree in a content area other than education (see Table 1).

Table 1

*Baccalaureate Degree Fields and Previous Occupations*

Baccalaureate degree field	Occupation prior to entering program
10 Psychology / Sociology	20 Business
10 Business management / marketing	- Office manager / Admin (5)
6 Communications / Journalism	- Office asst / Customer service (5)
5 Fine Arts / Dance	- Advertising / Sales (4)
4 Social Work / Child & Family Services	- Self-employed business owner (3)
4 English	- Accountant (3)
3 Biology / Biochemistry	13 Substitute or preschool teaching
2 Speech / Language / Hearing	4 Counseling / Social Work
2 Paralegal / Criminology	4 Performing Arts /Musician
2 Liberal Arts	3 Retail sales
1 Sports Management	3 Insurance
1 Geography	1 Armed Forces
	1 Pharmacist
	1 Homemaker

While the majority completed baccalaureate degrees in this state, overall,

27 universities in 14 states, Canada, and England bestowed degrees to these teacher

candidates. The youngest students had received their undergraduate degrees within the past year (three students were 22 or younger) while 7 students had graduated over 20 years ago. On average the MAT students had graduated university 10.25 years before beginning this program.

The participants had successful careers such as accountancy, retail management, social work, legal, and insurance professions (see Table 1). Several were already earning salaries that would exceed the grasp of even the most experienced classroom teacher. In addition, 13 out of 50 applicants had worked as substitute teachers or paraprofessionals, and therefore, a quarter of all students had at least some prior teaching experience. Recognizing this wide breadth of life experience representing occupations often associated with success and status in this society, we were keen to document the students' reasoning and enthusiasm for turning to the teaching profession. We were particularly interested to find what powerful impetus was driving this considerable investment of time, energy and, in most cases, substantial lost income.

#### *What Were They Thinking?*

The students' essay responses were categorized according to the following five interconnected, multi-layered and overlapping themes: (a) The quality of life, (b) wanting to make a difference, (c) positive orientations toward children, (d) the ongoing desire to learn, and (e) the attraction of the MAT program. For the purposes of this research they are individually presented but have considerable overlap and should not be read as discreet categories, rather as dynamic extensions of each other.

*The quality of life.* The students were deeply reflective about both their personal and professional lives and the desire to transform their present ways of life. On a personal level several students wrote about how the parenting process had changed their

value systems. One student shared how her life changed through motherhood:

When my son came into my life, he opened my eyes to a whole new world. Suddenly, each moment and experience had an important lesson to teach. You can see his wonderment and excitement with every move. His capacity for learning is never ending.... Trying to capture every chance is a continuing challenge . . . Being able to bring this to children in the classroom would be another gift in itself.

Many others also commented about parenthood greatly altering their lives as their children grew older and they had become reacquainted with the elementary school as volunteers. As one student indicated:

My youngest child is in kindergarten. I am the homeroom mom for her class and this gives me the opportunity to be involved with many activities. I enjoy being story mom and reading to the children. It has been great fun to work with the children for special activities such as crafts and cooking projects... I have really had a wonderful year with them.

Another student, having volunteered in her child's classroom, experienced a renewed interest in the learning and teaching process, "I really enjoyed watching how children learned and interacted with each other. Since I felt energized by the children I decided to get a summer job [as an assistant teacher] at the local community center."

Professionally, students also expressed dissatisfaction with their existing career paths, feeling unfulfilled and unchallenged, and questioning the long-term worth associated with their employment. This notion consistently presented itself in the data. A restaurant owner stated, "I always

knew that there was more to life than salads and quiche” while a business manager reported that, “Although I learned a lot during my 12 years in business, I feel that the real contribution resulting from most of those working hours was minimal. I failed to derive satisfaction from the pursuit of stockholder value.” The general dissatisfaction with prior employment was reflected by a graphic artist who stated, “Creatively, I am not feeling challenged. Also, I feel that I am not contributing to the world in a positive way.”

Dissatisfied by their present occupational status they also stressed the importance of finding success in life measured through indicators other than monetary rewards. Students asserted that the high salaries once sought and revered were no longer as important. One student remarked, “As I grow older money has become less and less important compared to being happy and loving what you do in this world.” Although their former occupations provided financial security, another student commented, “Life is not all about making money and climbing the corporate ladder, but instead is to help those around us and to give back to society.” Some students in the program, expanded on this idea of contributing to society. As one student with 27 years of experience in private industry wrote, “The satisfaction of positively influencing a child’s intellectual, emotional, and social development will have a greater impact on me than any business project that I have been responsible for in the past.” For those students the need to make a difference became a most important factor.

*The need to make a difference.* While some students wrote about being drawn to teaching as a result of unfulfilled prior career goals, other students chose to focus their personal narrative by looking forward to what they wanted to achieve in the future. These students perceived that by entering the teaching profession they would be

enriching their lives. In many ways their comments were idealistic and naïve, but their writings speak to teaching as a valuable profession that would transcend their previous work experience therefore making them, as one student suggested, “better parents and citizens.” This idea is further captured in the statement, “There is no doubt in my mind that teaching is the *best* profession in the world! [In] what other career can you hold the future leaders of our world in your hands and see them grow and prosper?” Additionally, a sample of the written assertions included, “Making a difference and shaping young minds would give me the satisfaction I want from a career as a teacher,” “I can make a difference in our future as a peaceful, caring society, one child at a time,” “I love the idea of being the person to shape their minds,” and “I feel that the opportunity to be a positive influence in a child’s educational career would be an honor.” In one of the more powerful statements to encapsulate this theme one student declared, “This will be an opportunity to change from a ‘money gathering’ type of profession where people are concerned about money matters, and shift my forces so that ‘people matter.’” While children are central in their plans to make a difference, many students extended these responses further to explicitly declare their affinity for children.

*Positive orientations toward children.* Like most preservice teachers the MAT students felt compassion for children and a desire to positively influence the learning process (Brookhart & Freeman, 1992; Weinstein, 1990). Many students spoke to their personal experiences and satisfaction as adults working with children, some through professional school-business partnerships. Comments such as, “I find great satisfaction in helping children and watching as they grasp new concepts and ideas that they have struggled to understand,” and “Through all my work experience, I have found a way to be

involved with children. I enjoy seeing them light up when they accomplish a task” represented this theme. One of the most heartwarming comments came from a student who had worked as an administrative assistant at a school and had become personally attached to the children:

One of my jobs has been to retire cumulative files. I examine a file to determine whether a student graduated or withdrew. I have a very difficult time reconciling the many failures to graduate with the always bright and hopeful smiling faces whose pictures are stapled inside the files. There was a time when they did not expect to fail and I would like to be trained to stand in the gap for these children.

Parallel to this altruistic interest in wanting to make a difference, many students recognized that they had a need to continue learning in their own lives.

*The ongoing desire to learn.* The MAT students’ commitment to lifelong learning was evident in their personal and career sacrifices. These students were willing to take substantial risks as they redirected their lives. Such was their hunger and zest for continued learning that they resigned from career positions, altered their entire family support systems including the financial framework, used savings or took student loans, and then entered the program with an infectious attitude that they had much to learn. Not only did they aspire to influence children’s learning but also they saw their own continuing potential unfolding within that process. The majority of students spoke to this concept, as represented by the following statements: “I feel this is a wonderful challenge and I am finally getting the chance to learn more about the educational process,” and “I have an insatiable desire to learn...some of the teachers in my life have motivated me to learn and have made learning an enjoyable experience...I would consider it a privilege

to be able to do the same for others.” Similar comments included, “I love to learn. I have loved sharing what I know with my children and watching them become independent thinkers,” and “One of the wonderful aspects of working with children is keeping in touch with my imagination and being able to look at the world the observant insightful way that children do.” The students’ desire to learn motivated them to search for a comprehensive program of study.

*The attraction of the MAT program.* Given the increase in alternative routes to state certification, we were curious about what the students were thinking when they made the commitment to the MAT program despite the existence of less demanding pathways into teaching. Without being prompted, students volunteered this information in their narratives. Frequently, students wrote about the research they had conducted into various academic programs before applying to the MAT program. One reported, “I have reviewed the programmatic offerings of several regional colleges and universities. The [MAT] program appears to be rigorous, intensive and focused in design and provides a balance between empirical course work and an application-based internship.”

In general, the students were attracted by the goal of earning a masters degree, the relatively short time line (an intense 4 semesters for the full-time student) and the strong emphasis on field based learning and inquiry. The following assertions, “I am interested because it is a relatively quick way to get certified in elementary education and into a classroom,” and “This program is exactly what I have been looking for. It allows me to expedite my entry into the field of teaching and provides the mentoring and classroom experience that I feel is so important,” confirm this theme. One student noted his preference for this pathway into teaching when he wrote, “Even though I qualify for the alternative certification program, I prefer some more formal education before teaching.” Perhaps, most

poignantly another student wrote that the MAT program “offered the opportunity for those of us who realized later in life that children are a wonderful entity.” Although we were concerned that the intensity of the program would seem potentially overwhelming to some candidates, in reality the sequence of the program was a major attraction. Armed with the program description, candidates made a conscious decision to accept some personal sacrifices and to commit themselves to this program. In light of the fact that these people hold such positive attitudes, we considered whether they were outside the normal population. However, given the broad range of career paths and life experiences, the fact that some were newly graduated while others had worked in careers for over 20 years, and the diverse motivations as described above, we believe this population does not represent outlying phenomena.

### Discussion

For the faculty involved in the planning and implementation of the new MAT program a defining characteristic of this student body was the wealth of their prior life experiences. For some students the motivation to return to higher education came from their dissatisfaction with their career paths or from recognition that they wanted a more meaningful professional life. While these students had questioned the direction of their careers, the richness and variety of worldviews provided both the instructors and their peers with a broad set of experiential approaches. We anticipated that having a class of previously employed counselors, business managers, dance instructors, substitute teachers, soldiers, and advertisers would bring a wealth of multiple perspectives to the work of the teacher educators. A key theme was the expressed need to regain control over their professional lives for many MAT students and being admitted to the MAT program was an act of taking control and feeling more in charge of

their lives. These people came into the program with clear objectives for applying the knowledge and skills acquired in their personal and professional lives to the new world of teaching, findings similar to Chambers (2002) and Salyer (2003). Our experience suggests that teacher educators developing high quality MAT programs will discover that there are second career teacher candidates seeking that academic challenge. Teacher educators do not need to compromise their values.

A second significant characteristic of this MAT cohort was that these professionals had all found themselves contributing to the lives of children. For some, this involved becoming a parent and raising their own children and with this intense experience came an appreciation for the complexities and challenges of growing up. Many of these students saw themselves as teachers in the parenting of their own children. As their children reached school age, the act of volunteering at their child's school translated into opportunities such as becoming classroom aides, parent representatives on school committees, or substitute teachers; a process that afforded them insights into the teaching world. A smaller group of students did not have children of their own but through opportunities in the workplace, primarily business partnerships with schools or tutoring programs, they found themselves interacting with children and developed an affinity for teaching. The serendipitous result of this involvement with children included an awareness of their interest in teaching. In general, the MAT students had become conscious of the significance of children in their lives over a period of time, and the decision to apply to the MAT program was a carefully calculated and purposeful act. While some of our undergraduates do have extended life experiences with children, as a rule these MAT students brought a more expansive schema, and a wider scope of personal



practical knowledge (Clandinin, 1985). Consequently, teacher educators need to be aware that these students will bring an array of expectations and new challenges for our work.

Aware of their own desire to assume a new challenge, these MAT students valued the life-changing endeavor this program represented. From the very beginning program we were impressed by the passion of the students' commitment to their studies. None of these MAT students casually or half-heartedly decided to become teachers. Rather, they appeared self-reflexive, and thoughtful about the role of continued learning in their own lives. As such, being enrolled in the MAT program was a statement of self-actualization by many students. They were all willing to redefine their professional and personal lives in order to feel they were contributing to the lives of children. Although much older than our "traditional" undergraduates, they were in many ways just as idealistic (Weinstein, 1988). They entered the program convinced that they could make a difference as a teacher, and with high aspirations for their success as an educator.

We found the MAT students voiced a deep commitment and brought a vibrancy and desire to their studies. While this research examined a specific cohort of MAT teacher candidates, we found ourselves comparing these students to our traditional base of undergraduate elementary education majors. Consistent with the findings of Huling, Resta, and Rainwater (2001), we assert that the needs and motivations of the MAT students together with the depth of their life experiences make them quite distinctive from our undergraduate preservice teachers, an area that we believe merits future research.

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We intend to continue our research with second career candidates. Longitudinal studies should help teacher educators understand these candidates from multiple perspectives (university faculty, cooperating teachers, and school administrators) and to follow these candidates into their teaching careers. Further research is needed to compare retention and attrition rates of second career MAT prepared teachers to other traditional and alternative pathways to teaching. We encourage teacher educators to discover whether second career teachers who are prepared through MAT programs are sought after for teaching positions ahead of candidates from traditional or alternatively trained programs. Research is also needed to examine whether second career teacher candidates bring other attributes to the teaching field.

We are convinced that given their different characteristics, this career switching population needs strategically designed and deliberative programs. Teacher educators working with career switchers should recognize the wider diversity of life experiences among students and be open-minded and willing to respond to the more complex set of perspectives and expectations that these students bring to their studies. We encourage faculty in second career teacher preparation programs to recognize and include their students' contextual life experiences. In light of the fact *these* people have made a conscious decision to circumvent earn-as-you-learn alternative certification options, MAT teacher educators must recognize the differences these students bring to their studies and the subsequent impact on the process of teacher preparation.

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## Societal Responsibility and Linguistic Rights: The Case of Deaf Children

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*If deaf people's linguistic needs are not met, deafness disables, potentially profoundly as to cognitive function, psychological well-being, and educational and economic possibilities. But if linguistic needs are met, deaf people can thrive within the larger hearing society. These needs should be met through linguistic models fluent in American Sign Language (ASL), regardless of whether the child also receives speech training and/or has a cochlear implant. Society must be informed that ASL is a bona fide language, so parents can make responsible decisions concerning their child's linguistic input. Deaf children must get adequate education so that literacy rates rise to the level of hearing peers.*

Let us make a distinction at the start: the term *deaf* is an auditory one, referring to hearing loss, while the term *Deaf* is a cultural one, connected to American Sign Language (ASL; Padden & Humphries, 2005). We come forth as scholar-activists in response to a call by the *Journal of Research in Education* in 2006 for "papers on the legal, ethical, technical, psychosocial, or multicultural issues of people with disabilities (preschool age through adult)." This paper focuses attention on the particular paths of deaf children – detours not typically accessed, and, often not even noticed. Scholars of human endeavors tend to base conclusions on studies that do not include deaf people, an invisible minority. Focusing attention on deaf matters has two purposes: first, to persuade readers to actively protect full linguistic rights for deaf children; second, to encourage readers to look at their own research and teaching areas through d/Deaf eyes and do more inclusive work in the future. We are spreading the word to you, who are in a position to spread it further.

We have a wide range of experiences, professional and personal, with d/Deaf people/issues, and thus owe general thanks to our students, teachers, colleagues, friends, and particular thanks to Irene Leigh and Kristin Lindgren. Our interest here, however, is narrow:

the linguistic needs of d/Deaf people, especially those who use ASL as their primary language and English as their written language, and the moral imperative to meet those needs.

### How Deafness is Unique as a Disability

If a child does not hear and no one recognizes that fact early on, formerly a common situation in the USA and still common in much of the world (Lane, 1984; Peterson & Siegal, 1995), or if a child is not given appropriate support and receives inadequate linguistic input, the effects can be disastrous. By the time a child reaches 5 to 7 years of age (Krashen, 1973; Pinker, 1994), the brain's language mechanism changes; a child without sufficient linguistic input during that critical period for language acquisition is likely never to achieve fluency in any language, spoken or sign, and the chance for proper development of many cognitive skills related to language use is minimized (Peterson & Siegal, 1995), although certainly home signing goes beyond mere gesture (Goldin-Meadow, 2003). This situation disables.

Language is the strongest facility distinguishing humans from other animals (Pinker, 1994); it follows that depriving children

of language reduces their humanity. Language binds us to each other, allowing meaningful and intimate interactions. It is the foundation of culture, fundamental to human identity (Lane, Hoffmeister, & Bahan, 1996; Weinberg & Sterritt, 1986).

Evidence that deaf people were considered subhuman until recently comes from the fact that it is only within the past few centuries that deaf people have been educated (Lane, 1984). As Winzer (1993) points out, who was taught, when and how through the decades, tells us much more about society's appreciation of the humanity of traditionally "disabled" people than it tells about the particular educational needs of those people. People without language are not simply isolated, they are reduced as humans in the eyes of society and in their own eyes; they are culturally impoverished in a way hard to imagine for people accustomed to the American scene.

Descriptions of the cultural destitution of deaf people around the world, particularly in rural areas, speckle the Internet. Wilson and Kakiri (2005) outline typical problems of d/Deaf in many countries. In Guatemala, for example, where 22 Mayan languages plus Spanish are spoken, Guatemalan Sign Language is not standard among the deaf, and many physically isolated deaf people live in dire poverty, economically and culturally (Bruce & Trant, 2003).

Today, fortunately, most deaf people in America, at least, learn a language. While it is difficult to get accurate numbers, for many it is eventually ASL. Mitchell, Young, Bachleda, and Karchmer (2006) report estimates on the number of deaf people who use ASL in America from 100,000 to 15,000,000 (the upper limit is clearly implausible). They discuss why it is difficult to get an accurate count and raise a call for changes to allow such a count. Pending further study, many continue to rely on Schein and Delk's (1974) 500,000 estimate. Moores (2006) reports that, while the number of deaf children learning ASL is decreasing because many of them are educated in oral-only settings and get a cochlear implant (CI), it is still strong because the Deaf

community takes an active role in educational policy regarding deaf children.

Using a sign language, Deaf people are able to do anything that hearing and speaking people can do, other than hearing and speaking. And sign languages facilitate the cognitive development of deaf children just as spoken languages facilitate the cognitive development of hearing children (Corina, 1998; Emmorey, 2002; Neville, in press; Poizner, Klima, & Bellugi, 1990); they manage very well at human cognitive and other tasks.

In addition, ASL forms the basis of a culture. Not only do Deaf people share a language, they share common beliefs, ways of perceiving the world, and values, many based on their experiences as visual people whose way of gathering information differs from that of the hearing people who compose the majority culture (Lane, Hoffmeister, & Bahan, 1996; Padden & Humphries, 2005). For members of this culture, it is an essential part of their identity.

Many Deaf people object to the classification of deafness as a disability (Lane, 2002). Indeed, there is a term for the belief that hearing is superior to not hearing: *audism*, which has as negative a set of connotations to those who are against audism as *racism* or *sexism* has to people who oppose racism or sexism (Humphries, 1977). Deaf people are able within their culture; it is only within hearing societies that their abilities might be limited by their deafness. Some are also successful and comfortable interacting with hearing people. Others avoid it, for a variety of reasons. And so, to various degrees, many are able to negotiate both the Deaf and the hearing worlds of which they are a part (Brueggemann, in press: Padden, 1996).

Nevertheless, most hearing people are unaware that Deaf culture exists. Witness the rise of media aimed to combat that ignorance, such as books like that written by Moore and Levitan (1992), cable television shows like the one put on by the Virginia Department for the Deaf and Hard of Hearing, the institution of

Deaf Awareness Week by the World Federation of the Deaf, and multiple Internet sites on the topic. This ignorance persists, although among college students there is a recent surge in interest, addressed below. Hearing people do not have extensive or even minimal social interaction with Deaf people (Cappelli, Daniels, Durieux-Smith, McGrath, & Neuss, 1995; Foster, 1988). Part of this, naturally, is simply the small number of Deaf people compared to hearing people. Part is the language barrier. But part is due to a common misperception: Hearing people unaccustomed to deaf people, upon hearing their speech, or seeing their written English, which often contains errors similar to a second language user's, may conclude they have a mental deficiency rather than a hearing loss (Gelb, 1989; Lane, 1984). They may see them signing and view it as a primitive, gestural means of communication. This misperception is one reason why it has taken so long for ASL to be accepted as fulfilling language requirements in secondary schools and universities (Wilcox, 1992). Even people who have Deaf family members, or work side-by-side with Deaf people, sometimes even teachers who have d/Deaf children mainstreamed into their classroom, can suffer to varying degrees from this erroneous suspicion (Osgood, 2006). Indeed, being diagnosed mentally deficient happens far too frequently for deaf people (Lane, 1984), even though the majority of them fall within the ordinary range of intelligence.

In support of the claim that most deaf people are of ordinary intelligence, consider data from the Gallaudet Research Institute (2005). During the 2004-2005 school year, the Center's Annual Survey of Deaf and Hard-of-Hearing Children and Youth reports 37,500 children in special education programs across the USA. Of them, 15,037, or 40%, are reported as having one or more "additional condition other than deafness," including low vision, blindness, autism, learning disability, speech or language impairment, mental retardation, orthopedic impairment, attention deficit disorder, traumatic brain injury, emotional disturbance, or other health impairment. No information beyond deafness was available on 2,093 of the children in the study. The bare numbers, however, do not

reveal the complexity of the issues involved; Braden (1994), who discusses the myriad effects of deafness on family dynamics and social interaction, shows that deafness negatively impacts verbal IQ, but has no effect on nonverbal IQ. In fact, deaf children of deaf parents perform better on IQ tests than hearing children.

Society's responsibility to the deaf person is crucial, for failure to meet that responsibility risks damning deaf people to a lower status, in the best case depriving them of the pride in their language that would allow them to develop strong, healthy identities within Deaf culture, and in the worst case depriving them of any language as a means to proper cognitive and social development and thereby truly limiting their ability to partake in humanity. It is essential to the psychological, social, and economic well-being of any person that he or she learn a language, any natural language, spoken or sign, well enough to have a full range of human interactions with others and belong to a culture. If the individual does not, as a result of misidentification or of inadequate response to a proper identification, then he or she is truly disabled. In other words, if society fails to meet the needs of deaf people, we actually create true cognitive and/or societal and/or economic disability of the types described above (Corker, 1998).

### Societal Responsibilities

How can society avoid creating that kind of disability? First, all deaf children must have access to a natural language. Whether that means that they use a CI or hearing aids and the accompanying therapy successfully provides them with access to spoken language (O'Reilly, Mangiardi, & Bunnell, in press), or that their families learn ASL as best they can and use it with them consistently (Wilbur, 2000), comprehensible linguistic input is an absolute necessity. However, there is no denying that for deaf children, being bilingual is nothing but an asset (Chamberlain & Mayberry, 2000; Harris & Beech, 1998; Hoffmeister, 2000; Padden & Ramsey, 2000; Strong & Prinz, 2000; Wilbur,

2001). Society must recognize and encourage this.

Even deaf children who learn ASL as natives, from Deaf parents, still need to know English, since the written form is a necessity for leading a literate life and communicating with the majority of people, who do not sign. Spoken English is also of benefit – with voice where feasible, and without voice (mouthing and speechreading) if possible – since there is evidence that phonological awareness helps develop literacy among deaf children (Hanson, 1989; Hanson, Shankweiler, & Fischer, 1983; Hanson & Wilkenfeld, 1985; Luetke-Stahlman & Nielsen, 2003; Nielsen & Luetke-Stahlman, 2002; Sterne & Goswami, 2000), and, together with written English, voicing and/or mouthing and/or speechreading obviously broadens opportunities and options within mainstream society (Marschark, Lang, & Albertini, 2002).

Likewise, children who receive CIs or have access to spoken language with hearing aids still need to know ASL (Yoshinaga-Itano & Sedey, 2000). First, when hearing aids and implants are off, removed, broken, or need re-programming, the child does not hear. And everyone knows it. So the child's identity is not going to develop as a totally hearing child. Knowing ASL will serve several purposes for such a child, listed by the Laurent Clerc National Deaf Education Center (n.d.). It gives the child immediate access to language by building on a child's strong sense of vision while the sense of audition is developing. It allows communication with others at all times, including when spoken language is not a possibility and when noise interference hinders the effectiveness of CIs. And, until it is ensured that hearing aids or an implant are offering a child the language access hoped for, ASL provides early comprehensible input. ASL also offers the child a way to develop a positive view of his or her identity as a deaf person (Stinson, in press).

So, three additional societal responsibilities are necessary to ensure the inclusion of successful bilingual Deaf members in the larger society. First, schools must educate everyone about basic linguistic matters, including the facts that no one language is better than another (see

Chomsky, 1965) and that ASL is one language among many, all created equal (see Stokoe, 1960). It is especially important that this appreciation for language diversity be fostered in deaf children, who are unique in that they may learn a language that is not the native tongue of their family members. Second, public institutions must ensure that those who are not deaf, those who wield tremendous power and prestige in our society, use their privilege not to continue the unequal status quo, but rather to provide excellent linguistic and cultural models for deaf children. Finally, schools, through educational policies and practice, must ensure that all children become literate in the written language of the larger society, including children who cannot hear that language. If this happens, our educational system will be able to successfully educate deaf children in a way that ensures they do not have a disability.

### Knowledge and Appreciation

As stated above, no child should be denied language. What that means with respect to the linguistic input given to a particular deaf child is complex. These children have a wide range of personal situations and the possible responses to deafness are, accordingly, just as wide.

Few deaf children are born to Deaf parents. The figure is certainly under 10%, and Moores (2001) puts it as low as 4%. The rest are born to hearing parents, many initially unprepared to deal with the choices they must make. Some offer their children only sign language. Others offer the child only spoken language, abandoning that effort only under the duress of undeniable failure. Still others offer both sign and spoken language from the start. Assistive technologies such as hearing aids are common, and CIs are becoming more common, with best results for the latter coming from consistent, persistent rehabilitation therapy. Yet, even then, they exhibit a still-unexplained failure rate of around 20% (O'Reilly, Mangiardi, & Bunnell, in press).

That parents are the ones to make these decisions on behalf of their child is unavoidable and regrettable. It is unavoidable because of the

critical age for language acquisition: Linguistic input is essential before the age of 5 to 7, and the earlier, the better, yet no child can be asked to make serious decisions at such a tender age. The parents simply must start the child down some language path in order to ensure proper cognitive development. However, it is regrettable because these decisions are intrinsic to the child's identity. Which language to learn and use, and with what effort or ease, are the sorts of decisions that lead people to easily make friends and feel good about themselves or to be isolated and possibly psychologically damaged (Brueggemann, 1999; Kent, 2003; Leigh, in press). The bioethical questions involved in making such decisions for deaf children are treated eloquently in Burke (in press).

Here is where a crucial societal responsibility comes in: It is imperative to supply the preparation necessary to make such decisions, and, preferably, in advance of the often very emotional point where people are faced with them. Schools must educate society about basic linguistic matters, for, as per the earlier discussion, language rights are human rights.

Let us step outside the situation of deaf people for a moment. Americans have appreciated a multilingual society and resisted language legislation since the birth of this nation. In 1780, John Adams proposed an official language academy, which the Continental Congress promptly rejected (Crawford, 1997). While English was and is still used in official documents, the USA has no declared official language. Bilingual and multilingual citizens have been the rule across America through these three centuries, and public schools have always served children who speak many different languages (Castellanos, 1983).

At the same time, however, language bigotry has been and is common in our history and present life (Valdés, 1999). This bigotry extends not just to languages other than English, but to varieties of American speech other than the standard (Wolfram & Schilling-Estes, 1998). Speech may be perceived as different for many

reasons: It could sound odd because the speaker is not a native of English or uses a different variety, such as British or Australian, or because the speaker has a hearing loss and cannot regulate or form certain sounds, or because the speaker has a physical disability that affects language production, such as cerebral palsy, and so on. Regardless of the source of this perception, speech difference is judged, and a value is placed on that speaker's intelligence, social standing, and indeed, his or her worth as a person (Linn, 2000). These judgments can affect employment possibilities, access to housing and medical assistance and legal protection, the very way people are treated in the classroom (Baugh, 1999, 2000; Purnell, Idsardi, & Baugh, 1999). In other words, basic civil rights. And that is not even counting the effects of these judgments on social and personal identities (Jones, 2003).

Linguistic bigotry is born of ignorance. Many Americans still do not know that all natural languages (and there are some 6,000 in the world) are capable of expressing abstract thought, human emotion, creative urges, and complex ideas. Society has a responsibility to counter linguistic ignorance for the sake of the civil rights and human rights of many people, not just deaf people. The education our nation needs must include the information that not only are all natural human languages equal citizens, if you will, in a linguistic sense, but ASL is a natural human language, and, therefore, one more equal citizen.

Furthermore, one of the results of knowledge is appreciation. If you know your language is as good as anyone else's, you can use it with pride (Baugh, 2000; Rickford & Rickford, 2000). Consider the situation of immigrants, in particular of Spanish-speaking immigrants. As with other immigrant groups, once a family comes to America its home language shifts from Spanish to English over a three-generation span (Portes & Rumbaut, 1990, 2001a, 2001b). But for Spanish, at least, there are always new immigrants coming. And these immigrants and their descendants have let their language pride shine forth, as in the placards in California in the demonstrations against the



English Only Movement in the 1990s: *English si, Only no!*

That kind of language pride may also be rising among speakers of the non-standard variety of English called African-American Vernacular English (AAVE; a.k.a., Ebonics). While the controversy over Ebonics (Baugh, 2000) may not be over, the persistence and popularity of music and of media that use AAVE suggest a growing appreciation of the language, and works like that of Rickford and Rickford (2000), which discuss the cultural history and role of AAVE, help.

The Deaf Pride movement (Healy, 2006) has, likewise, led to appreciation of ASL. Before 1965 almost no one, including Deaf people, realized that ASL had the structural building blocks and communicative power of any other natural human language (Humphries, in press). Most people considered sign language to be hardly more than gestures. Others considered it broken English. Spoken language was assumed to be more complex, and capable of expressing a wider range of ideas and in greater depth; in short, superior. That erroneous notion has changed, starting with Stokoe, Casterline, and Croneberg (1965), and is gaining momentum with the work of linguists and social activists, such as Carol Padden and Carlene Canady Pedersen. Humphries (in press) outlines these changes in Deaf Americans' perceptions of ASL, and the rise of Deaf Pride. But the personal and social transformation is still ongoing.

Today one can find many DVDs of Deaf stories and poetry (Bauman, Rose, & Nelson, 2006). Performances by the National Theater for the Deaf and by wonderful Deaf poets, such as The Flying Words Project, allow hearing people who otherwise have no connection to Deaf culture to recognize the beauty of ASL. Perhaps that, and certainly the pure fun of using parts of the body other than the speech tract to produce language, have resulted in ASL having the fastest growing number of students among second languages studied at the university level in the USA according to a Modern Language

Association survey (Hoover, 2003; Welles, 2004).

The trouble is, though, that again, the situation of deaf people has unique properties that set it aside from the situations of people who speak languages other than (standard) English. If you speak Spanish, for example, the chances are great the rest of your family does, too. The same is true if you speak some nonstandard variety of English. But that is not true of people who use ASL. The vast majority of deaf children grow up in a family in which they are the only deaf persons (Moores, 2001). If they learn sign, their family members may or may not also learn it. It is not uncommon for a sibling and sometimes even a parent of a child who uses ASL to have at best only a rudimentary skill in ASL. If these children do not have extensive exposure to Deaf culture outside the home, they may not discover the rich resources in sign theatre, storytelling, and poetry until they are teens or adults, or, perhaps, ever.

Children who use ASL as their primary language need to know that it is in no way inferior to the spoken language used by the hearing people around them, for if they believe that something as fundamental to their identity as their language is inferior, how can they help but feel inferior as human beings? At best, signing children should be introduced to other Deaf people and brought to events that allow them to develop and use ASL skills and that offer them the advantages that exposure to competent and creative use of their language offers to hearing people all the time (Stinson, in press). At the very least, they should be explicitly taught in school, along with hearing children, that natural sign languages (rather than any kind of manually coded version of a spoken language; see Lou, 1988) are bona fide natural human languages and that ASL has the same linguistic status as English or any other natural human language. That way they can experience the confidence and pride in their language that most hearing people take for granted.

### Privilege, Power, Competence

One of the thorniest issues that faces people who interact with people who have disabilities stems from the fact that they often do not share that disability. In this sense, they are privileged with respect to the disabled person. That same kind of privilege is experienced by many people who work with or love members of oppressed minorities of any kind. And that privilege holds of hearing people who work with Deaf people. But, again, the situation is more extreme, and the ethical issues that arise are insistent.

Sign languages have a particular social situation that no spoken languages share. Recall: Well over 90% of deaf children live in hearing families. In families that offer their child ASL, often at least one parent and/or sibling learns some sign. And there are many hearing teachers and interpreters for the Deaf. Add to that the recent surge in popularity of ASL among university students, and we conclude that more hearing people sign (to varying degrees) than deaf people.

Hearing people who learned ASL as a second language (L2) are often the ones to expose deaf children to sign. Even children who acquire ASL through communication with native signers are heavily exposed to sign by interpreters, all of whom are hearing and most of whom are L2 signers. Most Deaf children are mainstreamed (Clark & Mattiacci, in press), so most deal with interpreters on a near daily basis. But now, with university students/ graduates knowing ASL to varying degrees and using it with Deaf children when the opportunity arises, possibilities for influence from spoken English and manually coded English to creep into ASL multiply (D. Yanke, personal communication, March 23, 2006). Languages often borrow from each other (witness in English *karioki* from Japanese, *genre* from French, *taboo* from Tongan/ Fijian), but in limited ways unless we have an invasion situation, where the influence can be extensive. With Deaf signers being so outnumbered, what will become of ASL? Hearing people, who have always held a

position of privilege with respect to language, now also have a stunning power.

The issue is not just academic – it has practical and moral implications. Think of mistakes that L2 learners of English make. What if more people made mistakes than spoke naturally? Over time, mistakes would prevail, though probably with modifications. Certainly language change cannot be halted, nor do we advocate trying to do such a misguided thing. But it is important to recognize several facts if society is to protect the linguistic needs of deaf children.

Learning a second language as an adult, that is, past the onset of puberty, a second critical period for language learning (Krashen, 1973), is hard work, and one will almost undoubtedly never gain native competence. Many take multiple years of university language courses and still barely hobble along in a language. Typically an extended visit to a community where the target language is spoken helps enormously, but nothing compares to acquiring a language as a child.

This is as true of sign language as of spoken language. The Deaf child, surrounded by hearing L2 users of ASL, is often bombarded by poor language models. But in order to acquire a sign language (or a spoken one), one needs exposure to sufficiently rich and appropriate language input (Kegl, 2000; Mayberry, 1993). Poor signing by parents or anyone else is rarely enough to allow deaf children to develop adequate signing skills (Gregory, Bishop, & Sheldon, 1995). Yet many organizations serving the public don't require interpreters to be certified in ASL. All too often an organization puts out a call for help interpreting, and a hearing person who took an ASL course years ago steps forward. We may applaud the volunteer, but we must condemn the practice. Schools are also guilty of this (Clark & Mattiacci, in press). Even teachers may not be required to be fluent in the very language students are expected to learn.

Society must ensure that people who serve the needs of Deaf people, particularly of

children, be linguistically competent to do that. Think of the misinformation the Deaf child gets if the adult signs incorrectly. Acting upon wrong information could make the child do something entirely reasonable given his or her interpretation of the information, but that looks stupid to others. Worse, students can miss pertinent academic information, misunderstand assignments, even learn incorrect "facts" based on the poor ASL skills of teachers or interpreters. Think of the confusion the child may feel if the adult signs incorrectly. Children tend to trust adults when it comes to language use. So, Deaf children may lose confidence in their own signing. What if the child learns a new sign from this volunteer (or paid) incompetent signer, which is not, in fact, a real sign, and uses it with other Deaf children or adults, only to be ostracized or not understood?

Failing to provide good linguistic models and competent interpreters to Deaf children not only inhibits proper language development, it can seriously inhibit access to knowledge and profoundly damage self-esteem. The World Federation of the Deaf (n.d.) declares denying a Deaf child access to a quality education "tantamount to child abuse."

### Literacy

There is a close link between illiteracy and poverty around the globe, from the personal to the national level (Adishesiah, 1990). Again, though, the case of Deaf people is more extreme, since reading/writing may be the Deaf person's only way of connecting with the hearing world. When the written word becomes a primary means of direct communication, the need for literacy is raised to the level of a linguistic need.

Presently, American schools are failing to meet that need for Deaf people; as the discouraging statistics on literacy reveal, under 16% of Deaf high school students read above the sixth-grade level, and that figure falls drastically for African-American and Latino students, with many Deaf overall being functionally illiterate (T. Allen, 1994). Discussing why there is such a high rate of illiteracy among the Deaf and offering suggestions for positive change go

beyond this paper (see S. Allen, in press; DeLuca & Napoli, in press). Our point here is more basic. Written language, as a link to hearing individuals and to the world in general, offers Deaf people possibly their best avenue to economic and political power. English is the language of commerce, of academia, of technology, and more. Denying an entire group of people access to those powerful arenas is ethically reprehensible. Effective education for the Deaf, including literacy in the dominant language, must be a societal priority.

### Conclusion

Described here are some of the ethical considerations when working with deaf children. Society has a responsibility to these children, to offer them a life, a language, an identity, and an education on par with their hearing peers. Schools, in particular, must promote attitudes, knowledge, and equity in linguistic matters such that a bilingual life, one that includes both ASL and English (for the American or Canadian deaf child), is the norm. We cannot continue to allow deaf children to be denied language, literacy, equal access to information, privilege, and all the choice that is the hallmark of our society.

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## Graduate Studies Cohort for Elementary Teachers: New Direction for Professional Development

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*Research indicates that in order to achieve success in the restructuring of schools in the promotion of school reform, school university partnerships are essential. This article describes one university's effort to partner with a local school system to offer a graduate studies cohort program to assist practicing elementary teachers in their efforts to obtain "highly qualified" status required by the No Child Left Behind (NCLB) Act (PL 107-110). This study examined the participants' perceptions of their professional growth through their completion of the graduate studies cohort. Data were collected from teacher narratives, open-ended questionnaires and focus group interview. The results indicated that participants identified three areas of change in their teaching practices: (a) connecting theory to practice; (b) development of collaborative partnerships; and (c) continued lifelong learning and professional growth.*

### Introduction

In 2001, The No Child Left Behind (NCLB) Act (PL 107-110) set guidelines that require states to fill classrooms with "highly qualified" teachers by the end of the 2005-2006 school year. Since that time, state departments of education and policymakers have begun implementing plans, per NCLB requirements, that set criteria for practicing and new teachers in the effort to earn the rank of highly qualified teachers.

In order to meet the NCLB guidelines, the state of Alabama mandates new elementary teachers, holding a Bachelor of Science degree, to complete a "four by four" block of core subjects (i.e., four courses in English language arts, science, social science, and mathematics; Alabama State Department of Education, 2003). Most practicing teachers who earned their certification prior to NCLB, however, fall short of the four by four core subject requirement. One option for these Alabama teachers, who are seeking highly qualified status, is to earn their Master of Elementary Education degree.

One research university, in partnership with the local school system, designed a model for teacher education graduate studies for a cohort group of elementary teachers seeking to earn the title of highly qualified teacher. The uniqueness of this partnership's model is the commitment among the partners to identify the specific needs of the classroom teachers, school, and community when constructing and designing the courses as part of the professional studies. While this study is not intended to be generalized, its results do attempt to provide a vivid description of how university professors and a cohort of classroom teachers collaboratively designed a graduate program not only for the purpose of obtaining highly qualified teacher status, but to facilitate professional growth and teacher change. The insights gleaned from this study attempt to provide a model of a graduate program that can readily be incorporated into existing university school partnerships across the country.

## Theoretical Background

In its report, *What Matters Most: Teaching for America's Future*, the National Commission on Teaching and America's Future (1996) states that teacher expertise is the single most important determinant of student achievement. The report suggests:

What teachers know and can do makes the crucial difference in what teachers can accomplish. New courses, tests, and curriculum reforms can be important starting points, but they are meaningless if teachers cannot use them productively. Policies can improve schools only if the people in them are armed with the knowledge, skills and supports they need. (p. 5)

Guskey and Huberman (1995) suggested regardless of how schools are formed or reformed, structured or restructured, professional skills are fundamental to improvement (p. 1). However, the literature on professional development provides descriptions of failed models along with potentially successful ones that can guide future efforts (Epstein, Lockard, & Dauber, 1988; Griffin, 1983; Guskey, 1986; Joyce & Showers, 1988; Lieberman & Miller, 1979; Orlich, 1989; Wood & Thompson, 1980). One common element in many of these models is that most emphasize that good teachers must have a host of subject-matter and pedagogical skills to help every student meet high academic standards (Shulman, 1987; Wilson, Darling-Hammond, & Berry, 2000). From this school of thought emerges the question of how to facilitate and develop teacher expertise. More often than not, the development of teacher expertise has been attempted through in-service training or staff development that consists of isolated and deficit models facilitated by an outside expert who "would supply teachers with knowledge they lack" (Feiman-Nemser, 2001, p. 1038). In response to these failed models, researchers and professional organizations have begun to argue against these traditionally sporadic and disconnected professional development opportunities for

teachers and advocate for a new paradigm of professional development (Darling-Hammond & McLaughlin, 1995; Feiman-Nemser; Lieberman, 1975; National Staff Development Council, 1994).

A major overhaul would mean reform propositions so profound that the teacher profession itself, along with the culture of schools and schools of education, would undergo a total transformation (Fullan, Galluzzo, Morris, & Watson, 1998). Ball and Cohen (1999) recommend that teachers need serious and sustained learning opportunities throughout their career in order to teach in ways that meet the demanding new standards and seek to offer solutions to educational problems. One avenue of developing teacher expertise is through university school partnerships. In the last decade, there have been many reports of teacher educators attempting to work collaboratively with classroom teachers for the dual purposes of reciprocal professional development and improved education for students (Ramsey, 2000). In addition, a learning/teaching collaborative model embedded with relationships established over time has been shown to foster teacher leadership (Darling-Hammond, Bullmaster, & Cobb, 1995).

On the other hand, some findings indicate that professional development through school/university collaborations can be adversely affected by the conditions that exist in the participating institutions (Goodson, 1992). These include personal conditions such as past experience and personal beliefs and values, cultural conditions related to shared values, beliefs, habits, and assumptions and ways of doing things and structural conditions in the form of "rules, roles, responsibilities and relationships" within a workplace (Hargreaves, 1994, p. 242).

Guskey (1986) recommended that two crucial factors should be considered when planning professional development programs: (a) what motivates teachers to engage in professional development, and (b) the process by which change in teachers typically occurs. Beattie (1997) suggested that this can be

achieved within a community of inquiry where a shared vision of teacher education and teacher development in the construction of professional knowledge of teaching (p. 111) exists. This study described the shared vision between a university and professional development schools to establish a sequence of graduate coursework with the goal of facilitating teacher professional growth and change.

Professional Development Schools (PDS) represent one type of initiative that attempts to align the teacher-as-learner with the development of collaborative work cultures (Fullan, p. 253). The hallmark of the PDS is the collaboration between university and school personnel. The structure of these partnerships provides opportunities for teachers and administrators to influence the development of their profession and for university faculty to increase the professional relevance of their work through: (a) mutual deliberations on problems with student learning and their possible solution; (b) shared teaching in the university and the schools; (c) collaborative research on the problems of educational practice; and (d) cooperative supervision of prospective teachers and administrators (Holmes Group, 1986). The uniqueness of the PDS model is the effort to strengthen knowledge and practice in schools by providing exemplary sites for research, experimentation, inquiry, evaluation, and eventual dissemination of innovative programs and effective practices. The PDS model was used to plan, construct, and implement this graduate cohort.

The purpose of this study was to examine the perceptions of a group of elementary classroom teachers who collaboratively constructed a series of graduate courses with university professors. Additionally, an investigation into the effects the completion of the coursework had on these teachers' attitudes, beliefs, and perceptions of their teaching and professional growth was conducted. Rather than an explicit hypothesis, a set of question(s) provided the direction for this study: (a) How did the participation in a university and school partnership cohort graduate program influence a group of teachers' attitudes, beliefs, and

perceptions about teaching and professional growth? and (b) How has the participation in a university and school partnership cohort graduate program influenced a group of teachers' classroom teaching practices?

## Methods

### *Participants and Setting*

The participants in this study were 7 elementary teachers who began their graduate cohort program sequence at the Master of Elementary Education level and continued with the completion of an Elementary Education Specialist degree at a large southeastern public research university. The combined programs required 60 semester hours of coursework and were completed over 7 semesters. Their years of teaching experience ranged from 1 to 18 years and represented three different elementary schools within the local city school system.

Through completion of a Masters degree in Elementary Education, teacher participants would obtain the "highly qualified" status required of the No Child Left Behind (NCLB) Act (PL 107-110). The curriculum framework, however, was designed to meet the needs of the teachers within the context of their school and community. Participants were asked "What needs and goals, as a classroom teacher, do you want to accomplish in this graduate cohort program?" With the overarching goal of raising student achievement, teaching and learning "Best Practice" strategies provided the framework for the graduate courses' curriculum (Daniels & Bizar, 2005). Specific courses focused on writing across the curriculum, closing the achievement gap, and meeting the needs of diverse learners. Joining in the effort were administrators from both the university and the elementary schools. Principals made suggestions based on targeted areas of improvement according to school goals while university professors adapted syllabi and coursework.

### *Data Collection and Analysis*

Clandinin and Connelly's (2000) "three-dimensional narrative inquiry" framework guided the design of this study and the continuum of data collected (p. 50). Data collected from teacher narratives, open-ended questionnaires and focus group interview served as data triangulation. In addition, data collection demonstrated the researchers' thoughtful efforts to record and interpret data in a way that reflected teachers' perceptions of their professional growth and change as the result of their participation in the graduate cohort sequence (Lincoln & Guba, 1985). The data were transcribed and subjected to analysis by the primary researcher and two additional faculty members who were not part of the study. Data were examined and analyzed according to Bogdan and Biklen's (1998) units of analysis that reflected "perspectives held by subjects" (p. 173). Specifically, words and phrases that the teachers used frequently were underlined. Repeated use of certain words and phrases suggested three themes that could be used to organize the data. The identified themes compared by three investigators were: (a) relating research literature to practice, (b) collaborative partnerships, and (c) lifelong learning and professional growth. Once data had been analyzed, the findings were presented in the form of a narrative and confirmed by the classroom teachers and two of the university professors. Member checking, the process of providing participants with a transcript and obtaining approval for the use of all their personal quotes were used to further confirm the findings (Lincoln & Guba). Emerging themes were evidenced within the framework of both research questions.

### **Results**

#### *Theme 1: Relating Research Literature to Practice*

Similar to those activities required of students in most graduate programs, these elementary teachers were asked to select, read, and synthesize professional literature from peer reviewed research journals and books within

each of the courses they took. However, because the teachers and the university professors collaboratively designed each of the courses, specific needs and issues guided the area of literature examined that provided a value-based component to the readings. For example, the changing demographics of the English Language Learners in the area's student population created unique challenges for experienced teachers, most of whom had never taken a course in the area of multicultural education or second language learners. One teacher wrote:

the assigned professional readings were on relevant topics and situations that we face each day in our classroom. For the first time in my 11 years of teaching, I could see practical application gleaned from the research literature.

Another described the required readings as "research based, but user friendly." A teacher who had just welcomed into her classroom a third grader from Mexico with no mastery of the English language shared one example of how the reading of professional research literature influenced classroom practice. This teacher admitted that a year ago she would have panicked at such a challenge, but having just completed a course designed to help teachers meet the needs of students with limited or no English language skills, she faced the challenge with a "calmness and even eagerness." She shared the following story:

As I welcomed Maria and her family to our school, I only knew a few Spanish phrases, but still I felt confident as I embraced the challenges of teaching her to speak, read, and write in English. I can remember when students with just limited English skills made me feel ill prepared and uneasy....I suddenly realized how much I had changed as a result of my graduate studies. It was like a door had been opened, the door to true professional development and growth in my own teaching career.

Overall, these teachers admitted that prior to their graduate studies they had never grasped the connection between research and practice even though some had been teaching a number of years. When the topics and issues explored had relevance and meaning to their own classrooms and challenges, they acknowledged that the “light went on” and they could incorporate “research-based classroom practices” with ease and confidence.

### ***Theme 2: Collaborative Partnerships***

The phrase “ivory tower” refers to an impractical attitude marked by a lack of concern with or interest in practical matters or urgent problems. Colleges of education and professors have often been accused of being disconnected from the challenges facing classroom teachers. The design of this graduate program, however, fostered a partnership between the university professors and the classroom teachers that knocked any appearance of so-called “ivory towers.” Courses were often taught in the PDS classroom—a classroom designated for university taught courses and professional development. This created a “safe and less threatening” environment for the classroom teachers. Within these walls, conversations took on new meaning. Incidents or issues that occurred within the schools during the past week often initiated class meetings. One teacher reflected, “We started class with a cup of coffee and shared stories about our students that day. It became a time to vent some of the frustrations about our profession with those who happily listened and offered constructive feedback.” Another commented that the collaborative community that had been established became the place “where all the walls came down” and thus became second nature to develop this type of environment in her own classroom. “I developed a greater appreciation for my students’ mistakes and wanted to inspire them to succeed by supporting each other.” Collaboration took on new meaning for these 7 teachers. Not only did they discover new ways of learning and growing professionally among other classroom teachers and university professors, they developed awareness that the students in the classroom could also benefit from similar experiences.

One of the first projects this group of teachers and university professors took on was the role of cooperating teachers working with interns. Since the school system shared a partnership with the university, many elementary interns had been placed in these teachers’ classrooms over the years. It was the classroom teachers who initiated an interest in wanting to know what implications and recommendations for working with interns the professional literature could provide. They expressed a desire to play a more active role in the mentoring of these interns while “bridging the gap” between the university and school placement divide. Based on their readings, they developed a handbook to help guide elementary interns through the internship experience. One teacher described this effort in the following way:

Our connection to the university allowed us to have input in the issues and weaknesses we felt needed to be addressed with interns. This input was collectively based upon our own observations, evaluations and performances and the university’s research. Our collaboration was essential in addressing these issues and resulted in the implementation of data-driven mentoring strategies.

### ***Theme 3: Lifelong Learning and Professional Growth***

Four of the 7 teachers had taught for more than 5 years before entering this graduate studies program. They expressed frustration at some of the disconnected contexts in which professional development had occurred in the past. Some indicated that they had become complacent about their teaching and reluctant to try new things. In addition, teaching can be an isolated experience. Participants shared feelings of isolation with limited opportunities to collaborate with others in the teaching profession outside the walls of their own school. This is exemplified when one teacher commented:

One of the most important lessons I gained from the [graduate studies] cohort was the empowerment that comes from personal reflection and sharing. Often in teaching you feel isolated. You are so wrapped up in the world of your classroom and your students that you forgot the big picture. We are professionals, and to grow in our teaching, we must nurture our own development...I know now that I will continue to make time for personal research, personal reading, and personal reflection...It is vital because as we reflect and share, we make teaching better for ALL teachers and ALL students.

Others indicated that this was only the beginning of their journey of lifelong learning and professional growth and hope to continue their professional growth through the doctoral program or National Board Certification process. Another teacher indicated that the experience had given her a renewed confidence in "defending the teaching profession." She shared:

Education is a complex field in which to work. Educators are scrutinized by their students, the parents of their students, fellow teachers, their administrators and by the public...because of this experience and my feeling of professional growth, I can defend why I teach the way I do with confidence. I can reference standards and research to support my instructional decisions.

### Discussion and Implications

Guskey (2002) described three major goals of professional development programs as: (a) change in the classroom practices of teachers, (b) change in their attitudes and beliefs, and (c) change in the learning outcomes of students (p.

383). While the latter of the three is not reflected within the realms of this paper, the first two are supported by the data analysis. Based on the analysis of data, the researchers conclude that the commitment of the university and schools' partnership to create a graduate studies cohort facilitates teacher professional growth and change. The fact that these teachers remained together as a cohort throughout their professional studies allowed them to become active agents in the construction of their own professional knowledge and growth (Beattie, 1997).

Much congruence was found among these classroom teachers as they shared how their participation in the graduate cohort transformed their attitudes, beliefs, and perceptions about teaching and their professional growth. This group of teachers agreed that the greatest impact on their professional growth in this graduate cohort was enhanced through collaboration and the understanding and awareness of personal reflection on teaching and student learning. Teaching can be an isolated profession when it comes to having time for conversations with other teachers, especially outside the walls of their individual schools. One teacher commented:

When we have faculty meetings or grade level meetings, we usually have a pre-set agenda with a list of things to be done according to deadlines. We seldom have time to say, "How can we better meet the needs of our second language learners?" Having time to share our concerns and challenges, to discuss and research possible solutions, and to develop plans of action have been one of the most rewarding areas of professional growth for me.

The uniqueness of this partnership's model is the unified commitment to identify the specific needs of all the partners and to design coursework that addresses those needs. This is in contrast to more formally arranged partnerships with predetermined agendas, coursework, and

syllabi. Marlow (2000) described this type of complex structure of a university-school partnership as "kuleana" (p. 192). Originated from a Hawaiian term, the concept is most often used in reference to the concept of responsibility and a strong commitment to support one another. The participants in this graduate cohort believe that the culture of collaboration, inquiry, and continuous growth supported through the initial mindset of this unique arrangement facilitated an appreciation for innovation, experimentation, and risk taking among faculty and teachers alike. We believe that through these collaborative efforts, the teacher education program at this university is significantly improved while also enhancing K - 6 teaching and learning.

The goal of this elementary education graduate cohort was to facilitate meaningful professional development within a group of teachers seeking to earn the certification of highly qualified teachers. While each of the teachers met the requirements to earn such a title, the professional growth experienced by this group of teachers far exceeds the label of highly qualified. However, as one teacher stated, the initial effort to meet the No Child Left Behind Act to become highly qualified teachers was no longer their reason for being a part of this university-school partnership. "This program was designed to meet our needs and desires to become better teachers, not just to meet new federal standards...it became a self-initiated desire to improve professionally through learning experiences that were useful and connected." These teachers became partners and co-developers with university professors in a graduate program designed to help them to grow professionally as teachers. The greatest success that may emerge from this graduate cohort experience may be enhanced K-6 student learning. This potential can be attributed to the joint collaboration with classroom teachers and university professors to improve K-6 teaching and learning and is reflective of the true spirit of the Professional Development School concept.

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## Waging Peace through Forgiveness in Belfast, Northern Ireland II: Educational Programs for Mental Health Improvement of Children

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*Peace efforts that focus on children occur infrequently and are rarely researched. Because excessive anger can lead to violence and because student anger is an important and increasing concern within the school setting, 3 studies were done to address this issue within Belfast, Northern Ireland. In Study 1, 309 first-grade students from Belfast, and Milwaukee and Madison, Wisconsin completed the Beck Anger Inventory-Youth. Children in the two impoverished and violent environments presented with statistically significantly greater anger than those in Madison. In Studies 2 and 3, using a teacher/psychologist consultation model, psychologists instructed and supported teachers who led forgiveness interventions with 1<sup>st</sup> grade children (N = 36 experimental, 57 control) and 3<sup>rd</sup> grade children (N = 35 E, 49 C) in Belfast. In each case, the children whose classrooms were randomly assigned to the forgiveness intervention reduced statistically significantly in anger relative to the children whose classrooms were in the control group. For the 3<sup>rd</sup> grade study, the children in the experimental condition also improved more in forgiveness and reduced more in psychological depression than their control counterparts.*

### Introduction

In 2003 in this journal, we presented a peace proposal for the mental health improvement of children in Belfast, Northern Ireland, a community characterized by impoverished and violent environments, through forgiveness education (Enright, Gassin, & Knutson, 2003). Our thinking was that research has shown the effectiveness of forgiveness therapy in reducing excessive anger and related emotional difficulties in adult samples (see, for example, Lin, Mack, Enright, Krahn, & Baskin, 2004; Reed & Enright, 2006). We wondered if this approach could be extended to children,

especially in Belfast. We developed two goals: (a) in the short-run to improve the mental health of the students, especially by reducing anger, through forgiveness education programs delivered by classroom teachers and (b) in the long-run to implement this program from Grade 1 (Primary 3 in Belfast) through high school so that, once they are adults, these students will be psychologically sophisticated forgivers. The expectation is that they then will forge a deeper and more lasting peace in their community than their forebears because they may be less angry and will have a tool, forgiveness, for reconciliation. To date, we have completed

evaluations on Grades 1 and 3 (Primary 3 and 5), which are the basis of this article.

### *Children and Anger*

Children's anger within classroom settings has become a serious problem not only in the United States but also across the globe (Campano & Munakata, 2004; Fryxell, 2000; Thurman, 2006; World Health Organization, 2006). Current thinking among scholars is that aggressive behavior, while the main emphasis in school prevention and remediation programs for decades (Derzon, 2006), should not be the primary or exclusive focus of treatment within schools because such programs do not necessarily target the underlying emotions of anger and hostility that fuel aggressive acts (Fitzgibbons, Enright, & O'Brien, 2004; Fryxell, 2000; Gansle, 2005). In fact, research over the past decade has linked children's anger to such deleterious outcomes as below average academic performance, delinquency, including substance abuse, difficulties in interaction with peers, and long-term behavioral disorder (Deffenbacher, Lynch, Oetting, & Kemper, 1996; Enright & Fitzgibbons, 2000; Fryxell, 2000; Furlong & Smith, 1998; Lipman et al., 2006). Children's anger, along with related negative emotions and behaviors, can be particularly pronounced in impoverished and violent communities, whether in the United States or abroad (Curran & Miller, 2001; Enright, Gassin, & Knutson, 2003; Gassin, Enright, & Knutson, 2005; Lipman et al., 2006).

Environments of poverty and violence, in which many students may be angry, make this approach potentially appealing. This especially would be the case in communities with few psychological resources. Within-school psychological services in Belfast's central-city, or what the locals call the "interface" areas, are limited. For example, in every school involved in the studies here, there was no psychologist or counselor affiliated with the school.

The interface areas are characterized by Catholic and Protestant neighborhoods being in close proximity to each other, although the actual neighborhoods are segregated by religion

and ethnicity (Irish or English; see Cairns & Darby, 1998). Heatley (2004), in analyzing the interface areas, concluded that 69% of people living in such areas are near or below the poverty level; 31% of the community tends to be unemployed, compared with a Northern Ireland (NI) average of 14%; and 41% receive income support, compared with an average of 21% across NI. Because of the presence of paramilitary personnel within the neighborhoods, children perceive the threat of violence (Curran & Miller, 2001). The deleterious effects of poverty and violence on children's well-being are reviewed in Enright, Gassin, and Knutson (2003).

*Anger reduction programs in schools.* A few programs that are intended to help children with their anger have shown some success, while others report no difference between experimental and control groups (Lipman et al., 2006). Two notable programs are Student Centered Aggression Replacement Education (SCARE) and Social Skill Trainings (SST); see, for example, Hermann and McWhirter (2003); Kellner and Bry (1999). Gansle (2005), in reviewing the literature on anger reduction programs in schools, concluded that most programs, using the cognitive behavioral model, help children *control*, not necessarily reduce or eliminate, the anger. The programs are typically administered by professionals other than the teachers, taking children's time from classroom activities and increasing costs for implementation. Most anger-reduction school programs are centered on adolescents and those in upper elementary school, not in the primary grades (Fryxell, 2000; Hermann & McWhirter).

### *Forgiveness Interventions*

One promising area for reducing anger in children is forgiveness intervention (Lin, Mack, Enright, Krahn, & Baskin, 2004; Reed & Enright, 2006; Worthington, 2005). Forgiveness is a person's internal, psychological response to another person's (or people's) injustice. A person who forgives reduces resentment and offers beneficence to an offender, without condoning, excusing, or forgetting. A person who forgives may or may not reconcile with the

offender, depending on the trustworthiness of that offender (Enright & Fitzgibbons, 2000). The gist of forgiveness intervention is to help the person think about the offender in broader ways than just the offense itself (reframing) and to cultivate empathy and compassion toward the offender (while, at the same time, protecting oneself as necessary).

*The concept of unconditionality.* Researchers have developed a variety of interventions that assist people in forgiving offenders who have been considerably unfair. One of the key social-cognitive processes in these programs, including the ones in Belfast, is *unconditionality*, based on Piaget's concept of conservation (Enright & the Human Development Study Group, 1994). Unconditionality is the understanding that all people are equal, regardless of personal characteristics (e.g., socioeconomic status, athletic ability). Offering forgiveness involves acting on this social-cognitive understanding and the moral principle of inherent worth (all people have value) that develops from it.

*Research on forgiveness therapy.* Forgiveness therapy programs with adults have been successful in reducing anger, anxiety, and/or depression. Most have used randomized, experimental and control group designs with pretests, post-tests, and follow-up testing (Al-Mabuk, Enright, & Cardis, 1995; Coyle & Enright, 1997; Freedman & Enright, 1996; Hebl & Enright, 1993; Lin et al., 2004; McCullough, Worthington, & Rachal, 1997; Park, 2003; Reed & Enright, 2006; Rye et al., 2005).

*The present studies.* Despite the considerable success of forgiveness therapy as a way to reduce anger and related emotions across diverse samples and with different therapists, there are no studies with early elementary school children. Can classroom teachers in Belfast, where psychological services are few, be instructed and supported by psychologists in the use of forgiveness interventions that are developmentally appropriate for their primary grade students? If so, can teacher-led forgiveness interventions help reduce anger in the students, especially in children who are

exposed to poverty and violence in their communities?

Three studies are presented. First, a study of anger in first-grade children is described across three communities: Belfast, Northern Ireland, noted for what the locals call "The Troubles," or ethnically-motivated violence, central-city Milwaukee, which has challenges of poverty, violence and racism, and serving as a comparison with these two, Madison, Wisconsin, a medium size-city (approximately 250,000 residents) in which poverty and violence are not prevalent (three murders in 2005, for example; Madison Police Department, 2006). We intend to examine the degree of anger in these first-grade samples and thus to discern the need for intervention to reduce anger in primary grade samples in Belfast. Study 2 reports on a forgiveness intervention for first-grade (Primary 3) children in Belfast, in which psychologists developed a forgiveness intervention and then supported teachers in their delivery of that intervention to the students. Study 3 extends the work of Study 2 by implementing the program in a more developmentally advanced sample of third-grade (Primary 5) children within Belfast. The research hypothesis in Studies 2 and 3 is this: Children in the experimental group, who are taught forgiveness concepts by the classroom teacher, will show improved psychological health compared to their control group counterparts.

### Study 1

There is some disagreement in the published literature of the extent to which the current generation of children in Belfast is psychologically affected by The Troubles. For instance, Cairns and Wilson (1993) state that children have coped relatively well with the violence. On the other hand, Curran and Miller (2001) report that referrals of children in particular to psychiatric services increase after major acts of violence. To begin discerning the extent of the problem of anger in early primary school, we selected 6 schools in Belfast, Northern Ireland, all of which, as we already

stated, are in what the locals call "the interface areas" of the city.

The Irish Catholic children virtually all go to Catholic schools or to Irish schools, which receive some government support, but preserve their religious or cultural identity. A simplified difference between Catholic and Irish schools is this: Parents who send children to Catholic schools wish to emphasize the *Catholic* (religious) aspects of Irish Catholicism, whereas parents who send children to Irish schools wish to emphasize the *Irish* (cultural, historical, and language) aspects of Irish Catholicism. The Protestant children go to state schools, but retain a predominantly Protestant identity even within the school setting. For example, many of the state schools were formerly Protestant, private schools, with a church and rectory near or on the school grounds. The children wear uniforms to school in all three kinds of schools, similar to private schools in the United States.

To make the comparisons to Belfast as close as possible, we chose "alternative" or private schools in Milwaukee's central-city. We chose Milwaukee because of its poverty and violence in the central city. Statistics show that even though the midwestern city has about a third of the population of all of Northern Ireland, Milwaukee has approximately two-and-a-half times the number of murders of Northern Ireland (Police Service of Northern Ireland, 2005). Levine (2002) reports that in Milwaukee's central-city: the population declined by 45.2% between 1970-2000; the poverty rate was 44.3% in 1999; deindustrialization has left only 19% with industrial jobs, compared to 41% in 1970; and the median income was 40% of the Milwaukee metro area median.

We chose alternative schools in Milwaukee because all of the schools in the interface areas of Belfast, whether Catholic, Irish, or state, have more in common with American private than public schools (uniforms and acknowledgment of religious holidays, for example). We chose private schools in Madison for the same reason. No perfect match in terms of race or ethnicity for the comparison group exists so that it can be compared directly to both Belfast and

Milwaukee. Madison, thus, was considered a reasonable compromise in that it has many people of European descent, like Belfast, and it shares the Wisconsin midwest culture with Milwaukee.

## Methods

### *Participants*

For the Belfast sample, participants included 93 students from 7 first-grade (Primary 3) classrooms in 7 different schools (32 females, 61 males). Two Protestant, one Irish, and 4 Catholic schools participated. All students were currently living in areas near to their schools, and 98% were ethnically either Irish or English. The SES of the families was predominately working class and lower class. Many of the families in the study had the attitude that economically they could not afford to move out of their neighborhood, even though they did not like the high level of violence that they experienced in their community.

For the Milwaukee sample, participants included 150 first-grade students from 11 classrooms in 6 schools in the central city (78 females, 72 males). One Catholic, one Lutheran, and 4 non-religious private schools participated. The SES of the families was predominantly lower class and working class. Seventy-eight percent of the sample was African-American, 17% Hispanic, 3% Asian, and 2% European American.

For the Madison sample, participants included 66 first-grade students from four separate schools (39 females, 27 males). Three Catholic schools and one Protestant school participated. The predominant SES of the families was lower middle and middle class. Eighty-five percent of the sample was European American, 8% Hispanic, and 7% African-American. The modal age of the children across the three communities was 7-years-old.

### *Instrument*

The Beck Anger Inventory for Youth (BANI-Y; Beck, Beck, & Jolly, 2001) is

designed to assess angry affect and cognitions associated with anger that are prominent in a variety of childhood disorders including Oppositional Defiant Disorder and Conduct Disorder. The Beck Anger Inventory for Youth manual suggests that it may be particularly useful in identifying anger in children who are reacting to family/life circumstances. All participants in the three cultures were orally administered the scale by a trained university student (training is described below in *Testing Procedures*). The 20 items are scored using a 0 (*never*) to 3 (*always*) scale. The raw scores are then converted to T-Scores, or standard scores as per the manual's instructions, with a high score representing high anger. T-Scores adjust raw scores to take into account gender differences in responding to the scale. A representative from Harcourt Assessments informed us that the use of the T-Scores is appropriate for our samples because we did oral administration to circumvent any reading problems and the assessments took place in the spring semester when most of the participants were 7-years-old; no 6-year-olds were in the sample upon which the T-Scores were normed (Prince-Embury, personal communication, 2006). Validity with other anger measures is reported as adequate and the Cronbach's alpha of internal consistency is reported as .91 in the manual (Beck, Beck, & Jolly, 2001). Cronbach's alpha for this study, collapsing all data across the three sites, was .85.

### *Testing Procedures*

Each child was individually and orally presented the items by one of three trained college students from the United States. Each researcher was first trained by a professor with three decades of experience in assessment, who explained the nuances of oral scale administration with children; the researchers next piloted the interview process on each other and then did pilot work with at least five children, supervised by an advanced researcher, at a local school in Madison. To enhance concentration and understanding in each participant, each interviewer used a response board that had the choices from 0 (*never*) to 3 (*always*) printed in large letters on the board. Children, if they wished, could simply point to their answer for any given question.

### **Study 1 Results and Discussion**

A 3 (community) by 2 (gender) ANOVA was run on the anger T-Scores. The analysis yielded a significant between-community difference,  $F(2, 306) = 7.64, p < .001$ , but no gender differences or a community-by-gender interaction. Means and standard deviations for the anger T-Scores by community, along with the reported clinical ranges are in Table 1.

Table 1

*Means, Standard Deviations, and Post-Hoc Comparisons for Significant Two-Way ANOVA Results*

	<u>Beck Anger T-Scores</u>		<u>ANOVA</u>	<u>Post hoc</u>
	<i>M</i>	<i>SD</i>	<i>F</i> (2, 306)	
(1) Madison 1 <sup>st</sup> ( <i>N</i> = 66)	50.53	10.04	7.64**	1 < 2 ** 1 < 3 *
(2) Milwaukee 1 <sup>st</sup> ( <i>N</i> = 150)	57.33	12.59		2 > 1 ** 2 = 3

\* *p* < .05; \*\* *p* < .001

**Beck Anger T-Scores and Clinical Ranges**

<u>Score</u>	<u>Severity Level</u>
T = 70 +	Extremely Elevated
T = 60-69	Moderately Elevated
T = 55-59	Mildly Elevated
T < 55	Average

The post-hoc Fisher LSD analysis revealed that the anger level in Milwaukee was significantly greater than that for Madison (a mean difference of 6.80, *p* < .001) with a medium to large effect size (*d* = 0.59) by Cohen's (1988) criteria (95% CI 0.87 to 0.28). The anger level in Milwaukee did not differ from Belfast (a mean difference of 2.89, *p* < .061). From a statistical standpoint, the level of anger in central-city Milwaukee and the interface areas of Belfast are similar for these samples. The anger level in Belfast was significantly greater than in Madison (a mean difference of 3.91, *p* < .04), with a medium effect size (*d* = 0.36) by Cohen's (1988) criteria (95% CI 0.67 to 0.33).

From a clinical perspective, the children in Milwaukee are in the mildly elevated level of anger severity. This is of clinical import because we did not choose an at-risk sample among eligible children, but instead assessed all children in a given classroom for whom we had parental consent. In Belfast, the children are

approaching a mildly elevated level of anger, but are still within the high average range, again a concern in that we did not choose a clinical sample of children. In contrast, the children in Madison show an average level of anger.

It does appear that the children in Belfast could benefit from an anger reduction program, in this case a forgiveness intervention. When we consider the arguments in the published literature regarding the current emotional health of Belfast's children, it appears, in this study at least, that there is cause for some concern. It seems reasonable for educators in that community to devise preventive and remedial programs for children's emotional well-being.

**Study 2**

The next step was to build a forgiveness intervention so that children could learn the necessary concepts and to see whether those children participating would benefit

psychologically, in terms of anger reduction, compared to children in a control group. We chose first-grade (Primary 3) teachers and classrooms in Belfast, Northern Ireland, because: (a) the children showed a profile of anger that is of clinical concern and (b) students in the interface environments, based on the published literature, are at risk for emotional health compromise and violence more than children in other parts of the United Kingdom and therefore may benefit from a peace intervention focused on forgiveness.

### ***Participants***

The same sample from Belfast Grade 1 (Primary 3), as described in Study 1, was employed in this intervention research. The experimental group consisted of 36 students (13 females, 23 males) from two Protestant classrooms and one Catholic classroom. The control group consisted of 57 students (19 females, 38 males) from one Irish classroom and 3 Catholic classrooms.

### ***Instrument and Testing Procedure***

The Study 1 data collection formed the pretest data of Study 2. The Cronbach's alpha of internal consistency reliability for the anger scale in this sample was .87. The researchers were blind to treatment condition. The participants were tested at pretest, approximately 1 week prior to the intervention, and at a 1 month follow-up after the intervention ended in May.

### ***Research Design***

Seven classrooms were randomized (through the use of a table of random numbers by the two consulting psychologists, who subsequently informed each of the principals of the schools) such that 3 classrooms were assigned to the experimental condition and 4 to the wait-list control condition. A fourth experimental classroom was unable to begin the program because of its (unexpected) requirement that all materials be translated into Gaelic, a prohibitive financial and time cost. The control

group Irish school did not have this requirement. The principals and the teachers were aware that they would receive the intervention starting in the first or second year, and, after random assignment, were informed of which year. Because both groups were getting an intervention at some point, the principals and teachers were satisfied to be in either group.

### ***Consultation***

Each teacher attended a 1-day workshop with a licensed psychologist (over 20 years of experience) and a developmental psychologist (over 10 years of experience). Three themes were emphasized at the workshops: (a) the concept of forgiveness from its ancient origins to modern philosophical analysis and psychological studies; (b) a discussion of how people go about forgiving those who hurt them; and (c) an examination of the forgiveness manual for teachers. Books and related materials that accompanied the manual were distributed at that time. The workshop took about 5 hours to complete.

### ***Forgiveness Intervention***

An intervention manual consisting of 17 sessions was written by the licensed and developmental psychologists for the teachers' use (Knutson & Enright, 2002). Each session was written to take approximately 45 minutes or less and each was to occur approximately once per week for the entire class. Additional activities in the manual at the end of each session are described in case a teacher wishes to extend the learning.

Prior to implementing the program, the teachers were given the manual to review, and then they received direct instruction and continued support from the two psychologists for the purpose of understanding the program, and how best to implement it with their students. The psychologists supported the teachers through continued contact with them throughout the time period of the intervention. For both Studies 2 and 3, the interventions took place during the spring semester.



During the program forgiveness is taught through the medium of story. Through stories such as Dr. Seuss' *Horton Hears a Who*, *Horton Hatches the Egg*, *The Sneetches*, and *Yertle the Turtle*, the children learn that conflicts arise and that we have a wide range of options to unfair treatment. The manualized intervention is divided into three parts. First, the teacher simply introduces certain concepts that underlie forgiveness (the inherent worth of all people, kindness, respect, generosity, and beneficence), without mentioning the word forgiveness. In Part Two, the children hear stories in which the story characters display instances of forgiveness through inherent worth, kindness, respect, generosity, and beneficence (or their opposites of unkindness, disrespect, and stinginess), toward another story character who acted unfairly. In Part Three, the teacher helps the children, if they so choose, to apply the five principles (inherent worth, kindness, respect, generosity, and beneficence) toward forgiving a person who has hurt them.

Throughout the implementation of this program, teachers make the important distinction between learning about forgiveness and choosing to practice it in certain contexts. The program is careful to emphasize the distinction between forgiveness and reconciliation. A child does not reconcile with an unrepentant student who bullies, for example. The teachers took great care to impress upon the children that the exercises in Part Three of forgiving were not necessary, but completely optional. In fact, the children were not asked to discuss their own hurt with the class, but instead to think about the issues. Children were encouraged to approach the teacher if they were feeling uncomfortable. None availed themselves of this.

#### ***Treatment Fidelity Check***

To ensure that each teacher taught the program in accordance with the manual, a questionnaire was provided at the end of each written session for the teacher to complete.

Items included: Whether the students actively participated in a given session, learned the concepts in a concrete way, found the material difficult, found the material meaningful, and responded well or not within the session. No audio or videotaping was allowed because of policies in Belfast schools. Throughout the semester, a member of the team either visited each school, at least three times to observe the sessions, or emailed approximately fortnightly to discuss progress. At the end of the spring semester, the research team members discussed the program with the teachers to assure that compliance with the program occurred. No teacher was approached for lack of fidelity to the program.

### **Study 2 Results and Discussion**

Because our hypothesis was that the forgiveness intervention group would do better than the control group, and the fact that this hypothesis is supported by numerous studies with adults showing the effectiveness of forgiveness interventions, a *t* test gain-score analysis was conducted with a one-tailed test. The use of this particular statistic follows the precedence of previously published forgiveness therapy research, and is considered "sufficiently reliable for research purposes" when certain conditions – such as high pre-test reliability – are met (Williams & Zimmerman, 1996; Zimmerman & Williams, 1998, p. 350). For Studies 2-3, gender and anger (as well as gender and depression in Study 3) were tested first within each condition (experimental or control); no significant differences were found, and so gender was consolidated.

As can be seen in Table 2, the experimental group decreased significantly more in anger than the control group. The effect size ( $d = .41$ ) is medium by Cohen's (1988) criteria (95% C.I. of  $-0.82$  to  $0.02$ ). From a clinical standpoint, the experimental group started above the clinical cutoff for anger and went into the average range following intervention.

Table 2

*Means, Standard Deviations, t-tests, and Effect Size for Dependent Variables*

	Pretest		Delayed posttest		Gain score		Gain score <i>t</i> test	Cohen's <i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
<b><u>Belfast 1<sup>st</sup> Grade (Primary 3)</u></b>								
Experimental								
Anger ( <i>n</i> = 36)	56.1	10.3	50.5	10.2	-5.69	9.99	1.90*	.41
	9	5	0	7				
Control								
Anger ( <i>n</i> = 57)	53.3	11.2	52.2	13.0	-1.11	12.1		
	3	8	3	4		6		
<b><u>Belfast 3<sup>rd</sup> Grade (Primary 5)</u></b>								
Experimental								
Anger ( <i>n</i> = 34)	55.5	11.7	50.0	11.1	-5.50	10.5	3.12*	.70
Depression ( <i>n</i> = 34)	3	8	3	5	-3.47	78.6	1.67*	.38
Forgiveness ( <i>n</i> = 35)	53.5	11.5	50.1	13.5	18.2	7	2.56*	.57
	9	9	2	8	9	23.9		
	68.2	20.4	86.5	18.8		9		
	2	3	1	5				
Control								
Anger ( <i>n</i> = 49)	47.4	9.93	49.2	8.68	1.82	10.4		
Depression ( <i>n</i> = 49)	2	8.35	4	10.2	-0.14	7		
Forgiveness ( <i>n</i> = 47)	50.4	23.9	50.3	6	5.91	9.05		
	9	1	5	22.6		19.7		
	77.2		83.1	0		0		
	8		9					

\* *p* < .05

Note. The T-Score clinical ranges for depression are the same as those for anger.

Because the means of any intervention with statistically significant, results may be prone to regression toward the mean from pretest to posttest, we examined this possibility relative to the overall sample pretest mean of 54.44. As Table 2 shows, the experimental group went below this mean, suggesting a successful intervention not caused by statistical artifact. The high internal

consistency reliability further suggests that the children were not randomly responding.

This is the first indication that classroom teachers, in consultation with psychologists, can successfully effect a change in the level of anger for the children in the classroom through a forgiveness intervention. The fact that two-thirds

of the intervention consisted of learning about forgiveness rather than forgiving someone, as is the typical intervention in the previously published studies, is interesting for the psychological theory of forgiveness. Why should learning about forgiveness reduce anger in young children? As a speculation, the intervention asked the children to change their cognitive perspective of injustice toward offenders. A basic point of the program was to engage the students in the cognitive developmental concept of unconditionality, reframing who wrongdoers are, not to condone, excuse, or hastily reconcile, but to see them in broader contexts than the hurtful act. This may be a key reason for the shift in anger as the children applied this thinking to their own situation.

### Study 3

The purpose of this study was to examine the effectiveness of forgiveness intervention with a more developmentally advanced sample of third-grade (Primary 5 in Belfast) students. Because the upper primary grades are a time of more intensive instruction and learning, we, therefore, were able to introduce a more sophisticated forgiveness intervention and to add dependent measures to the outcome study.

Participants

A sample from Belfast Grade 3 (Primary 5) was employed here. The experimental group consisted of 35 students (16 females, 19 males) from two Protestant classrooms and one Catholic classroom. The control group consisted of 49 students (30 females, 19 males) from one Protestant classroom and 2 Catholic classrooms. Participants in this study were 98% ethnically either Irish or English. Because one child in the experimental group and two in the control group were not available for part of the assessments, the reported sample sizes in Table 2 vary across the dependent variables. The modal age of the children was 9.

### Instruments

Besides the BANI-Y to assess anger (Cronbach's  $\alpha = .89$  in this study), we chose

the Enright Forgiveness Inventory for Children and the Beck Depression Inventory-Youth. Pilot testing in first grade (Primary 3) indicated that some of the students were not yet ready for a forgiveness inventory because they could not remember what they had identified as a deep hurt those many months before. We expected the third-grade children to remember, and that turned out to be the case. The depression scale asks difficult questions of sadness and negative thinking that some teachers thought best to withhold until third grade. All children were individually administered the three scales, anger, forgiveness, and depression, in random order by one of three trained university students from the United States who were blind to treatment assignment.

*Enright Forgiveness Inventory for Children (EFI-C).* The EFI-C is a 30-item children's version of the Enright Forgiveness Inventory (the most commonly used assessment tool for forgiveness; Enright, 2000). Children describe an incident in which they were unjustly hurt by someone. Most students in this study reported injustices from other students, friends, and siblings and not The Troubles. The items include 10 that relate to thoughts, 10 that relate to behaviors, and 10 that relate to feelings. Children are aided in their responses by an interviewer who shows them four circles: large green, for strong yes, scores 0; small green, for weak yes, scores 1; small red, for weak no, scores 2; large red, for strong no, scores 3. The interviewer marks down the children's response for them. Of the 30 items, 15 are positive and 15 are negative, with positive and negative items reverse scored from one another. This results in scores ranging from 0 (less forgiveness) to 90 (more forgiveness). Validity in forgiveness education interventions and relationship to school-related behaviors is adequate (Gambaro, 2002). Cronbach's  $\alpha$  in this sample is .94, similar to other studies (Gambaro).

*The Beck Depression Inventory—Youth (BDI-Y).* The Beck Depression Inventory for Youth was designed to assess levels of depression syndromes and disorders (Beck, Beck, & Jolly, 2001). It includes an assessment of child's negative thoughts toward themselves,

their world, and their future, consistent with Beck's well-known model of depression. We used 19 of the BDI-Y items (one item that asked about a child's desire to die was deemed culturally inappropriate for these children, and was not used). The items were all scored on a 0 (never) to 3 (always) scale. Raw scores were converted to T-Scores as per the manual; validity is reported as adequate (Beck et al., 2001). Cronbach's alpha in the manual is .88 and in this sample was .87.

### ***Research Design and Forgiveness Intervention***

The 6 classrooms of children were randomly assigned to the experimental group, receiving the forgiveness intervention, or to the wait-list control group. Randomization was as described in Study 2. All teachers were instructed and supported as in Study 2.

The 15-session third grade program, as in first grade, was manualized (Knutson & Enright, 2005) and presented by the same two psychologists to the teachers at a 1-day instructional workshop. The message of forgiveness was delivered through the medium of story. The children focused first on the definition of forgiveness and on inherent worth. Teachers next presented the different aspects of beneficence apart from forgiveness. Beneficence in the context of forgiveness followed. The final seven sessions focused on teaching the children to forgive someone who was unfair to them by appropriating the learning from the first eight sessions. As in the previous intervention, the concept of unconditionality was a central part of the program: As the child sees the unconditional worth of all people, then even those who act unfairly are persons who are ends in and of themselves and should be treated as such. Key literature included *The Velveteen Rabbit* (Williams, 1958) and *Rising above the Storm Clouds* (Enright, 2004).

### **Study 3 Results and Discussion**

As in the Study 2, the t test gain-score analysis was conducted as a one-tailed test. As can be seen in Table 2, the experimental group decreased statistically significantly more in

anger and in depression than did the control group. The effect size for anger ( $d = .70$ ) is medium to large (95% C.I. of  $-1.14$  to  $-0.24$ ) and for depression ( $d = .38$ ) is medium (95% C.I. of  $-0.81$  to  $0.07$ ), by Cohen's (1988) criteria. From a clinical standpoint, the experimental group started at the mildly elevated level of anger and went into the average range following intervention. The experimental group, in the high average range for depression before intervention, went to the average level after intervention.

For forgiveness, the experimental group gained statistically more than the control group in the degree to which they forgave an offender who hurt them deeply, with a medium effect size ( $d = .57$ ) by Cohen's (1988) criteria (95% C.I. of  $0.12$  to  $1.01$ ). The experimental group gained approximately 18 points in forgiveness whereas the control group gained less than 6 points on the scale. The people and incidents targeted by the participants were typical childhood offenses such as someone taking a ball without permission, or being called a name by a peer, or being excluded from a game. No child mentioned violence, although, based on teacher reports, violence such as petrol bombs exploding in the night, is a common occurrence in the interface areas. In each case the researchers reported that at the delayed post-test the children remembered the person and the incident that they had identified on the pretest.

Regression toward the mean was again examined. Five conclusions are drawn: First, as in Study 2, the internal consistency reliabilities are high, negating a conclusion of random responding. Second, the depression and forgiveness findings do not lend themselves to such a conclusion. Third, the anger findings suggest that the experimental group went below and the control group stayed below the pretest mean (50.75 in this study). Fourth, the experimental group showed comparable gains and post-test scores as the experimental group in Study 1, where no regression toward the mean patterns are indicated. Fifth, if they were randomly responding, the participant in the experimental group would be unlikely to show improvement across three dependent variables.

It does appear from this study that a forgiveness intervention can lead to a decrease in anger compared with a control group that is not given the intervention. In both Studies 2 and 3, qualitative reports from teachers were very favorable and all teachers indicated an interest in continuing with the program in the future.

### Discussion and Implications

The three studies suggest that children in the impoverished and violent areas of Belfast, Northern Ireland, are angrier than the average child and are in need of intervention. The two intervention studies replicated one another with regard to the anger variable. We should note that forgiving another person usually means that resentment toward that person is reduced. In the studies here, we observed a general effect of anger reduction, not specified toward an offender. We say it is a general effect because the BANI-Y assesses the child's general level of current anger, not targeted toward any particular person. The third-grade findings include improvements in forgiveness and decreases in psychological depression for those receiving the forgiveness intervention relative to those who have not. Given previous findings with adolescents and adults, the results are consistent with past studies.

That the children on the EFI-C implicated age-mates rather than perpetrators of The Troubles shows the developmental nature of the interventions. We predict that it will not be until later adolescence that students begin struggling with the meaning of the ethnic conflicts that have lasted for centuries. The foundation for this kind of thinking, and concomitant action based on the insights, is being formed in these primary-grade programs.

Approximately two-thirds of each intervention was devoted to the children learning about forgiveness rather than practicing forgiving someone, as is the case in all other interventions to date. The social-cognitive developmental theme of unconditionality, in which the children are taught to see people more deeply than might have been the case prior to intervention, may be a key to the findings across the dependent variables. Concrete thinkers might

be swayed by concrete features of another person, whether that is a frown, or a clinched fist, or other forms of potential aggression. Learning the concept of cognitive unconditionality involves seeing beyond surface, concrete features and to the person him- or herself. Philosophers (Kant, 1788/1997; Kreeft, 1990) tell us that we are more than just our bodies. We have an essence of personhood and thus should be treated as ends and not means to an end. Furthermore, unconditionality seems to foster this kind of thinking that seems to directly target resentment, which is at the heart of anger when treated unfairly. This theme of unconditionality was featured across all aspects of the first- and third-grade curricula. If the children applied this learning across their varied experiences of injustice from others, it is not surprising that the anger variable showed significant reduction for the experimental group relative to the control group.

The effect sizes (ranging from .38-.70) across the four variables of the two intervention studies are generally comparable to the average effect size for adult group forgiveness interventions (.59) reported by Baskin and Enright (2004). These results are noteworthy for three reasons. First, all of the teachers were implementing a forgiveness intervention for the first time. The effect sizes suggest that this was not a hindrance to their success with the treatment manual and the delivery of services. Second, the children in these studies were between 6 and 9 years old. The fact that results can be generally comparable to motivated adults, who volunteered for the forgiveness interventions, suggests the potential of these interventions for other psychologist/teacher collaborations. After all, even though the children gave verbal assent to the program and parents gave written consent to the assessments, the children cannot be expected to have approached the task with the same degree of initial motivation or cognitive complexity as adults who respond to advertisements for psychotherapy. Third, as already stated, the intervention centered mostly on learning about forgiveness rather than direct practice of forgiving and yet anger in general was reduced in a clinically significant way.

The age of the children put a restraint on what could be studied. For example, academic achievement is not assessed in any formal way in the samples that we chose. No achievement tests are given and report cards are of the narrative variety, not easily quantified for research purposes. Besides this, our intent for this series of studies is centered primarily on anger-reduction. We wanted to ascertain whether or not a consultation model that included a teacher-led forgiveness intervention could reduce anger in young children and we believe it did.

We see anger reduction in the short-run, as was observed here, as a means to an end much later in the children's schooling and in their adult years within a contentious environment. If anger can be reduced from an elevated range, or stay within the average range, then the children may be less at-risk for aggression and academic underachievement later in their schooling (Park, 2003). Such programs, once the students are adults, may provide a tool for increased dialogue and possibly even reconciliation with those from the other ethnic and religious group with whom they have been in conflict for centuries. If the students can learn the lessons of unconditionality, then they may be able to deduce, years later, that even those considered their enemy have inherent worth and therefore are worthy of respect. Of course, this long-term goal must wait years of education and research before conclusions can be drawn, but the deductions from past research and the studies presented here are encouraging.

As a footnote to this wider perspective, we should not think of improved emotional health or forgiveness education as substitutes for social programs that are intended to reduce poverty and/or violence. Children from environments of

poverty and violence need both internal coping strategies, tools for effecting peace, and social justice.

Two limitations are worth noting. First, randomization was on the classroom- rather than the child-level, resulting in a quasi-experimental design. We were not interested in whether a classroom as a whole reduced anger, but instead whether the individual children became less angry. Analyzing on the classroom level would take at least a decade to amass a sufficient sample size. Our replicated results with the anger variable strengthen the conclusions. Second, the necessity of signed and returned parental consent forms resulted in a 60% parental response rate in Milwaukee. Madison and Belfast, with their 90% response rate, were not affected.

We have shown that primary school teachers, who work on forgiveness interventions with psychologists, can have an influence on reducing children's anger, and in the case of third grade, on reducing their level of psychological depression. Both variables are being implicated in the published literature as predictive of children's success within the school setting (Forsterling & Binser, 2002; Park, 2003). We have taken a first step toward further success for these students, all of whom are potentially at risk because they live in a socially contentious region, characterized by both poverty and violence, and have few psychological resources on which to draw. Gandhi has said that if true peace is ever to be achieved in communities, then we must begin with the children. Continued steps along this path of peace through forgiveness education may pay dividends for communities in conflict that we can hardly fathom today, but may indeed be realized in the future.

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## Failure in Elementary Mathematics: The Role of Goal Orientation, Motivation, Family and School Relationships

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*The purpose of this study was to investigate the role of achievement goal orientation, motivation, self-regulated learning, family and school relationships among ethnically diverse 4<sup>th</sup> and 5<sup>th</sup> grade learners (n = 169) in the content area of mathematics. Using Discriminant Function Analysis (DFA), the results suggest that students who expected to earn better grades in mathematics expressed a task and performance approach goal orientation, higher levels of self-efficacy, higher levels of intrinsic motivation, and more effective self-regulation and cognitive strategies. These students also indicated a greater sense of fitting in at school and more positive relationships with teachers. On the other hand, students who indicated previous failure in mathematics were more likely to have higher levels of cultural dissonance and test anxiety and lower levels of self-efficacy, self-regulation, cognitive strategies, community safety, school safety, and school belonging.*

### Introduction

There have been many initiatives aimed at improving educational practices and the academic success of students. The most recent reform efforts directed by the No Child Left Behind Act (NCLB) of 2002 mandate that every child should be granted the educational opportunities that the child needs to succeed academically. Such mandates aim toward improving teaching practice, tightening accountability measures, and offering educational choices and options for low-income and/or minority parents and children. Due to individual learner characteristics playing a significant role in the academic achievement of students, researchers have focused a great deal of attention on the importance of self-regulated learning, motivation, and achievement goal orientation and their relation to academic achievement (e.g., Greene & Miller, 1996; Pintrich & De Groot, 1990; Zimmerman & Martinez-Pons, 1990).

Researchers have suggested that due to the differences in self-regulated learning across

disciplines (e.g., mathematics and language arts), the formation of self-regulated learning capability beliefs may be domain-specific (VanderStoep, Pintrich, & Fagerlin, 1996). For example, some researchers suggested that the academic tasks (e.g., determining how many calories per week would need to be burned to lose weight) that students are required to complete may influence levels of self-regulated learning (Howard-Rose & Winne, 1993). Other researchers have noted that student individual differences in conjunction with classroom contexts, such as teacher behavior and nature of tasks, are related to the level of self-regulated learning (Pintrich, Roeser, & De Groot, 1994). Using the Self-Regulated Learning Interview Schedule (SRLIS), Zimmerman and Martinez-Pons (1986, 1988) found that students' mathematics achievement was highly correlated with their use of many self-regulated learning strategies. More specifically, high achieving students sought more social assistance from teachers and peers than did low achieving students, as well as used more strategies such as rehearsing, memorizing, organizing,

transforming, goal setting and planning, monitoring and self-evaluation.

The research into self-regulated learning, motivation, and achievement goal orientation has been conducted with college, high school, middle school, and elementary students. However, less is known regarding the relationship of these variables to the mathematics achievement of elementary school learners. Elementary students (i.e., fifth graders) showed that their competence beliefs are important in their mathematics learning (Seo, 2001). Students' competence beliefs were found to be positively related to academic achievement, task values, task goal and ability-approach goal orientations, and deep learning strategies, while being negatively related to ability-avoid goal orientation and superficial learning strategies (Seo). Further, students competent in mathematics had positive task values, were oriented toward either task goal or ability-approach goal orientations, and used deep effective learning strategies. While these findings are important, particularly when examining subject area or disciplinary differences in regard to self-regulation, there is limited research regarding factors related to the academic success of elementary school students.

The present study examined the relationships between the constructs of achievement goal orientation, motivation, self-regulated learning, school and family variables with failure and perceived academic performance among ethnically diverse fourth- and fifth-grade learners in mathematics. A second purpose of this study was to examine differences between students that previously failed mathematics and those that did not in terms of goal orientation, self-regulation, motivation, and school and family variables.

### **Theoretical Framework**

#### ***Achievement Goal Orientation***

The achievement goal theories of motivation in particular have demonstrated an effect on students' motivation, cognitive strategy use, and self-regulated learning. Achievement

goal orientation theories offer an explanation of the reasons why students engage in academic tasks (see Pintrich, 2000). The type of goal orientation that the learner has is likely to affect the student's motivation and self-regulated learning strategies. A student's achievement goal orientation may be the result of prior learning experiences, the teacher's goal structure in the classroom, or a combination of these two factors (Pintrich).

In addition to the relationships between achievement goal orientation and motivation, numerous studies have also demonstrated relationships between achievement goal orientation and cognitive and self-regulated learning strategy use. Anderman and Young (1994) demonstrated that task goals (i.e., goals that involve an orientation to mastery of the task, increasing one's competence, and progress in learning) were highly correlated with eighth-grade students' use of deep level cognitive strategies. Middleton and Midgley (1997) found that sixth-grade students' self-reported self-regulated learning was positively correlated with a task goal orientation (e.g., students experience success when learning something new, gaining new skills or knowledge, or do their best). Ablard and Lipshultz (1998) administered the Self-Regulated Learning Interview Schedule (SRLIS; Zimmerman & Martinez-Pons, 1986) along with the Patterns of Adaptive Learning Survey (PALS; Midgley et al., 1997) to a group of seventh-grade high-achieving students. Their results indicated that mastery goal orientation (e.g., students are concerned with understanding, developing competence, and improvement) accounted for most of the variance in self-regulated learning. Specifically, students with low performance and low mastery goals had significantly lower self-regulated learning scores than students with high mastery and low performance goals or students with high mastery and high performance goals.

#### ***Self-Regulation and Success in Mathematics***

One of the most commonly used definitions of self-regulated learning identifies the self-

regulated learner as one who is behaviorally, metacognitively, and motivationally active in his or her own learning (Zimmerman & Martinez-Pons, 1986, 1988). Students who engage in self-regulated learning employ cognitive learning strategies such as rehearsal, elaboration and organization, as well as metacognitive processes including planning and organizing for learning, time-management, goal setting, self-monitoring and self-evaluation (Corno, 1986, 1989; Ghatala, 1986; Pressley, Borkowski, & Schneider, 1987; Weinstein & Mayer, 1986).

Pintrich (2000) offered a fairly comprehensive definition of self-regulated learning which states that self-regulated learning is an active, constructive process by which learners set goals, monitor their learning, control their cognition, motivation, and behavior, while taking into consideration the relevant features of their learning context and/or environment. According to Zimmerman (1994), the nature of the classroom plays an important role in facilitating self-regulated learning. Wolters and Pintrich (1998) assessed differences in students' task value, self-efficacy, test anxiety, cognitive strategy use, regulatory strategy use, and classroom academic performance across the subject areas of mathematics, social studies, and English. Results of their study suggested that the motivational aspects of self-regulated learning are somewhat context specific. Further, results suggested that the level of self-regulated learning in terms of strategy use can vary as a function of subject area differences (e.g., mathematics, social studies, and English) in classroom context. Additional research (e.g., Pintrich & DeGroot, 1990; Pintrich et al., 1994) suggested that students who valued and were interested in the content of the subject area were more likely to report using more self-regulatory strategies.

Previous research suggested that students who provide themselves with rewards (i.e., self-gratification) complete more arithmetic problems than students who provide themselves punishments or students who do not self-consequence (Jackson & Molloy, 1983, 1985). In addition, students' use of motivational regulation strategies can be used

to predict their use of learning strategies, effort, and classroom performance. When examining mathematics performance, Pajares and Graham (1999) found that students whose self-efficacy is higher are more accurate in their mathematics computation and show greater persistence on difficult items than do students whose self-efficacy is low. Other motivational variables that act as common mechanisms of personal agency also predict mathematics-related outcomes. These variables include mathematics anxiety, self-concept, self-efficacy for self-regulation, perceived value, and academic engagement.

Models of self-regulated learning, such as those of Pintrich and De Groot (1990) and of Skinner, Wellborn, and Connell (1990) hypothesized that learners accurately assess their own level of knowledge and then apply appropriate strategies to improve their performance. This self-regulation tends to result in higher grades and better standardized achievement scores. Researchers (Anthony, 2000; Stipek & Gralinski, 1991) have examined factors which are seen as having influence upon the success and/or failure of students in mathematics. Anthony noted that self-motivation was found most likely to influence students' success, while poor study techniques and lack of motivation were found to influence student failure. It was also noted that failure is related to students' ignorance regarding the study skills required, or the inability to apply these study skills appropriately (Anthony). More specifically, successful students reported that understanding rather than rote learning was more influential upon their success.

Stipek and Gralinski (1991) examined children's (e.g., third-grade and junior high students) mathematics achievement in relation to their beliefs and emotional responses to success and failure, and reported that successful students in mathematics attributed such success to their high ability while failure was attributed to low ability. Further, research indicated that mastery goals are related to cognitive strategy use and use of self-regulatory strategies in mathematics (Patrick,

Ryan, & Pintrich., 1999). Mastery goal orientation was found to be positively related to self-efficacy and use of self-regulatory and cognitive strategies for both males and females in mathematics, English, and social studies (Patrick et al). Zimmerman and Martinez-Pons (1990) reported that students' reliance on adults (parents) for assistance tended to be negatively related to mathematics efficacy and their perceptions of mathematics efficacy were significantly related to strategy use. Furthermore, students' efforts to strategically regulate their learning were associated with higher self-perceptions of mathematics efficacy (Zimmerman & Martinez-Pons, 1990).

### *Other Predictors of Academic Achievement in Mathematics*

Many aspects of interpersonal relationships have been found to have influence upon academic achievement (Wentzel, 1998). Specifically, predictors such as educational background of the family, reinforcement from parents, friends, and the individual himself, socioeconomic status (SES), student attitudes toward mathematics and teaching, school climate, and beliefs related to success in mathematics have been examined in relation to mathematics achievement (Papanastasiou, 2002). Teaching was found to have the strongest direct influence on students' attitudes toward mathematics followed by the reinforcement of the students from their near surroundings. Further, school climate was most directly influenced by SES followed by educational background.

Schiller, Khmelkov, and Wang (2002) explored disparity in the relationships between the parental education of students and family structure. Findings suggested that those students having educated parents or living with both parents tended to receive higher scores in mathematics. In addition, students' social backgrounds significantly influenced their mathematics achievement after controlling for their academic ability and orientation toward school (Schiller et al.).

Wentzel (1998) examined ways in which supportive relationships with parents, peers, and teachers were related to students' motivation at school and to academic achievement. In examining elementary and middle school students, significant relations have been documented among students' perceptions of support and caring from parents, peers, and teachers to positive aspects of motivation (Wentzel). The results indicated that parental support was the only type of support that was found to predict students' academic goal orientations. Researchers (i.e., Connell & Wellborn, as cited in Wentzel; Ford, as cited in Wentzel) have suggested that having a sense of social support and belongingness directly supports that adoption of socially valued goals and objectives.

The research questions addressed in this study are as follows: (a) What is the relationship of the School and Family Scales, the Pals Scales, and the MSLQ Scales to the academic indicators of students passing or failing mathematics and the students' expected mathematics grades? And (b) What is the difference in means for the family, school, goal orientation, motivation, and self regulation variables between the students who did and did not fail mathematics?

## **Method**

### *Setting*

This study included students participating in the South Florida Annenberg Challenge (<http://www.annenberginstitute.org/Challenge/sites/sfac.html>). The South Florida Annenberg Challenge (SFAC), a \$100 million effort, received its initial funding in 1997, as one of several sites participating in the National Annenberg Challenge (Annenberg Challenge, 2007). The SFAC, a collaborative effort between Miami-Dade, Broward, and Palm Beach school systems, has since evolved into a statewide entity, Council for Educational Change. (<http://www.changeeducation.org/>)

### *Procedures*

One fourth- or fifth-grade classroom was randomly selected from each of the 24 participating elementary schools in Miami-Dade County. Surveys were completed during a class period. A total of 600 surveys were distributed to these participating elementary schools and 396 were returned, resulting in a response rate of 66%. Each elementary student completed a survey instrument that included sections pertaining to his or her academic and social experiences in school, school climate, family background, and information regarding his or her mathematics or language arts class. The surveys were offered in English, Spanish, and Creole to accommodate the diversity of language spoken by these students and their families.

The majority of the survey instrument was constructed to gather information about students and their experiences in schools in South Florida so that it could be compared with information gathered at other sites (e.g., Bay Area, Chicago, New York, Los Angeles) participating in the National Annenberg Challenge (Annenberg Challenge, 2002). Students were asked to describe their academic experiences in reference to a target class (i.e., mathematics or language arts). Of the 396 respondents, 339 responded to an item regarding their birthday. The determination of each student's target class was made on the basis of his or her birthday. That is, children with birthdays between January and June were asked to respond in reference to their reading or language arts class ( $n = 170$ ) while those born between July and December responded regarding their mathematics class ( $n = 169$ ). Data reported in this study include only the sample of 169 students responding regarding their mathematics classes.

### *Instrumentation*

The survey instrument used was constructed to gather information regarding students' experiences in schools in South Florida while participating in the South Florida Annenberg Challenge. School and family measurement scales regarding student safety, community safety, relationships with teachers, school belongingness, and parental support were constructed from this survey. The survey also incorporated selected scales from the Patterns of Adaptive Learning Survey (PALS; Midgley et al., 1997), and a version of the Motivated Strategies for Learning Questionnaire (MSLQ) used previously with seventh graders (see Pintrich & De Groot, 1990) in the section pertaining to students' academic experiences. The final portion of the survey was comprised of an adaptation of the Self-Regulated Learning Interview Schedule (SRLIS; Zimmerman, & Martinez-Pons, 1986).

A summary of reliability estimates is provided in Table 1. Reliabilities regarding the six school and family measurement scales ranged from .5996 (school belongingness) to .8459 (family resources) with a median of .7721. The reliability estimates for the five PALS scales ranged from .7285 for the Performance Avoid Goal Orientation scale to .8041 for the Performance Approach Goal Orientation scale with a median of .7701. These estimates are consistent with those reported in a recent reliability generalization study of the PALS (Ross, Blackburn, & Forbes, 2005). Finally, estimates for the five MSLQ scales used in this study ranged from .6954 (Test Anxiety) to .8727 (Cognitive Strategies) with a median of .8461. These reliabilities regarding the PALS and MSLQ scales are consistent with those cited by the original developers of these instruments (Midgley et al., 1997; Pintrich & De Groot, 1990).

Table 1

*Relationships between School, Family, PALs, MSLQ, and Academic Indicators of Math Achievement*

	# items	Reliability	Correlation with academic indicators	
			Failure	Expected grade
<u>School and family scales</u>				
Parent support	9	.7585	-.085	.085
Family resources	10	.8459	-.131	.087
Community safety	8	.6872	-.189*	.151
School safety	7	.7857	-.286**	.098
School belonging	7	.5996	-.182*	.175*
Teacher relationships	6	.7895	-.010	.168*
<u>PALs scales</u>				
Task goal orientation	5	.8000	-.100	.190*
Performance approach	6	.8041	-.037	.219*
Performance avoid	6	.7285	-.070	-.052
Academic efficacy	7	.7701	-.132	.295**
Cultural dissonance	6	.7457	.232**	-.043
<u>MSLQ scales</u>				
Self-efficacy	9	.8660	-.234**	.457**
Intrinsic motivation	9	.8461	-.162	.310**
Test anxiety	4	.6954	.272**	.153
Self-regulation	9	.7690	-.146	.202*
Cognitive strategies	13	.8727	-.222*	.284**

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

### Analysis of Data

The analysis consisted of the two primary components. First, bivariate relationships between the variables of classroom goal structure, achievement goal orientation, motivation, and self-regulated learning and academic indicators were examined using Pearson Product Moment correlations. Second,

Discriminant Function Analysis (DFA) was used to examine differences among students from mathematics classes in terms of the above variables, as measured by school and family scales and the PALS and MSLQ. Two DFA's were performed using two sets of dependent variables. The first set was restricted to six variables regarding family support, community

and school safety, relationships with teachers, and school belongingness. The second set of dependent variables was comprised of measurement scales pertaining to the constructs of goal orientation, motivation, and self-regulation. Each multivariate test was followed up using univariate F tests (Hair, Anderson, Tatham, & Black., 1998.). This allowed us to determine which specific variables separated those students that had failed math from those that did not.

## Results

### *Student Characteristics*

Table 2 summarizes student characteristics (e.g., gender, ethnicity, free/reduced lunch, mother and father born outside USA, English being the primary language spoken, and mother's and father's education level and student academic indicators such as current level of performance in class, grade expected in the class, and whether or not students have previously failed a course). Of the participating students, over one half of the students who did

not fail mathematics were female (55%). Forty-three percent identified themselves as Hispanic American, while 29% identified themselves as African American. Further, 6% indicated that they were White/Not Hispanic and 6% described themselves as biracial/multiracial. Overall, the student characteristics were similar for both those students who failed and did not fail mathematics.

The academic indicators (i.e., current level of performance, grade expected and failure) were somewhat similar for those students who did not fail and those that did fail. The majority of the students who did not fail felt that they were performing the same as other students (56.2%) or better than other students (39.7%). One significant difference was found regarding expected grade. Students who had not previously failed expected to earn higher grades in the current class with 92% expecting an A or B compared to 66% of those who had previously failed a math class. Further, 12% of those students who previously failed expected a D compared to just 1% of the other students.

Table 2

### *Summary of Student Characteristics*

Characteristic	Failed in mathematics		Univariate analyses
	No ( <i>n</i> =130)	Yes ( <i>n</i> =39)	
Gender			$\chi^2 = .022, p = .881$
Female	55.0%	54.0%	
Male	45.0%	46.0%	
Ethnicity			$\chi^2 = 2.410, p = .300$
African American	29.0%	42.1%	
Asian American	1.0%	2.6%	
Hispanic American	43.0%	31.6%	
White/Not Hispanic	6.0%	7.9%	
Native American	4.0%	5.3%	
Biracial/Multiethnic	6.0%	0.0%	
Other	11.0%	10.5%	

(Table continues)



Characteristic	Failed in mathematics		Univariate analyses
	No ( <i>n</i> = 130)	Yes ( <i>n</i> = 39)	
Free/reduced lunch	72.0%	79.0%	$\chi^2 = .804, p = .402$
Mother born in USA	44.0%	28.0%	$\chi^2 = 2.840, p = .092$
Father born in USA	35.0%	34.0%	$\chi^2 = .007, p = .935$
English primary language spoken in home	69.0%	62.0%	$\chi^2 = .761, p = .383$
Mother's education level			$\chi^2 = 4.126, p = .389$
Did not complete high school	8.4%	12.8%	
High school graduate	15.0%	7.7%	
Some college or trade school	15.0%	7.7%	
College graduate	12.1%	15.4%	
Advanced degree	11.2%	17.9%	
Don't know	38.3%	38.5%	
Father's education level			$\chi^2 = 3.208, p = .524$
Did not complete high school	6.5%	10.3%	
High school graduate	12.1%	10.3%	
Some college or trade school	15.0%	5.1%	
College graduate	9.3%	12.8%	
Advanced degree	11.2%	10.3%	
Don't know	45.8%	51.3%	
Current level of performance			$\chi^2 = 1.302, p = .522$
Worse	4.1%	0.0%	
Same	56.2%	65.2%	
Better	39.7%	34.8%	
Grade Expected			$\chi^2 = 14.668, p = .002^{**}$
A	52.0%	42.4%	
B	39.8%	24.2%	
C	7.1%	21.2%	
D	1.0%	12.1%	
F	0.0%	0.0%	

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

*Relationships between Math Performance, School, and Family Variables, Goal Orientation, Motivation, and Self-Regulation*

Table 1 summarizes the relations between mathematics performance and measures from the School and Family Scales and the PALs and the MSLQ. The school and family scales (i.e., community safety, school safety, and school belonging) correlated negatively with failure in mathematics, while school belonging and teacher relationships correlated positively with expected grades. Generally, measures of the PALs (goal orientation) and the MSLQ (motivation and self-regulation) correlated positively with expected grades. Those students with a task or performance approach goal orientation were more likely to expect a higher grade in mathematics. In addition, those students scoring higher on the MSLQ scales of self-efficacy, intrinsic motivation, self-regulation, and cognitive strategies expected higher grades in mathematics. Students with higher levels of self-efficacy, intrinsic motivation, and cognitive strategies were less likely to have reported failure in mathematics.

*Discriminant Function Analysis Regarding Failure in Mathematics*

The results from multivariate comparisons are summarized in Table 3. Two multivariate

comparisons were made between students who previously failed mathematics and those who did not. The first comparison focused on the extent

to which these students differed in terms of school and family variables while the second focused on variables related to student goal orientation, motivation, and self-regulation.

School and family variables. The overall multivariate test of significance resulted in a Wilks Lambda of .860,  $p = .007$ , classifying 78.1% of the students correctly. Follow-up univariate F tests identified group differences on 3 of 6 examined scales. Specifically, those students who had failed mathematics reported that they felt less safe at school (school safety) and in their community (community safety) and less involved with the school (school belongingness).

Goal orientation, motivation, and self-regulation. The overall multivariate comparison yielded a Wilks Lambda of .827,  $p = .004$ , with a classification percentage of 76%. Examining the results from univariate F tests, it is concluded that students who have failed in mathematics were more likely to exhibit greater test anxiety, but lower levels of self-efficacy, intrinsic motivation, cognitive strategies, and self-regulation.

Table 3

*Summary of Discriminant Function Analysis*

	Failure in Math		<i>F</i>	eta <sup>2</sup>
	Did not fail ( <i>n</i> =130)	Failed ( <i>n</i> =39)		
Family and school <sup>a</sup>				
Parent support	3.04 (.51)	2.91 (.69)	1.484	.010
Family resources	6.39 (3.05)	5.56 (2.73)	2.222	.016
Community safety	2.94 (.56)	2.70 (.50)	5.442*	.037
School safety	2.89 (.64)	2.43 (.77)	12.939***	.084
School belongingness	3.11 (.48)	2.90 (.54)	5.270*	.036
Relationships with teachers	3.27 (.58)	3.25 (.54)	.058	.000
Goal orientation, motivation and self-regulation <sup>b</sup>				
Task GO	3.71 (.96)	3.44 (1.10)	1.774	.014
Perf. approach GO	3.46 (1.07)	3.34 (1.01)	0.322	.003
Perf. avoid GO	3.02 (1.07)	2.83 (1.03)	0.835	.007
Intrinsic motivation	4.09 (.78)	3.75 (.95)	4.242*	.053
Self-efficacy	4.07 (.78)	3.62 (1.03)	6.786*	.034
Test anxiety	2.18 (.89)	2.79 (.90)	11.784***	.088
Cognitive strategies	3.44 (.87)	2.99 (.84)	6.771*	.053
Self-regulation	3.17 (.85)	2.82 (.79)	4.319*	.034

a - Multivariate tests of significance yielded a Wilks Lambda of .860 ( $p = .007$ ), 78.1% classified correctly

b - Multivariate tests of significance yielded a Wilks Lambda of .827 ( $p = .004$ ), 76% classified correctly

### Discussion and Implications

While continued efforts focusing on the achievement in mathematics (Council of the Great City Schools, 2007; National Center for Education Statistics, 2003; Partners in School Innovation, 2003) have shown gradual improvement for urban schools and a decline in the achievement gap between Black and Hispanic and other students, urban school achievement continues to fall short of statewide averages. This study examines a diverse sample of elementary mathematics students to determine which factors are related to failure in mathematics. We find that students indicating previous failure in mathematics are less likely to feel safe at school and their community or develop a feeling of school belongingness. Students who indicate failure are also more likely to have higher levels of cultural dissonance and test anxiety and lower levels of self-efficacy, self-regulation, and cognitive strategies.

Before students are able to learn, they need to have a sense of belonging and safety within the school and classroom, as well as have a sense of safety within their family and community. The extent to which an elementary child feels that he/she belongs at school relates to his/her attitude toward learning, use of learning strategies, and eventually learning (Goodenow, 1991; Wentzel, 1998). Ma (2003) reported that students' sense of belonging to school is influenced more by school climate characteristics (e.g., academic press, disciplinary climate, and parent involvement) than by school context characteristics (e.g., school size and school mean SES). Among low-achieving African Americans and Hispanics, it is noted that those who report a negative climate at home have fewer education goals than those who report a positive home climate (see Honora, 2002). Further, high achieving students are found to express more long-term goals and expectations than low achieving students (Honora). Hence, teachers and parents should attempt to provide students with a safe learning/home environment. Students need to feel accepted, included, respected, and supported in the school social environment. Some

examples might include making sure that students are involved in all aspects of the learning process; ensuring that students feel safe and comfortable about asking and responding to questions even if the answer is incorrect; teaching students to accept and respect themselves and others within the classroom and outside of the classroom; and, making sure that students' work is always supported with positive encouragement.

Many students have been found to develop negative attitudes toward mathematics, as well as negative attitudes toward their own ability to understand mathematics as early as elementary school. Parents and teachers play a critical role in shaping the attitudes children have toward learning mathematics. If students believe that the contents of mathematics are irrelevant, this will have negative effects on their learning, understanding, and achievement (Mitchell, 1999). It has been noted that mathematics anxiety, as well as poor self-regulated learning may have negative effects on mathematics performance and achievement (Hsiu-Zu et al., 2000). Hence, the value students attach to mathematics could augment the effects of poor performance on students' mathematics anxiety, as well as self-regulated learning (Wigfield & Meece, 1988).

Previous research has established a positive relationship between task goal orientation and task goal structure and between self-regulation and math achievement, both leading to higher levels of motivation and use of self-regulated learning strategies (Ablard & Lipschultz, 1998; Anderman & Young, 1994) and between self-regulation and math achievement (Anthony, 2000; Fennema, 1989; Greene & Miller, 1996; Pintrich & DeGroot, 1990; Schoenfeld, 1992; Zimmerman & Martinez-Pons, 1990). The results reported in this study support these relationships and suggest that elementary teachers should strive to foster a task or mastery classroom goal structure in their classrooms and encourage students to use effective strategies to approach learning tasks and prepare for assignments and tests in mathematics. It is important for students to learn mathematics because they want and believe that it is valuable.

One way to do this would be for teachers to model the use of effective strategies and work with students to build their confidence in using such strategies. Teachers also should encourage students to engage in effective studying behaviors that foster self-regulation such as choosing study partners, seeking help selectively and confidently, planning realistically, using time effectively, monitoring their own progress, and engaging in self-rewards. Finally, teachers should continue to engage students in the process of mathematics. One example might be for teachers to include students in the design of mathematics assessments. Another example might be for teachers to allow student input on how lessons could be taught to better prepare them to be successful in mathematics.

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