Journal of Research in Education
Fall 2008

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Measuring the Relationship Between Electronic Portfolios and Student Teaching Competencies

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The purpose of this research is to investigate whether there is a correlation between the performance-based assessment of student teaching and a different form of performance based assessment of unit standards assessed through electronic portfolios. The four general outcome areas of planning, instruction, management, and professional growth used in the e-portfolio and student teaching served as the basis for student teaching grading and subsequent e-portfolio responses. Correlationals were done to compare student teaching grades and related e-portfolio reflections. Since significant correlations were identified, the knowledge base or skills used in these two assessments were determined to be different and consideration of each in an education assessment system is justified.

Performance based assessment has been receiving increasing interest in the field of teacher education. According to Mitchell and Crawford (1995), "performance assessment is the measure of whether or not and to what degree students achieve the standards" (p. 78). In contrast to traditional pencil-and-paper tests, this newer type of assessment is based on a collaborative, active learning model, with the goal of assuring success on 'real world' tasks (Spady & Marshall, 1991).

Although there are obvious differences between performance based assessment and traditional paper and pencil tests, there has been a surge in the field of education not to choose between one or the other form, but rather to implement both assessment practices concurrently as a means of assessing student skills in theory as well as practice. Many teacher education programs are implementing performance-based assessment through electronic portfolios as program completion requirements.

The challenge facing teacher preparation programs is how to effectively prepare students to function as participants in the learning environment (Ring & Foti, 2003). The University of Scranton has implemented an exit requirement of a reflective e-portfolio as a capstone following student teaching in order to bridge a gap identified by some researchers (Martin-Kniep, 2000; Wolf & Dietz, 1998) between passive teacher directed learning and active student centered learning.

The University of Scranton's (U of S) e-portfolio is a stand-alone, reflective program exit assessment that is unlike those showcase e-portfolios used by many other institutions simply to collect evidence. The US reflective e-portfolio is an independent assessment that follows student teaching as a program exit requirement. While materials prepared during student teaching may be selected by a student as artifacts to support their reflective assertions made in an individual portfolio, there is no required use of the grades, or other required product, of student teaching, as part of the e-portfolio as might happen in a showcase e-portfolio. Due to differences in the timing (student teaching precedes the e-portfolio) and the content (student teaching materials or grades are not a subset of the e-portfolio requirements) of the e-portfolio and student teaching, these assessments are independent of each other.

The purpose of this research is to investigate whether there is a correlation between the performance-based assessment of student teaching and a different form of performance-based assessment of unit standards being assessed through electronic portfolios. The underlying question is whether student teaching assessments and independently completed reflective e-portfolio assessments are

measuring the same thing. If there is task exchangeability between the assessment of student teaching and the e-portfolio assessment, then serious questions need to be asked, such as do we need to require both assessments? By requiring both assessments there is an increased reliance on physical resources in terms of computer lab time and personnel resources to evaluate e-portfolios. If there is exchangeability between the two assessments, then there is no need to require the e-portfolio, as student teaching grading in the traditional environment will never be abandoned. Thus, the research questions addressed were (1) Is there a correlation between the independent assessments of the grades awarded during the student teaching experience to the teacher candidate responses to unit standards in the e-portfolio? (2) Is there task exchangeability between the e-portfolio system and the assessment of student teaching based on correlational data examined in the study?

Literature Review

Electronic Portfolios

The word portfolio comes from the Latin words *portare* meaning to carry and *foglio* meaning sheet of paper (Hewett, 2004). Portfolios have been used in teacher education programs to assess student competencies in such areas as pedagogical and professional knowledge, decision making, planning, scholarship, growth, and classroom management. Bers (2004) defined portfolios as "collections of students' work that demonstrate learning and development (and) are carefully assessed by faculty and evaluated holistically" (p. 47).

Portfolios have several advantages as an assessment technique for both the reviewer and author of the portfolio. First, they provide the reviewer with the author's reflective responses to standards and a collection of the students' work that can show growth over time. The reviewer of the portfolio can also see the interrelationships between academic performance and performance in the field of teaching, through review of such artifacts as student teacher observation ratings and even digital media clips of teaching demonstrations. Second, they provide the pre-service or entry level teacher with the opportunity to review past work and reflect on ways to improve performance and decision making. Teacher reflection does not happen on its own until further into a teacher's professional life. Reflection involves the practitioner restructuring personal understanding of the problem situation and the strategies of action that have been used (Schon, 1995). The portfolio can prepare the student teacher to reflect.

Addressing Standards at the Program Level

Nationally, teacher development programs are being asked to include their students' artifacts in some form of teaching portfolio that will ultimately be used as an assessment vehicle for students, as well as program evaluation tools for NCATE accreditation (Shannon & Boll, 1996; USDE, 1997). Standards drive the assessment process, and portfolio assessment may be the most valid way to assess standards. Students are informed of performance standards, most often through rubrics, and they have opportunities to improve through self-reflection and faculty mentoring (Wigle & White, 1998).

According to Palomba and Banta (1999), programmatic assessment "helps determine whether students can integrate learning from individual courses into a coherent whole. It is interested in the cumulative effects of the educational process" (p. 5-6). The portfolio provides a vehicle by which to reflect upon and provide evidence of such integrated learning experiences in education. Through completion of an e-portfolio, teacher candidates engage in reflection not only on their most recent work, but on their work throughout the program. Many students submit artifacts that display their professional and personal growth in education from admission to program completion, which is important for programmatic reflection. Also, there are promising indicators from recent studies of National Board Certified teachers that correlate student achievement with an intensive program of professional development that includes portfolios (Goldhaber, Perry, & Anthony, 2004).

Program portfolios can consist of hard or electronic copies of students' work, or both, and must include documentation of learning and development across the spectrum of program objectives (Bers, 2004). Student authored electronic portfolios are currently a capstone exit requirement following student teaching for all education majors at U of S. Thus, the teacher candidate's completion of the e-portfolio process

occurs subsequent to the completion of all requirements of student teaching and its' grading. While materials prepared during student teaching may be selected by a student to support thoughtful assertions made in the reflective e-portfolio, there is no required use of grades from student teaching or any other specified document in the e-portfolio process. Therefore the two assessments are independent of each other. The students use a non-linear PowerPoint presentation to create the portfolios, and hyperlinks to external files are used to present the student-selected artifacts.

At the University of Scranton, students must include all eight sections as exit standards in their electronic portfolios. In each of the two areas of scholarship and decision making, students must address four outcome areas: planning, instruction, management, and professional growth. Scholarship standards emphasize the knowledge about planning, instruction, management and professional growth while decision maker standards emphasize the ability to apply that knowledge about planning, instruction, management and professional growth. These eight statements are adopted by the University of Scranton's Education Department as their program completion standards (see Table 1 and 2).

One goal of the e-portfolio is to promote reflective practice. The e-portfolio can demonstrate critical thinking through reflective writing about artifact construction, selection, and revision (Lynch & Purnawarman, 2004). Although early research suggested that reflection does not occur until after a teacher has several years of experience (Schon, 1983; Schon, 1987), a structured format can assist in developing reflectivity during teacher preparation programs (Grimmett & Crehan, 1990; DiGiaimo, 1993; Clarke, 1995; Loughran, 2002). Research suggests e-portfolios promote a deeper level of reflection because student work is displayed with reflections, data about the learning standard, and teacher feedback (Wenzlaff & Cummings, 1996; Ahn, 2004). The University of Scranton requires reflection in its e-portfolio process and grading is based on the assessment of the reflection as opposed to the alternative structure of an e-portfolio that merely requires the uploading of previously assessed documents.

Validity and Reliability of Portfolio Assessment:

Clear, established and reliable standards, including a concise rating system to describe acceptable performance and competencies, are essential in portfolio assessment, as in evaluation methodology (Condon, 1997; Irby & Brown, 2000). Validity of a portfolio assessment is supported in two ways: by a well-established appraisal system, which encourages self-development, provides the opportunity for creative problem solving and focuses individual effort on accepted program goals (Burch, 1997); and by the artifacts themselves, which are generally developed by students during the course of a degree program (Lynch & Purnawarman, 2004).

Implementation Challenges

Bers (2004) identified four challenges confronting e-portfolios at the community college level: (1) developing conceptual and operational definitions of what constitutes a program, (2) identifying students who are at the end of a program, (3) maintaining faculty concurrence on which key learning outcomes should be assessed, and (4) meeting the resource requirements needed to implement some assessments. These challenges continue at the baccalaureate level as they are further defined in education programs by NCATE, TEAC, and state requirements. Program completers of initial programs are defined by HEA Title II and all levels by state certification requirements. While e-portfolios are extraneous to the requirements of the major as defined in the U of S catalog, they are not so for program completers. An accepted e-portfolio is required under the U of S's definition for program completers. The eight standards of the program are aligned with course objectives, the Pennsylvania Department of Education standards, and NCATE 2006 Standards in Table 5. Therefore issues 3 and 4 as identified by Bers (2004) remain at the baccalaureate level.

Methods

E-Portfolio Artifacts

The U of S requires that students must cite one or two artifacts to demonstrate that their performance is consistent with their written reflections. Artifacts may include such items as documents, scanned items, images saved as

digital files, and digital videos. Historically, students have included such items as lesson plans, video clips of lessons, evaluations by their co-operating or supervising teacher, letters to and from parents of their students, research articles and papers, and certificates, etc. Table 1 and Table 2 review departmental standards and suggested artifacts for each of the eight standards. The type of file used as an artifact is not as essential as its ability to provide evidence that the candidate meets the standard for which the artifact is presented.

Meeting the Program Standards While Promoting Reflective Practice

The outline of what is done programmatically in the U of S's Education Department is consistent with what the program standards suggest is required to provide to the student and the community. Scholarship and decision-making are both important facets of program standards. Through scholarship, students obtain an in-depth understanding of the content they are to teach and to use in their teaching, and this content knowledge strengthens practice. Decision-making is important in that students influence other people in the community and world. This is why the Education Department chose these two areas to include in performance assessment (during student teaching) and its exit assessment (at program completion with the e-portfolio).

Student Teaching Competencies and E-Portfolio Components

Student teaching at U of S involves coursework and experiential learning assessed in the same four general outcome areas of planning, instruction, management, and professional growth. Students do not receive one grade for student teaching but receive four grades (one for each of those areas). Table 3 presents a description of each of those four grades issued at the end of student teaching. During student teaching, students are required to enroll in separate courses representing each of those outcome areas and they receive four grades upon completion of that work. Thus, the unit assesses performance in the same four outcome areas identified by the electronic portfolio, but not bifurcated as the e-portfolio does.

The four outcome areas of planning, instruction, management, and professional growth arose out of the faculty's examination of what is important in the preparation of a professional educator at all levels. Some programs have a capstone course, which is a required class at the end of the program that integrates material covered earlier and allows students to demonstrate their learning in various ways (Bers, 2004). The teacher candidate's program contains a sequence of prescribed courses, at the end of which is the experiential requirement of student teaching. The U of S uses student teaching to assess student performance because it is exactly this experiential process that is the capstone experience to program completion. At the end of student teaching, a candidate's program should be complete.

Reliability and Validity Issues

It is important to ensure validity during e-portfolio assessments because of the diverse group of faculty who will review the e-portfolios. The unit's assessment system is well correlated with the eight standards of the department discussed later. Faculty members suggest artifacts in a guide to assist development and assessment, but meetings with students and professors extend those possible artifacts beyond those indicated in the guide.

In order to ensure reliability, in the early stages of implementation, the faculty members were formally prepared in a sequence of meetings. The faculty from different specialties came together to assess the e-portfolios in a format where they were encouraged to discuss questionable responses. Any e-portfolio that was found to be deficient in meeting any one standard was assessed by a second faculty member.

Finally, obtaining reliable and valid assessments of the e-portfolios may become problematic, due to the high number of faculty responsible for reviewing these portfolios. Even a well-developed rubric will change as emphases shift and previous rubrics show weaknesses in the program. Additionally, changes in state requirements or faculty emphases will require the re-evaluation of the rubric. Such adjustments in the assessments of e-portfolios are inherently part of the process.

Data

The study considered teacher candidate grades in student teaching in the four outcome areas of planning, instruction, management, and professional growth as well as the assessment of each of the eight standards of the department which are organized along those four outcome areas. The data were entered into a spreadsheet using Microsoft Excel. The excel worksheet was then imported into SPSS for data analysis. The student teaching grades and the related e-portfolio assessments generated subsequent to student teaching were compared using the correlation subroutine in SPSS. Pearson was selected because the student teaching grade remained the single independent variable yielding correlational data that would be the same as that generated by the Pearson *r*.

The results for these comparisons are reported in Table 4 as a reported *r* and a level of significance (sig.). However, a preliminary examination of the data and the results of these initial correlations suggested that data were negatively skewed toward the high end of the 1-5 Likert-type scale in the e-portfolio data and toward the high end of the grading scale on a widely-used 4-point scale. The Kolmogorov-Smirnov (K-S) statistic was used to examine the data for normal distribution. The K-S determined that the data were not normal. Since correlations are most effective when used to examine data with a normal distribution, efforts were undertaken to transform the data into a more normal distribution.

Correction for the negative skewness of the data was attempted using an exponential transformation of the raw data. Although the distribution was improved, data were still not normally distributed. The use of a power transformation was not attempted in that such a transformation is not trivial. Since no pattern could be determined by examination of the raw data, no clear justification for the application of a particular power could be determined. The raw data were then reversed so as to become positively skewed (toward the low end of the ranges identified above). A logarithmic transformation was applied to the positively skewed data, yet the K-S showed that the data were still not normal. Therefore, the result of the exponential transformation was used to represent normalized data.

Analysis

Data analysis was accomplished by running a series of correlations between the e-portfolio scores from the assessment rubric of the eight unit standards to grades earned in the four outcome areas of student teaching (see Table 3). Composite scores from the e-portfolio were calculated from the sums of the two separate scores (in scholarship and in decision-making) for planning (S-1 + D-1), instruction (S-2 + D-2), management (S-3 + D-3) and professional growth (S-4 + D-4). An additional calculation was done to yield a composite score from all eight of the unit standards. These 13 areas were compared (using correlations) to the four related student teaching grades. An additional consideration was made by combining the four teaching grades to yield an overall (composite) student teaching grade.

The results of the correlation of raw data are shown as an *r* value in Table 4, with the level of significance indicated as "sig." The correlation of exponentially transformed data is shown in each cell as "Trr" with the level of significance indicated as "TrSig" (see Table 4). Given the difficulty in the analysis of these data, and to be conservative in the data analysis, both correlations of raw and transformed data within each cell needed to be significant (α=0.05) in order to conclude that a significant relationship truly existed.

Pearson correlation coefficients were run between the e-portfolio standards of S1 (μ = 3.4767; sd= 0.88440), D1 (μ= 3.4421; sd= 0.86408) and the planning composite score versus the planning grade (μ= 3.9397; sd= 0.22784); the e-portfolio standards of S2 (μ=3.5278; sd= 0.80647), D2 (μ=3.442; sd= 0.86408) and the instruction composite score versus the instruction grade (μ= 3.9041; sd= 0.29174); the e-portfolio standards of S3 (μ= 3.4583; sd= 0.86703), D3 (3.4306; sd= 0.88254) and composite score versus the classroom management grade (μ=3.8810; sd= 0.30999) and the e-portfolio standards of S4 (μ= 3.4583; sd= 0.86703), D4 (μ=3.4306; sd= 0.88254) and composite score versus the Classroom Management grade (μ=3.8810; sd= 0.30999) versus the Professional Growth grade (μ=3.9257; sd= 0.23810).

Results

In Table 4, no significance was found when correlations were run between related planning, instruction or management e-portfolio assessments with the related student teaching grades. Where a few correlations seemed to be significant using the raw data [e-portfolio standard S2 in instruction with the student teaching grade for instruction (n=215, sig.=0.048), for example], further analysis by correcting for the negative skewness showed a correlation that was not significant (n=215, sig.=0.187). The researchers considered that this correlation was not significant in that significance was not shown by both raw and transformed data. The data did show some significance in the correlations between professional growth standards and overall student teaching grades. In the e-portfolio assessment of standard S-4, professional growth in scholarship, D-4, professional growth in decision-making, and in the composite of S-4 and D-4, significance was identified in the correlation of each with the overall student teaching grade. In no other correlation was significance indicated by both tests performed. The data and the statistical analysis indicated, then, that only in the e-portfolio assessments related to professional growth and the composite of student teaching grades was there any appearance of significant correlation.

The negatively skewed distribution of the data may be due to the candidacy requirements in the U of S's Education Department that have the effect of filtering out students who are less academically talented. Another possible contributing factor to the abnormal distribution of the data may be the Pennsylvania requirements for teacher candidacy. By statute, all teacher education programs in Pennsylvania require a grade point average (GPA) of 3.0 or better, equivalent to a letter grade of B or above. Additionally, the program requires that a grade less than "C" is not satisfactory. Therefore the only grades possible in student teaching assessment are A (4.00 GPA), A- (3.67 GPA), B+ (3.33 GPA), B (3.00 GPA), B- (2.67 GPA), C+ (2.33 GPA) and C (2.00 GPA).

Another possible contributing factor to the negatively skewed distribution of the data may be the issue of grade inflation in student teaching assessment. It is uncommon for students to receive a grade of B or less in student teaching. This issue is directly linked to the emphasis placed on student teaching grades by administrators and school boards who are in the position of hiring potential applicants. Assigning a grade lower than a B to a student teacher, therefore endangers student employability and professional career. Until there is a change in the way students are hired or the criteria that are used in the hiring process, inflation in student teaching may never be addressed. This problem may be compounded by the number of adjunct faculty who supervise student teaching and who may issue inflated grades in the four courses comprising the student teaching grades (Sonner, 2000).

In the first round of e-portfolio assessments, it was much easier for faculty to assign ratings of "3" (on a Likert-type scale) to each standard because the process was new. This phenomenon is known as acquiescent response style. It would be interesting to further examine the distribution of e-portfolio grades once the faculty member had more experience with the e-portfolio grading process.

A number of significant correlations occured in the e-portfolio standard of planning in the scholarship area (standard S-1). Significant findings occurred in the correlations of S-1 with the grade in instruction in student teaching, the grade in management in student teaching, the grade in professional growth in student teaching, and the composite of grades in student teaching. This finding suggested that high grades in student teaching would indicate that students would be submitting a high quality e-portfolio response in the scholarship standard in planning. This finding makes sense in that instruction, management and professional growth are indicators that the student knows how to plan lessons, utilize management interventions and take advantage of professional growth opportunities. It is interesting that the grade in planning in student teaching and the e-portfolio response to standard S-1 are not correlated significantly. Although close, and therefore suggestive that a relationship may exist, the result failed to meet the α of .05 in a consideration of raw data. It could be, however, that grades in student teaching are a good indicator of the ability to respond in an e-portfolio to the standard regarding knowledge of how to plan.

Discussion

Based on data examined, the e-portfolio system and the assessment of student teaching do not appear to be measuring the same things along the composite areas of planning, instruction, and classroom management. The lack of relationship between these three standards of the e-portfolio and the grades assigned in student teaching suggest that if the desire is to prepare a reflective teacher, it appears as if the assessment of the student teaching process is not as effective in identifying a reflective teacher as is the e-portfolio.

That these assessments do not correlate well can be explained by an examination of the two processes involved. The very nature of the student teaching environment is not necessarily reflective. Further, student teachers are guests in the host school adopting a new process in an unfamiliar environment with someone else's students. Although toward the end of the 12-week student teaching experience, teacher candidates often referred to the students as "their students," they are never truly were their students. Student teachers must follow guidelines in the student teaching handbook that outline professional relationships and dress requirements which conform to the policies and expected behaviors of their school and faculty. Student teachers are bound by the rules and requirements that apply to the full time faculty at the assigned school. The nature of this environment, then, requires fast action within a context not of their own making.

Unlike the student teaching experience, teacher candidates have the opportunity to reflect upon their experiences and competencies when they author an e-portfolio. This is very different from the student-teaching experience, which emphasizes daily performance. Such an emphasis on performance does not provide the time necessary to reflect on that experience. It appears that there must be a requirement of reflection and a structured environment that will encourage the reflective process. In order for this to occur, there must be clearly defined standards, an environment consistent with the needs for reflective processes, and the guidelines for students to follow when reflecting. The U of S students engage in real reflection, and they are able to do that because they are provided the equipment, environment, and support to do so. Students must document that their performance is consistent with their reflection; these are higher level thinking processes not likely to occur without such supports. In an environment that requires so much "doing" it is imperative that students be required to slow down and reflect.

It is interesting to find a relationship between the grade in student teaching and the assessment of the e-portfolio in professional development. This may be due to the logical connection between those who are professionally oriented and reflective to begin with and superior performance in student teaching. In addition, all student teachers must be enrolled in professional development seminars for a minimum of one hour per week during their student teaching experience. This may contribute to the relationship between grades in student teaching and the assessment of the e-portfolio area in professional growth. Currently, student teachers at U of S are assigned based on geographic location rather than content area specialization. It is interesting to speculate whether there would be a stronger relationship if the students in secondary education would meet by content area. Ideally, professional seminars would prepare student teachers for reflection; however, this may not always be the practice, as some professional seminars simply require the student to "share" their experiences without incorporating reflective processes for enhanced professional growth. Problem-solving skills may be enhanced by placement of students in professional development seminars that are content specific, such as a seminar for students who are teaching biology.

Conclusions

Early in the development of an electronic exit portfolio system (e-portfolio), questions were raised regarding whether the knowledge and skills examined by the e-portfolio were the same as those assessed during the assignment of grades for student teaching. The research in this study attempted to answer these concerns by addressing the following research questions: (1) Is there a correlation between the independent assessments of the grades awarded during the student teaching experience to the teacher candidate responses to unit standards in the e-portfolio? (2) Is there task exchangeability between the e-portfolio system and the assessment of student teaching based on correlational data examined in this study?

The collection of data involved both e-portfolio assessments and student teaching grades over three consecutive semesters. Correlational studies were done to compare related assessments resulting from the application of the e-portfolio rubric and student teaching grades. Both raw data and transformed data (to make the data more normally distributed) were compared using correlational statistics. For correlations between factors to be significant, both sets of data (raw and transformed) had to yield significant results. Significant results were found only in those correlations between the overall student teaching grades and the professional growth e-portfolio assessments in scholarship, decision-making, and the composite of professional growth in scholarship and decision-making.

Therefore, it appeared that the individual outcome area grades in student teaching were not correlated with the assessment of the related standards in the e-portfolio. This suggested that the teacher candidates completing these two experiences were utilizing different skill sets and/or different bases of knowledge in these two tasks. For research question number one, then, the answer was yes, there is a difference. For research question number two, then, the answer was no. The assessments examined did not seem to be correlated suggesting that different skill sets and/or knowledge bases were being used.

It is only in the correlation of the professional growth assessments of the e-portfolio with the composite student teaching grade that there was a significant finding. This was not surprising in that those teacher candidates most concerned with their professional growth (indicated, it can be assumed, by the quality of the e-portfolio assessments of professional growth standards and composite) were, logically, the most successful student teachers (indicated by the composite student teaching grade). There may be a value to knowing that this correlation exists since appropriate mentoring can be done to intercede when one low assessment may point to what is likely to be another low score.

A need for further research has been identified as a result of this study. While the quantitative analysis shows that the assessments of the e-portfolio and student teaching seemed to be measuring different skill sets and/or different knowledge bases, the nature of these differences was not established. Therefore, a qualitative study is needed to establish what teacher candidates see as the difference between the skills and knowledge used in the completion of these two assessments. Knowing what skills and knowledge is used can then become the focus for considerations as to whether both assessments are necessary and whether or not they should both be continued.

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Table 1.

Standards and Suggested Artifacts for E-Portfolio Area of Decision-Maker

Decision-Maker Standards	**Statement of Standard**	**Suggested Artifacts** (Not exclusive)
Decision-Maker Planning (D-1)	Candidates design instruction based on knowledge of students, learning theory and subject content.	Lesson plan designed and used in actual teaching (field) experience, student teaching or microteaching situations and that are responded to by self-evaluation and reflection with such plan being assessed at the "A" level Digitized video recording of a teaching sequence with a voice-over addressing the standard Instructor/Supervisor/Cooperating Teacher comments on an evaluation or observation form
Decision-Maker Instruction (D-2)	Candidates integrate a variety of teaching strategies based on the addressed needs of their students.	Written unit plan that shows that the standard is met by utilizing a variety of techniques in developmentally appropriate teaching sequences Comments made as part of a student teaching journal that attests to the candidate's recognition of student needs Specific comments that are identified as part of the PDE 430 evaluation form
Decision-Maker Professional Growth (D-3)	Candidates effectively communicate with colleagues, administrators, families and other professionals for the benefit of their students	Video with voice-over of a presentation made during a back-to-school function or parent conference Letters of recommendations authored by administrators, colleagues, or a student's family where content attests to meeting the standard
Decision-Maker Classroom Management (D-1)	Candidates create and manage a positive, respectful and safe learning environment.	Photos or digital video of students participating in activities that demonstrate that the classroom is managed in accordance with the standard

Table 2.

Standards and Suggested Artifacts for E-Portfolio Area of "Scholarship"

Scholarship Standards	**Statement of Standard**	**Suggested Artifacts** (Not exclusive)
Scholarship Planning (S-1)	Candidates plan teaching models that use the major concepts, principles, theories and research related to learning.	Digitized video recording of a teaching sequence with a voice-over addressing the standard
Scholarship Instruction (S-2)	Candidates implement the central concepts, tools of inquiry, and structures of content for various developmental issues.	Evidence provided within written comments of a course instructor, cooperating teacher or supervisor regarding a lesson that is clearly inquiry-based in its methods and planning. Photos of students engaged in an inquiry-based activity within a course or field-based activity.
Scholarship Professional Growth (S-3)	Candidates utilize data gathering techniques including research, analytical processes, assessment, and professional collaboration.	Written analysis of professional development provided by peer- and/or self-evaluation that shows factual information, performance review and reflection based on the information provided. An instructor-accepted student report, demonstrating the standard, and which includes a reflection regarding field work or service project.
Scholarship Classroom Management (S-4)	Candidates apply effective communication, discipline and management techniques for establishing a conducive learning environment.	Written management plan composed in an appropriate course (professional seminar or classroom management course) in the preparation sequence.

Table 3.

Student Teaching Grading Variables

Student Teaching (ST) Variable	Description
ST: Planning	Preparation of actual teaching plans during student teaching. Application to field director is required.
ST: Instruction	Involvement in implementing methods and techniques. Student teaching on a full-time basis under the supervision of classroom teachers and University supervisors.
ST: Management	The demonstration of professional growth during student teaching as evidenced by professional behavior and skills, a commitment to improvement, and ability to relate to others. This includes attendance at and participation in a weekly seminar to analyze and discuss professional considerations and student-teaching problems.
ST: Professional Growth	Involvement in the management of learning situations during student teaching.

Table 4.

Correlational statistics between e-portfolio assessment and student teaching grades

e-portfolio standard	ST Planning Grade	ST Instruction Grade	ST Managmnt Grade	ST Prof Grow Grade	ST Total Average
S-1	n(215) r=0.130; sig.=0.057 Trr=0.120; TrSig=0.080	**n(215)** **r=0.242; sig=0.000** **Trr=0.163; TrSig=0.017**	**n(215)** **r=0.234; sig 0.001** **Trr=0.164; TrSig=0.016**	**n(215)** **r-.254; sig=0.000** **Trr=0.182; TrSig=0.007**	**n(215)** **r=0.262; sig=0.000** **Trr-0.206; TrSig-0.002**
S-2	n(215) r=0.130; sig=0.056 Trr=0.060; TrSig=0.383	n(215) r=0=135; sig=0.048 Trr=0.090; TrSig-0.187	n(215) r=0.113; sign-0.098 Trr=0.061; TrSig=0.371	n(215) r=0.159; sig-0.020 Trr=0.107; TrSig-0.117	n(215) r=0.160; sig=0.019 Trr=0.096; TrSig=0.160
S-3	n(215) r=-.032; sig=0.640 Trr=-.063; rSig=-.357	n(215) r=0.004; sig=0.959 Trr=0.006; TrSig=0.927	n(215) r=0.006; sig=0.936 Trr=-.012; TrSig=0.866	n(215) r=0.117; sig=0.088 Trr=0.046; TrSig=0.499	n(215) r=0.026; sig=0.704 Trr=0.014; TrSig=0.844
S-4	n(215) r=0.115; sig=0.093 Trr=0.077; TrSig=0.260	n(215) r=0.131; sig=0.054 Trr=0.116; TrSig=0.090	n(215) r=0.109, sig=0.112 Trr=0.088; TrSig=0.197	n(215) r=0.130; sig=0.057 Trr=0.085; TrSig=0.215	**n(215)** **r=0.145; sig=0.033** **Trr=0.145; TrSig=0.033**
D-1	n(214) r=0.028; sig=0.680 Trr=0.014; TrSig=0.839	n(214) r=0.080; sig=0.245 Trr=0.057; TrSig0.406	n(214) r=0.042; sig=0.541 Trr=0.008; TrSig=0.906	n(214) r=0.088; sig=0.199 Trr-0.052; TrSig=0.446	n(214) r=0.072; sig=0.296 Trr=0.049; TrSig=0.476
D-2	n(215) r=0.111; sig=0.108 Trr=0.068; TrSig=0.324	n(215) r=0.093; sig=0.175 Trr=0.085; TrSig=0.213	n(215) r=0.078; sig=0.252 Trr=0.060; TrSig=0.380	n(215) r=0.078; sig=0.252 Trr=0.063; TrSig=0.356	n(215) r=0.117; sig=0.117 Trr=0.101; TrSig=0.140
D-3	n(215) r=0.035; sig=0.612 Trr=0.004; TrSig=0.952	n(215) r=0.141; sig=0.039 Trr=0.068; TrSig=0.319	n(215) r=0.129; sig=0.059 Trr=0.052; TrSig=0.446	n(215) r=0.140; sig=0.041 Trr=0.085; TrSig0.213	n(215) r=0.138; sig=0.044 Trr=0.088; TrSig=0.199
D-4	n(215) r=0.104; sig=0.130 Trr=0.099; TrSig=0.148	n(215) r=0.111; sig=0.105 Trr=0.115; TrSig=0.091	n(215) r=0.129; sig=0.059 Trr=0.150; TrSig=0.027	n(215) r=0.123; sig=0.073 Trr=0.126; TrSig=0.065	**n(215)** **r=0.141; sig=0.039** **Trr=0.157; TrSig=0.022**
S-1 + D-1 Composite Planning	n(215) r=0.081; sig=0.239 Trr=0.063; TrSig=0.359	n(215) r=0.167; sig=0.014 Trr=0.108; TrSig=0.114	n(215) r=0.141; sig=0.039 Trr=0.086; TrSig=0.209	n(215) r=0.178; sig=0.009 Trr=0.113; TrSig-0.099	n(215) r=0.172; sig=0.011 Trr=0.126; TrSig=0.066
S-2 + D-2 Composite Instruction	n(215) r=0.131; sig=0.055 Trr=0.026; TrSig=0.0707	n(215) r=0.124; sig=0.070 Trr=0.056; TrSig=0.416	n(215) r=0.104; sig=0.129 Trr=0.010; TrSig=0.880	n(215) r=0.128; sig=0.061 Trr=0.034; TrSig=0.621	n(215) r=0.145; sig=0.034 Trr=0.050; TrSig=0.467
S-3 + D-3 Composite Managmnt	n(215) r=0.002; sig=0.981 Trr=0.058; TrSig=0.395	n(215) r=0.079; sig=0.252 Trr=0.012; TrSig=0.856	n(215) r=0.131; sig=0.054 Trr=0.014; TrSig=0.842	n(215) r=0.138; sig=0.043 Trr=0.024; TrSig0.721	n(215) r=0.089; sig=0.195 Trr=0.030; TrSig=0.660
S-4 + D-4 Composite ProfGrow	n(215) r=0.120; sig=0.079 Trr=0.081; TrSig=0.238	n(215) r=0.133; sig=0.052 Trr=0.120; TrSig=0.078	n(215) r=0.131; sig=0.054 Trr=0.116; TrSig=0.090	n(215) r=0.138; sig=0.043 Trr=0.111; TrSig=0.106	**n(215)** **r=0.157; sig=0.021** **Trr=0.153; TrSig=0.024**
Composite Tot E-Port Ave Rating	n(215) r=0.090; sig=0.191 Trr=0.050; TrSig=0.469	n(215) r=0.137; sig=0.045 Trr=0.077; TrSig=0.262	n(215) r=0.122; sig=0.073 Trr=0.080; TrSig=0.242	n(215) =0.159; sig=0.019 Trr=0.075; TrSig=0.272	n(215) r=0.153; sig=0.025 Trr=0.103; TrSig=0.134

Note: Significant cells (with correlations of both raw and transformed data below the a = 0.05) are indicated in bold face.

Table 5.

Alignment of Unit Standards with State and National Accreditation Requirements

E-Port Standards	ST Grades	PDE ST Performance Assessment	NCATE 2006 Standards
S-1 : Scholar / Planning: plan teaching models that use major concepts, principles, theories, research and technology related to learning, including attention to the needs of diverse learners	- - - - -	Demonstrates thorough knowledge of content and pedagogical skills in planning and preparation. Student teacher makes plans	Understanding of the central concepts, tools of inquiry, and structures of their fields as delineat in professional, state, and Institutional standards and shown through inquiry, critical analysis, and synthesis
S-2 : Scholar / instruction: implement the central concepts, tools of inquiry, and structures for the various developmental levels of diverse populations and use continuous reflective self-assessment for professional growth	- - - - -	Through knowledge of content, pedagogy and skill in delivering instruction, engages students in learning by using a variety of strategies and sets goals based on content to be taught/learned, knowledge of assigned students, and the instructional context.	Have indepth knowledge of subject matter that they plan to teach as described in professional, state, and Institutional standards. They of conter demonstrate their knowledge through inquiry, critical analysis, and synthesis of the subject.
S-3 : Scholar / management: Utilize data gathering techniques that include research, analytical processes, assessment and the use of appropriate technology throughout the curriculum. Candidates practice proper professional behaviors and deal ethically with colleagues, superiors, students and families.	- - - - -	Establishes and maintains a purposeful and equitable environment for learning in which students feel safe, valued and respected by instituting routines and setting clear expectations for student behavior	They have in-depth understanding of the subject matter that they plan to teach, allowing them to provide multiple explanations and instructional strategies so that all students learn. They present the content to students in challenging, clear, and compelling ways and integrate technology appropriately.
S-4 : Scholar / Prof Grow: Apply effective verbal, written and technological communication and management techniques, and react with sensitivity to the various needs and feelings of students, families, colleagues and others	- - - - -	Demonstrates qualities that characterize a professional person in aspects that occur in and beyond the classroom/ building	They develop meaningful learning experiences t facilitate learning for all students. They reflect o their practice and make necessary adjustments tc enhance student learning. They know how students learn and how to make ideas accessible to them. They consider school, family, and community contexts in connecting concepts to students' prior experience and applying the idea to real-world problems

(table continues)

Table 5, continued

E-Port Standards	ST Grades	PDE ST Performance Assessment	NCATE 2006 Standards
D-1 : D-Maker / planning: Design instruction for the diversity of student needs, based on the use of appropriate learning theory, content knowledge including academic content standards, multicultural materials, and technological options	Preparation and actual teaching plans during student teaching	Demonstrates thorough knowledge of content and pedagogical skills in planning and preparation. Student teacher makes plans and sets goals based on the content to be taught/learned, knowledge of assigned students, and the instructional context.	Teacher candidates reflect a thorough understanding of pedagogical content knowledge delineated in professional, state, and Institutional standards. They have in-depth understanding of the subject matter that they plan to teach, allowing them to provide multiple explanations and instructional strategies to that all students learn.
D-2 : D-Maker / instruction: Develop goals and objectives appropriate for all students and integrate a variety of teaching strategies based on the assessed needs of their diverse student population.	Involvement in implementing methods and techniques. Student teaching on a full-time basis under the supervision of classroom teachers and University supervisors.	Through knowledge of content, pedagogy and skill in delivering instruction, engages students in learning by using a variety of strategies.	(Candidates) present the content to students in challenging, clear, and compelling ways and integrate technology appropriately
D-3 : D-Maker / mgmt: Show concern for peers and students by managing positive, respectful safe learning environments, and and by demonstrating the belief that all children can learn	Involvement in the management of learning situations during student teaching.	Establishes and maintains a purposeful and equitable environment for learning in which students feel safe, valued and respected by instituting routines and setting clear expectations for student behavior	Teacher candidates accurately assess and analyze student learning, make appropriate adjustments to instruction, monitor student learning, and have a positive effect on learning for all students.
D-4 : D-Maker / Prof Grow: Effectively communicate with colleagues, administrators, families and other professionals and positive relationships, and diverse populations by encouraging considering feedback from those relationships. Appropriate professional behaviors are practiced consistently	Demonstration of professional growth during student teaching as evidenced by professional behavior and skills, a commitment to improvement, and facilitate the social acceptance of the ability to relate to others. This will include attendance and participation in a weekly seminar to analyze and discuss professional considerations and student teaching problems.	Demonstrates qualities that characterize a professional person in aspects that occur in and beyond the classroom/building	Candidates work with students, families and communities in ways that reflect the dispositions expected of professional educators ... (and) recognize when their own dispositions may need to be adjusted and are able to develop plans to do so.

Can School-Based Forgiveness Counseling Improve Conduct and Academic Achievement in Academically At-Risk Adolescents?

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A study of forgiveness counseling (FC) with adolescents showing high Trait Anger is described. Twelve adolescents from ages 11 to 14 were randomly assigned to a 15-week school-based intervention in either FC or an alternative treatment control group using a client-centered format. Dependent variables were administered at pretest, post-test, and 4-month follow-up. FC was more effective than the alternative treatment control group in reducing school conduct problems by promoting forgiveness, self-reliance, academic achievement, and positive attitudes toward teachers and parents. Results held at 4-month follow-up. Aggregate effect sizes were strong for post-test and follow-up analyses. Implications for treating high anger and resentment in adolescents are discussed.

Forgiveness counseling (FC) is described by a number of counselors and researchers as a promising new approach to anger-reduction and the restoration of emotional health (Enright & Fitzgibbons, 2000; Ripley & Worthington, 2002; Rye et al., 2005). To forgive is not the same as to condone or excuse, to forget, or to reconcile; forgiveness is an internal response by the one forgiving, whereas reconciliation is a negotiation toward greater trust and a coming together again by two or more people (Worthington, 2005).

In a recent issue of this journal our research group described a series of studies focused on forgiveness education in the schools of Belfast, Northern Ireland (Enright, Knutson Enright, Holter, Baskin, & Knutson, 2007). One of the major findings with both 6-7 and 8-9 year olds was that as the students learned about forgiveness, and applied that knowledge to someone who hurt them, there was a tendency to reduce negative emotions. A key point is that the anger was reduced *in general* and not necessarily only toward the person who needed to be forgiven. Other studies with adults have shown similar patterns: As participants in forgiveness counseling or therapy forgave, they tended to show a general improvement in emotional health (see for example, Freedman & Enright, 1996; Lin, Mack, Enright, Krahn, & Baskin, 2004; and Reed & Enright, 2006). Forgiveness counseling and education, regardless of the age group studied, seem to effect an improvement in emotional health that goes beyond the person who is forgiven.

This observation, that specific acts of forgiving a particular person for a particular injustice can have generally positive consequences for emotional regulation, may be explained by the nature of resentment, which is a key reaction to a deep injustice over time when forgiveness does not occur (Enright & Fitzgibbons, 2000). Studies of forgiveness show that in the short-run resentment can take the form of negative affect toward the offending person (anger, for example), negative thoughts toward that person (a narrative or script that focuses predominantly on the person's negative qualities), and negative behavior (ignoring, aggression, revenge-seeking) (see, for example, Enright & Fitzgibbons, 2000; Kaufman, 1984). Over time if the resentment is not resolved, the client can develop general negative affect and mood (high levels of anger, anxiety, and depression that are not centered on the offending person), negative cognition (including negative scripts that are focused not only on the perpetrator but also on the self in the form of low self-esteem), and dysregulated behavior (conduct disorder, for example, that is not centered on the perpetrator). For discussions of this generalized

psychological pattern, see Hunter (1978), Fitzgibbons (1986), Enright and Fitzgibbons (2000).

Still unanswered is the extent to which forgiveness counseling can show *general* improvement in one's attitude toward a wide variety of important people in one's life. Might students who participate in forgiveness counseling show not only an improvement in their response to the perpetrator and the self but also to school, teachers, parents, and general interpersonal relationships? The findings on generalized improvement in affect, mood, and scripts or narratives toward self as well as the perpetrator suggest that this may be possible.

Still unanswered is the extent to which forgiveness counseling in school can show general behavioral improvement in the form of school conduct and academic achievement.

Research on the relationships among resentment, emotional dysregulation, school conduct, and academic achievement, suggest that an affirmative hypothesis seems reasonable, as we will see in the following brief literature review on these topics.

Emotional Regulation, School Behavior, and Academic Achievement

Research suggests prior hurtful treatment from others may underlie both emotional or behavioral dysregulation and academic difficulty. Reviews of the literature find abused and neglected children have deficits in emotional adjustment and cognition (Ammerman, Cassisi, Hersen, & Van Hasselt 1986; Lamphear, 1985) that can lead to dysregulation and academic failure. Complimentary findings have been reported in studies of aggression; youth who have been victims of aggression (Dodge & Frame, 1982; Dubow, Huesmann, & Boxer 2003) tend to also have difficulty controlling their own aggressive behavior.

An abundance of research demonstrates that youth who have difficulty regulating their emotions and behavior also tend to experience academic difficulty (Loveland, Lounsbury, Welsh, & Buboltz, 2007; Strauss, Frame, & Forehand, 1987; Wiesner & Windle, 2004). This relationship has been examined from multiple perspectives in the educational and psychological literatures. Although researchers approach this relationship from different theoretical foundations and with different research designs, there is considerable agreement that youth who demonstrate poor emotional and behavioral regulation are also likely to struggle academically.

Many types of emotional and behavioral dysregulation are associated with poor academic outcomes. Strauss et al. (1987) found that elementary school youth who were rated as anxious by their teachers also had significantly poorer academic ratings than a non-anxious comparison group. Tramontina et al. (2001) found conduct disorder was more common among children who dropped out of school than among the youth who did not drop out of school. This relationship held even after controlling for family and socioeconomic status variables. Difficulty controlling aggression was found to be associated with school dropout and lower grades (French & Conrad, 2001; Loveland et al., 2007).

The relationships among emotional and behavioral dysregulation and school performance are complex and not necessarily unidirectional. For example, Wiesner and Windle (2004) found that academic difficulty was among the factors that contributed to conduct problems, particularly delinquency. Poor academic performance also predicted recidivism in youth with conduct disorder (Bassarath, 2001). In a meta-analysis, Maguin and Loeber (1996) concluded low school achievement predicted delinquency; disciplinary action, such as suspension, in turn led to removal from the classroom and less opportunity for academic success.

Underlying deep anger or resentment may be a key to understanding the subtle interplay of emotional dysregulation, conduct problems, and academic failure. Forgiveness, which reduces the resentment, may be a way of reversing the downward spiral that too many students experience, as they get angry because of unjust treatment, become resentful, and then begin a pattern of behavioral disruption and academic failure in school. For instance, individuals with high Trait Anger have little anger control, react impulsively to criticism, and develop poor social bonds that lead to disruptive behaviors and poor transitions into adulthood (Ensminger & Juon, 1998). Some become so dysfunctional as to be incapable of self-support or satisfactory relationships (Rak & Patterson, 1996). This deep-rooted hostility can also manifest as underachievement in the school setting (Morrison, 1967, 1969).

Prior Interventions to Reduce Dysregulated Affect and Behavior in Schools

The prevalence of emotional, behavioral, and academic problems among youth (Lerner &

Galambos, 1998) has created a great need for effective interventions; indeed, many school-based interventions have been developed. These interventions differ with respect to scope and focus. Some interventions address multiple contexts and are universal in scope (Conduct Problems Prevention Research Group [CPPRG], 2004). Others target intraindividual factors such as improving self-management skills (Mooney, Ryan, Uhing, Reid, & Epstein, 2005). Furthermore, some interventions target specific populations of students such as those with Attention Deficit Hyperactivity Disorder (DuPaul & Weyandt, 2006) while others focus on general populations such as every fifth grader in a school (Brigman, Webb, & Campbell, 2007).

Scholars have identified at least four concerns with current school-based interventions: few achieve strong results, few use an experimental design, few measure both improvements in regulatory functioning and academic performance, and few address the underlying cause of the emotional or behavioral problem (CPPRG, 2004; Enright & Fitzgibbons, 2000; Hoagwood et al., 2007). A review of school-based interventions by Hoagwood et al. (2007) indicated that such interventions need to be tested using rigorous scientific methods. Hoagwood et al. identified over 2000 studies of school-based interventions between 1990 and 2006. Of these studies, only 64 met inclusion criteria which meant they were conducted in public schools, used prospective designs, and used either random assignment or a quasiexperimental control group. The current study addressed this issue by using a prospective design and randomly assigned youth to either an experimental or control condition.

Among well-executed studies in schools, most have been cognitive-behavioral (e.g., Deffenbacher, Lynch, Oetting, & Kemper, 1996; Derzon, 2006). These behavioral and cognitive interventions are limited by their shared underlying assumption: that aggressive children need primarily to train and practice socially desirable skills, behaviors, and thought patterns. The anger and resentment that lead to the aggressive actions are too often left unaddressed (Derzon, 2006; Enright & Fitzgibbons, 2000). By this perspective, there is concern that these methods primarily treat symptoms rather than the underlying causes of maladaptive behaviors. Thus, there is the need to develop interventions with adolescents that target the roots of anger and resentment. Forgiveness provides a vehicle for addressing the underlying pain and anger.

The Current Study

This study investigated the effects of a school-based forgiveness intervention on the psychosocial functioning and academic performance of youth with high levels of Trait Anger (Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983). Forgiveness is "a willingness to abandon one's right to resentment, negative judgment, and indifferent behavior toward one who unjustly injured us, while fostering the undeserved qualities of compassion, generosity, and even love toward him or her" (Enright, Freedman, & Rique, 1998, p. 47). Spielberger et al. (1983) defined Trait Anger as frequent angry feelings, frustration, and a generalized belief that one is treated unfairly by others. Forgiveness is well suited to helping people regulate their feelings of anger because forgiveness can help them cope effectively with the unfair treatment that often underlies their anger and resentment (Enright, 2001). Although past research suggests forgiveness can improve psychological well-being among youth (Al-Mabuk, Enright, & Cardis, 1995; Freedman & Knupp, 2003), we do not know how a school-based forgiveness education program affects academic performance. This study addresses this gap in the literature by examining the effects of a forgiveness education program on school outcomes.

Research Purposes and Hypotheses

The current study tested the effectiveness of a manualized education program designed to increase forgiveness toward an injurer, by teaching adolescents with high Trait-Anger about forgiveness. The forgiveness program allowed participants to work through an injustice from another person. The effects of this forgiveness program were compared to the effects of a support group in which the students explored their psychological responses toward their offenders in a less structured, client-centered program where forgiveness was not discussed.

The following research hypotheses were tested: First, when compared with alternative-treatment participants, the experimental (forgiveness) group will show significant improvement from pretest to post-test in self-rated levels of forgiveness. Improvement will also be observed from pretest to follow-up. Second, when compared with alternative-treatment participants, the experimental group will show significant improvement from pretest to post-test and pre-test to follow-up in self-rated levels of positive attitudes toward the self, school and teachers, relationships with parents, and interpersonal relationships. Third, when compared with

alternative-treatment participants, the experimental group will show significant improvement in academic grade and discipline data. These changes will be observed from pretest to post-test and from pretest to follow-up.

Methods

Participants

The study was proposed to and approved by the Institutional Review Board at the lead author's university. Participants were rural European-American early adolescents of low socio-economic status randomized to either a forgiveness or a client-centered (control) condition. Potential participants were screened and selected in three ways. First, each participant had to show significant anger on a reliable and valid psychological instrument of trait anger. For this study, each participant's score had to fall at or above a score of 60 on the State-Trait Anger Expression Inventory- 2 (STAXI- 2, Spielberger et al., 1983) which is the recommended cut-off by Spielberger et al. for intervention. Second, teachers were asked to identify students who were at risk of academic failure if they did not receive effective treatment of some kind. Third, all had to have a significant, deep hurt from another person to participate. Of the 12 participants, 9 identified a family member as the source of injustice. Specific offenses included a violent father, a brother who committed suicide, sexual assault, and repeated verbal abuse.

Participation was voluntary. The initial sample consisted of eight participants in each group. Attrition occurred because two students moved and two, at the recommendation of teachers because of failing grades, attended study sessions during the time the group met. Because the primary researcher had a prior affiliation with the participants, fidelity checks were conducted weekly.

The total number of participants in the final sample as stated above was 12 (5 experimental and 7 control), and consisted of the following: 2 male experimental participants ages 13 and 14; 3 female experimental participants, two at age 12 and one at age 13; 4 male alternative treatment control participants, two at age 12 and two at age 13; and 3 female alternative treatment control participants ages 12, 13, and 14. Four published studies based on the forgiveness process model were used to calculate appropriate sample sizes (see Al-Mabuk et al., 1995; Coyle & Enright, 1997; Freedman & Enright, 1996; Hebl & Enright, 1993). For a power of .80, with a significance level equal to or less than .05 for one-tailed tests, the total sample size should be equal to or greater than 10 (Kraemer & Thiemann, 1987). Thus, this study design slightly exceeded the minimum sample size required to achieve cost-effective power.

Research Design and Testing Procedures

Final participants were yoked on age and gender, and the yoked pairs were randomly assigned to either an experimental or an alternative treatment (client-centered) control group. The same instruments were administered for the pretest, post-test, and a 4-month follow-up. To increase reliability, all instruments were administered twice at one-week intervals, and scores were averaged. Instruments were administered in random order. At pretest, instruments were administered 2 weeks prior to beginning the program, and again 1 week later. Post-testing was done 1 day after the program ended and again 1 week later. Follow-up testing was done 4 months after the program ended and again 1 week later.

Measures

Enright Forgiveness Inventory for Children. The Enright Forgiveness Inventory for Children (EFI-C; Enright, 2000) is a 30-item Likert-type scale in which the child identifies a person who hurt him or her deeply and unfairly and answers questions regarding his or her cognitive, behavioral, and emotional responses to the offender. The range of scores is between 30 and 120, with a high score representing higher forgiveness. Cronbach's alpha coefficient on the first set of pretest measures was .94, which is similar to other studies (Enright et al., 2007; Baskin & Enright, 2004). The EFI, on which the EFI-C is founded, has been validated using other measures of forgiveness (Subkoviak, Enright, Wu, & Gassin,1995; Sarinopoulos, 2000). The EFI shows no relationship with the Crowne and Marlowe (1960) Social Desirability Scale.

State-Trait Anger Expression Inventory. The STAXI-2 was used to assess Trait Anger. This 10-item subscale was used as a screening device to identify youth for the study. The alpha coefficients of each subscale are stable and reliable (Spielberger et al., 1983). In this sample, the internal consistency was .79. Concurrent validity with the Buss-Durkee Hostility Inventory (BDHI; Buss & Durkee, 1957; Spielberger, et al, 1983) ranged from .66 to .73 with a mean of .69.

BASC. To assess the possibility of a generalized effect of improved cognitive scripts for self, school, teachers, parents, and general interpersonal relationships of the forgiveness intervention, the BASC rated Self-Reliance (a 7-item measure of confidence in one's ability to solve problems; higher is better), Attitude to School (a 10-item measure of negative feelings towards school; lower is better), Attitude to Teachers (a 12-item measure of negative feelings towards teachers; lower is better), Relationship with Parents (an 8-item measure of positive regard towards parents; higher is better), and Interpersonal Relationship (a 16-item measure of positive relationships with peers; higher is better). The Self-Report of Personality form of the BASC was used in the current study. The reported internal consistencies of subscales averaged about .80 for both genders and for children and adolescents (Reynolds & Kamphaus, 1992). In this sample, the internal consistency average was .81. Detailed validity information can be found in the BASC manual (Reynolds & Kamphaus, 1992).

School performance. In light of the literature review in this article that significant anger and resentment contributes both to underachievement in conduct and in academic performance in the school setting, two types of school performance data, grades and discipline, were included to test whether the intervention contributed to school adjustment. Grades in written English, math, and social studies were examined to see if they improved at post-test and at follow-up. It is important to note that the 4-month follow-up period occurred after a summer so the adolescents were in a new grade and had different teachers. Grades were quantified on a 4-point scale where A = 4, B = 3, C = 2, D = 1 and F = 0. Discipline data were divided into four categories of increasing seriousness: detentions (D), 1-day in-school suspensions (ISS1), 1-day out-of-school suspensions (OSS1), and 3-day out-of-school suspensions (OSS3). For each of the discipline variables, data were gathered from school records over a 9-week period at three separate intervals: once prior to beginning the study, once just after the study ended, and once just prior to the follow-up period.

Interventions

The effectiveness of two 15-week programs was compared in this experiment. One used direct instruction in forgiveness (FC) and the other was an unstructured client-centered approach (CC). The choice of a group format over individual interventions is supported by Shechtman (2004). Martsch (2005) found that both leader-guided, highly structured formats (such as FC provides) and self-determined, interactive formats (such as CC provides) were effective in treating aggressive adolescent boys. Both interventions intended to produce lasting improvement in relationships, self-esteem, and emotional regulation. In FC participants had the opportunity to work through their anger using the structured forgiveness curriculum while CC participants had a chance to identify hurtful events and the related anger in a supportive environment. Both groups met twice per week for 15 weeks.

FC tested an educational manual by Enright and the Human Development Study Group (1993). To illustrate the process of forgiveness, two story lines were followed at each session, each dealing with a protagonist who suffered from an injury and learned to forgive his or her offender. The FC group read the stories and discussed how they related to the individual injuries identified by each group member at the beginning the program.

The CC group was chosen because the therapist, who also provided FC, has over two decades of experience using it. CC provides a supportive environment in which to express angry emotions and explore motivational, affective, and cognitive strategies to reduce anger. CC participants did not follow a specified curriculum. The goals of each session were allowed to emerge as discussions of hurtful events unfolded. Accordingly, forgiveness was not introduced by the counselor, but was allowed to be discussed if initiated by the students themselves. In a typical meeting students discussed events, emotions, reflections and thoughts since the last meeting about their offenders and were given a chance to process their feelings.

Psychologist's Qualifications

The facilitator of both groups had 21 years of experience as a school psychologist, 19 were in the school district in which the intervention was given. She had studied the psychology of forgiveness for 9 years and had conducted client-centered support groups for her entire career. In preparation for the forgiveness intervention, she did a 6-week pilot intervention with students of the same age.

Results

Analyses were conducted with two sets of gain scores: the first from pretest to post-test, and the second from pretest to follow-up. The EFI-C and BASC encompassed the self-reported measures of this study. Because there is a small sample size, and

because the gain scores of the Forgiveness Counseling group were so much larger than the gain scores of the Client-centered group, a two-sample Wilcoxon test was performed on the individual gain scores for the EFI-C and the BASC. This allowed for a more conservative test because possible outliers from the zeal of a few students would not overly influence the results, as the Wilcoxon uses the ordering of results to measure significance.

For all school performance measures, because the gains scores were not as large, we use the one-tailed t-test. Because we had specific directional hypotheses for each variable, one-tailed tests were deemed appropriate for these analyses and are consistent with previous research (for example, see Enright et al., 2007). Gain scores were used for group comparisons on all variables because of the precedent set in earlier studies (Coyle & Enright, 1997; Enright et al., 2007; Freedman & Enright, 1996; Lin et al., 2004; Reed & Enright, 2006).

Means and standard deviations for the pretest, post-test, and follow-up measures are in Table 1. Gain score means and standard deviations are in Table 2. Increases in forgiveness scores on the EFI-C were significant from both pretest to post-test and from pretest to follow-up ($Tw = 50$, $p < .005$ for both cases), indicating a significant gain in forgiveness in the FC group relative to the CC group.

All five BASC sub-scale scores displayed significant gains favoring FC. Compared to CC, Self-Reliance scores in the FC group improved significantly both from pretest to post-test and from pretest to follow-up ($Tw = 50$, $p < .05$ in both cases). The same held true for Attitude to School scores ($Tw = 49$, $p < .05$ in both cases), Relationship with Parents scores ($Tw = 50$, $p < .05$ in both cases), and (general) Interpersonal Relationship scores ($Tw = 49$ and 48, $p < .05$ in both cases). Likewise, Attitude to Teachers scores of the FC group compared to CC improved significantly from pretest to post-test ($Tw = 48$, $p < .05$) and from pretest to follow-up ($Tw = 49$, $p < .05$).

For school performance, grades in written English, math, and social studies were examined at pretest, post-test, and follow-up intervals. One tailed t-test comparisons of FC vs. CC participants' gain scores in the period from pretest to post-test showed significant improvement in the FC group for written English ($t(10) = 3.1$, $p < .01$), math ($t(10) = 2.7$, $p < .05$.), and social studies ($t(10) = 4.1$, $p = .01$). For gain scores from pretest to follow-up, all three academic areas showed significant improvement for FC ($t(10) = 3.9$, $p < .01$ for writing; $t(10) = 3.8$, $p < .01$ for math; and $t(10) = 4.0$, $p < .01$ for social studies). One-tailed t-test comparisons showed a significant decrease in the number of detentions for FC over CC from pretest to post-test, $t(10) = -4.1$, $p < .01$) and from pretest to follow-up ($t(10) = -4.7$, $p = .001$). Significant improvements in the FC group relative to the CC group were noted in ISS1 for the pretest to post-test ($t(10) = -3.7$, $p < .01$) and the pretest to follow-up comparisons ($t(10) = -3.0$, $p < .01$ from pretest to follow-up). No significant changes emerged for OSS1 and OSS3. The means (see Table 1) were near the floor for both OSS1 and OSS3 and the standard deviations were so small as to render the analyses unnecessary.

Hedges and Olkin's (1985) model for meta-analysis was used to calculate effect sizes. The formula ($g=(ME - MC)/SP$) was applied to the post-test scores for the forgiveness group (ME) and control group (MC). The standardized effect size d for each result was calculated by applying the formula $d = [1 - 3/(4N - 9)]g$. The aggregate effect size across all variables was 1.05 with a standard deviation of 0.20. The 95% confidence interval had a lower bound of 0.67 and an upper bound of 1.43. Further, at follow-up the aggregate effect size across all variables was 1.17 with a standard deviation of 0.20. The 95% confidence interval had a lower bound of 0.78 and an upper bound of 1.55. According to Lipsey (1990) both of these effect sizes are large. Across all 13 variables results were not homogenous ($Q = 68.1$ post-test, 62.7 follow-up, for $X^2 = 22.36$). So results can be considered strong, but not uniform to all outcomes.

Discussion

Results of the current study suggest that forgiveness counseling is a successful means of improving the psychosocial and academic functioning of high Trait-Anger adolescents. After an intervention designed for middle school students to forgive a significant person in their lives for a significant injustice, not only does forgiveness improve substantially but also we see improvements in perceptions of self, school, teachers, parents, and their interpersonal relationships in general. Following the forgiveness intervention these students, who were judged by the teachers to be at-risk for academic failure and who were diagnosed with excessive Trait anger, improved in their academic grades in three diverse subject areas and decreased their numbers of detentions and school suspensions. These results were relative to a viable

therapeutic control group from pretest to post-test and from pretest to a 4-month follow-up.

Previous research demonstrates FC can improve adolescent psychological well-being (Al-Mabuk, Enright, & Cardis, 1995; Freedman & Knupp, 2003). This study demonstrates FC can generalize to a more positive attitude toward a variety of people and the school and have an effect on school performance. We can only begin to speculate on the cause of the results, with the generalized positive assessment of the perpetrator and the self, teachers, parents, and peers, along with transformed school performance in academics and social behavior. We surmise that a key feature to the forgiveness program and thus to the generalized outcomes is the cognitive development of understanding *inherent worth* which is emphasized in the forgiveness program. Inherent worth is the insight that all people are unconditionally valuable, an essence that is not earned by a person's success or others' praise and is not withdrawn by the person's failure or others' condemnation. In the stories within the forgiveness manual, the students are challenged to see beyond surface features, such as a person's rudeness or aggression, to see below that surface to the worth of the person, not because of his or her behavior, but in spite of it. As students gain in their cognitive abilities to see the inherent worth of story characters, they then begin to see such worth in their perpetrator and even in the self. This, then, generalizes to all people and thus we see improved attitudes across a wide spectrum of significant people in the students' lives on the BACS. As a student sees the inherent worth in a perpetrator who has caused considerable emotional unrest, the student may invest less energy on resentment and thus have more energy to concentrate on school work and more of a cognitive focus to be more successful. With reduced resentment, there is less of a need to act out in school, with the result of fewer detentions and suspensions.

Yet even with our speculation above, we must admit that the interplay among the insights of inherent worth, forgiving a perpetrator, attitude improvement toward a variety of people, and school performance is complex. How an improvement in one affects another, either directly or indirectly, is difficult to disentangle. As relationships with teachers and peers improve, attitudes toward teachers and school might improve. With this shift in attitudes, academic performance might improve. As evidenced by the concurrent increase in self-reliance, good grades and more harmonious relationships, youth appear to have a greater sense of autonomy and more consistent mastery of their environment. Improvements across multiple contexts (Bronfenbrenner & Morris, 1998) may reinforce one another strengthening the individual effects and opening the possibility for a significant change in a person's developmental ecology.

Of particular interest are the data on detentions and in-school suspensions. School personnel who issued detentions and suspensions did not know that the participants were involved in either a forgiveness or a support-group study, thus there was no concern about bias at post-test and follow-up. The FC group went from an average of 9 detentions to less than one per student over the course of a semester, but CC group participants maintained approximately 5 detentions per person. A similar pattern emerged for one-day in-school suspensions; the disruptive behavioral pattern initially seen in all participants virtually ceased for FC participants, but remained the same for CC. Maguin and Loeber (1996) noted that problem behavior, resulting in suspension, prevents students from attending class and diminishes their opportunities for success. The reductions in suspensions may have contributed to the increase observed in grades for the youth who participated in the FC group.

The implication for school counselors and teachers appears to be this: confronting emotional injury through structured forgiveness education can produce positive psychosocial and academic changes in students with high Trait-Anger, who are at-risk for academic failure by teacher judgment. These results can be considered robust, as the large effect size seen at post-test was calculated across all measures. Thus, there are multiple constructs suggesting progress, rather than simply improvement in one area. Further, effect size results not only maintained but increased at follow-up across measures, pointing to the strength of the intervention. Since changes were seen across a variety of different reporters and observers (in participants' self-reports of forgiveness, in their self-perception and efficacy, in teachers' reports of academic performance, including new teachers at follow-up, and teachers' and principals' observations of student behavior through reported detentions and suspensions), the improvements were not limited to the perception of one person, or isolated to one point in time.

In their meta-analysis of school-based intervention programs on aggressive behavior, Wilson, Lipsey, and Derzon (2003) observed that quality of implementation is critical to program success. The structure of the FC model and its self-explanatory manual allows school psychologists or

teachers to implement forgiveness education in their schools or classrooms. The forgiveness model introduces participants to an ordered forgiveness process which examines the negative effects of anger and aggression, nurtures empathy and compassion, and explores new meanings for past injuries. By guiding facilitators and participants step-by-step through the sequential process outlined in the forgiveness process model, the manual ensures that each milestone in the process receives sufficient attention.

Prior to this study, researchers questioned the cognitive ability of adolescents to understand forgiveness in sufficient depth to produce behavioral or affective changes (Hepp-Dax, 1996). The current findings demonstrate that adolescents do have the capability to understand forgiveness. In addition to the quantitative data, informal qualitative interviews with participants since the final data collection period indicated awareness of a shift in perspective toward greater compassion and understanding of the offender upon completion of FC.

Because this is the first study of this kind and the sample size was small, the findings should not, at this point, be generalized beyond this group of participants. Although the sample size was sufficient to detect meaningful differences, the authors recommend replication.

Freedman and Enright's (1996) findings that adults maintain positive gains for at least 14 months suggest that, in replication studies, follow-up should be conducted after a longer period than was done in this study. The current study also holds a clear possibility that allegiance effects existed, and it is unclear the degree to which this may have been a factor in the results. Because students in both groups may have an allegiance to the counselor, however, this concern is diminished.

Future research in forgiveness interventions within school settings could benefit from an age analysis. For example, can children in elementary school, who are beginning to show signs of debilitating anger, be helped by developmentally-appropriate forgiveness interventions? Such knowledge and early intervention may be beneficial in preventing psychological difficulties in adolescence.

The published literature shows that youths who exemplify high Trait-Anger suffer psychologically, socially, and academically. Some cope with this pain by inflicting harm on themselves, their families, and in the larger society. There is considerable frustration among school psychologists, educators, parents, researchers, and policymakers with existing prevention and intervention strategies for the resulting behavior problems. The data from this study provide evidence that learning to forgive an offender has the potential to transform adolescents with high Trait-Anger from disruptive individuals at-risk for academic failure to successful students in positive social and family relationships.

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Table 1.

Means and Standard Deviations of the Dependent Variables

	Forgiveness Group			Client-centered Group		
	Pretest	Posttest	Follow-up	Pretest	Posttest	Follow-up
EFI-C						
Forgiveness	44.5 (8.2)	114.8 (6.4)	116.1 (7.9)	43.6 (9.1)	46.7 (7.8)	45.1 (8.3)
BASC						
Self-Reliance	47.6 (9.3)	64.6 (8.9)	66.8 (10.1)	48.0 (3.9)	47.2 (4.3)	46.6 (5.6)
Attitude to School	56.2 (9.4)	44.0 (9.6)	43.0 (10.4)	56.7 (4.2)	56.1 (3.9)	56.1 (4.5)
Attitude to Teachers	54.1 (7.2)	39.3 (6.3)	39.1 (7.8)	54.3 (6.0)	51.4 (5.4)	53.7 (5.2)
Relationship with Parents	42.7 (3.4)	53.5 (3.1)	54.7 (3.3)	43.0 (10.7)	39.7 (12.2)	38.9 (15.2)
Interpersonal Relationships	44.2 (9.8)	56.9 (10.7)	57.2 (14.9)	43.9 (11.6)	41.6 (12.1)	39.8 (15.2)
Grades						
Writing	1.4 (.55)	2.6 (.55)	2.6 (.55)	1.6 (0.5)	1.4 (0.5)	1.3 (0.5)
Math	1.4 (.55)	2.4 (.55)	2.4 (.55)	1.6 (0.8)	1.7 (0.8)	1.3 (0.5)
Social Studies	1.6 (0.6)	3.0 (.00)	2.6 (0.6)	1.9 (0.7)	1.7 (0.5)	1.4 (0.5)
Discipline						
Detention	9.0 (4.6)	1.4 (1.3)	0.6 (1.0)	5.4 (3.6)	5.1 (2.1)	5.4 (2.7)
1-day in-school suspensions	3.4 (1.8)	0.2 (0.4)	0.2 (0.4)	1.9 (1.4)	1.4 (0.5)	1.3 (0.8)
1-day out-of-school suspensions	1.0 (1.0)	0.0 (0.0)	0.0 (0.0)	1.0 (0.8)	0.7 (0.8)	0.7 (0.8)
3-day out-of–school suspensions	0.2 (0.4)	0.0 (0.0)	0.0 (0.0)	0.4 (0.5)	0.1 (0.4)	0.6 (0.5)

Table 2

Comparisons between the Groups

	Gains from Pretest to Post-test			Gains from Pretest to Follow-up		
	Forgiveness	Client -centered		Forgiveness	Client -centered	
EFI-C			*Tw*			*Tw*
Forgiveness	70.3 (11.1)	3.1 (5.1)	50.0*	71.6 (10.4)	1.5 (5.7)	50.0*
BASC			*Tw*			*Tw*
Self-Reliance	17.0 (8.9)	-0.8 (4.2)	50.0*	19.2 (9.2)	-1.4 (4.4)	50.0*
Attitude to School	-12.2 (9.2)	-.0.6 (3.6)	49.0*	-13.2 (9.9)	-0.6 (3.3)	49.5*
Attitude to Teachers	-14.8 (6.9)	-2.9 (5.9)	48.0*	-15.0 (8.5)	-0.6 (4.9)	49.0*
Relationship w/ Parents	10.8 (2.8)	-3.3 (14.2)	50.0*	12.0 (2.5)	-4.1 (12.6)	50.0*
Interpersonal Relations	12.7 (10.1)	-2.3 (13.9)	49.0*	13.0 (9.5)	-4.1 (16.3)	48.0*
Grades			*t-test*			*t-test*
Writing	1.2 (0.5)	-0.1 (0.9)	3.1**	1.2 (0.5)	-0.3 (0.8)	3.9**
Math	1.0 (0.7)	0.1 (0.4)	2.7*	1.0 (0.7)	-0.3 (0.5)	3.8**
Social Studies	1.4 (0.6)	-0.1 (0.7)	4.1**	1.0 (0.7)	-0.4 (0.5)	4.0**
Discipline			*t-test*			*t-test*
Detention	-7.6 (3.8)	-0.3 (2.4)	-4.1**	-8.4 (4.0)	0.0 (2.2)	-4.7***
ISS1	-3.2 (1.5)	-0.4 (1.1)	-3.7**	-3.2 (1.9)	-0.6 (1.1)	-3.0**
OSS1	-1.0 (1.0)	-0.3 (0.8)	-1.1	-1.0 (1.0)	-0.3 (0.8)	-1.4
OSS3	-0.2 (0.4)	-0.3 (0.5)	0.3	-0.2 (0.4)	0.1 (0.4)	-1.4

Note. ISS1 = 1-day in-school suspensions; OSS1 = 1-day out-of-school suspensions; OSS3 = 3-day out-of-school suspension

* $p < .05$; ** $p < .01$; *** $p < .001$ (all Grades and Discipline measures used the one-tailed t-test)

Perceptions of Underprepared Community College Students Regarding their Educational Achievement

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The author reports the results of a study of under-prepared ethnically diverse community college students who persisted through their remedial classes and their programs of study and had attained the associate degree at a multicultural community college. This study is informed by Tinto's academic integration model, Astin's social involvement model, and Freire's critical theory with attention to the ways that race, class, gender, the economy, education, religion, and sexual orientation interact to construct a social system. The researcher discusses implications with respect to improving support systems for underprepared college students to increase their chances for completing their degree programs.

Postsecondary institutions such as community colleges place a great deal of emphasis on student retention. Such interests include the long-term earning options of students, the economic vitality of communities needing skilled workers, and the institution's curriculum development, faculty planning, mission, and political impact (Bragg, 2001). College administrators perceive student retention rates as indicators of academic quality and student success. In community colleges, this accountability measure is particularly disconcerting where the percentage of college students who leave within the first year is higher than that from any other type of institution (McCabe, 2003). Furthermore, college students whose entry placement scores require that they enroll in remedial classes are most likely to have low persistence and graduation rates (Bers & Smith, 1991; Burley, Butner, & Cejda, 2001).

Nationally, 47% of students who require remediation graduate while only 24% of students who need three or more developmental courses complete their programs of study (Adelman, 1996). Attainment of pre-requisite knowledge and skills (failure to complete developmental classes) remains the stumbling block for student achievement but students who complete all developmental coursework achieve success rates similar to college-ready students (Boylan, 1999). The national statistics are consistent with 2-year institutions in South Florida. For example, during the fall 2002 semester at one community college, 2,339 students out of the 9,160 new incoming freshmen, required all developmental courses. Specifically, at one campus, 613 of 2,326 freshmen were underprepared. Of this number, approximately 5% have graduated. Less than 10% of those students who withdraw return within 4 years (Broward County Community College, 2006).

Researchers have identified several factors that increase retention, such as (a) increased levels of faculty-student interaction, (b) integration of academic and social activities, (c) opportunities for involvement, (d) mentoring and (e) use of campus resources (Astin, 1984, 1985, 1996; Harvey-Smith, 2002; Roueche & Roueche, 1999; Tinto, 1997). Learning communities provide such key factors to help retain students. Yet the research focuses on college-ready students at 4-year institutions. Previous studies have relied on correlational studies to show that learning communities have a positive effect on academic achievement and retention of students and have focused on college-ready students (e.g., Brittenham, Cook, Hall, Moore-Whitesell, Ruhl-Smith et al., 2003; Knight, 2003; Raftery, 2005). A few researchers have studied the experiences of college students who have participated in learning communities (Singleton, Garvey, & Phillips, 1998; Tinto, 1997). Tinto (1997) found that students at Seattle Central Community College who participated in a learning community reported a greater sense of community with faculty and peers and a greater appreciation of diversity because they had developed relationships with peers different from themselves. Freshmen who participated in the

College of the Holy Cross's First Year Program, located in Worcester, Massachusetts, expressed positive satisfaction and had more favorable experiences (Singleton et al., 1998). Yet, to date, no study has been found that analyzes the impact of learning communities on persistence and achievement of underprepared college students.

Because the ideals of learning communities are consistent with the values of community colleges within a democratic society (Harvey-Smith, 2002), studying the perceptions of underprepared college students who have participated in learning communities, may inform the field. If better understood, perhaps more holistic initiatives can be implemented by community college administrators, admissions personnel, and faculty to better support underprepared ethnically diverse community college students. The study is also important in light of the potential increased understanding that the underprepared ethnically diverse college students may acquire as a result in participating in this study. This study explores the perceptions of underprepared college students who have participated in learning communities and who persisted to complete developmental classes as compared to their peers who did not persist to complete their developmental classes and who have dropped out of college.

Research Question

The following question frames the study. How do underprepared community college students who participated in a learning community, completed their developmental classes, and graduated from their programs of study or successfully transferred to the upper division, perceive their experiences at the community college?

Theoretical Framework

Three major theoretical frameworks guide this study: academic integration theory (Tinto, 1975); social involvement theory (Astin, 1985) and critical theory (Freire, 1970, 1992; Horkheimer, 1982; McClaren & Hammer, 1989). Figure 1 depicts how the theoretical frameworks guided the interpretations of perceptions of academic achievement of underprepared college students who participated in a learning community.

Tinto (1975) created the integration model that posits students who are more integrated and feel valued are more likely to persist. Astin (1984) addressed persistence and student success, finding that the greater the amount of time a student participates in co-curricular and other in and out of the classroom activities, the more likely he/she will continue in school. The First Year Experience Learning Community was created using the theoretical frameworks developed by Tinto and Astin. Critical theory is used as the lens that frames the examination of underprepared college students who perform well after participating in a learning community through question development and data collection and analysis. Tinto and Astin do not address how the system functions for underprepared students. The third lens is necessary to explain why some students succeed in spite of a flawed education system. This theory guides the researcher in deconstructing the external factors that impact the ability of students from traditionally marginalized groups to navigate unfamiliar systems. Critical theorists such as Freire (1970, 1992) and Horkheimer (1982) reflect on ways in which race, class, and gender interact to influence an individual experience. Freire (1970) proposed the concept of "libratory intervention" (p. 7) where education results in an individual person's emancipation or liberation, not only from previously held views of one's self. Liberation can also occur in the sense of becoming prepared to negotiate larger circles of influence, as when students learn new skills. The liberatory phenomenon or concept is an important aspect of the present study since the researcher hopes to uncover the perceptions of underprepared students regarding how the dominant academic culture may have treated them.

Methods

The research design relied on a case study approach to understand the experiences of underprepared college students (Bogdan & Biklen, 2003; Gall, Gall, & Borg, 2003, Schwandt, 2007). By focusing on specific instances, or individual cases, the researcher derived an in-depth study of each case so as to obtain the emic perspective of case study participants (Gall, et al., 2003). Subsequently a cross-case analysis was conducted across all participants to identify common and unique themes. Participants were engaged in an interview process in which they described their

lived experiences. According to Bogdan and Biklen (2003) qualitative methods such as a case study approach can serve as the primary means of "giving voice" to the human experience (p. 201). The goal was to gain a deeper understanding of how the students negotiate and make sense of their college experiences, specifically the experiences that one community college has provided for them.

Participant Recruitment and Selection

Since fall of 2003, at the community college where the study takes place, underprepared college students whose scores on standardized tests required them to enroll into all three remedial courses (English, reading, and mathematics) had the opportunity to participate in the First Year Experience (FYE) Learning Community. Approximately 25 students per year volunteered (N to date = 98). Of these, approximately 68% persisted to complete remedial classes and enrolled in credit-bearing classes. Since the inception of the program, seven students (7%) graduated with an associate degree or transferred to a university. Those who persisted to complete developmental classes, enrolled in credit-bearing courses towards their programs of study for the associate degree (the persisters), and had graduated were invited to participate in the study.

The purposeful case sampling method, intended to identify information-rich cases for in-depth study (Glesne, 1999), was implemented. The researcher used directory information on all FYE students (address, phone number, and email address). Initially, participants were contacted by telephone to set up mutually convenient interview locations and appointments. For students whose phone numbers had been disconnected, the researcher used a snowball sampling technique (Bogdan & Biklen, 2003) where the researcher asked the interviewed student for contact information of an FYE peer who had not been contacted. Unresponsive students were mailed a letter informing them of the study which requested that they contact the researcher.

Researcher as Participant Observer

As the main research instrument, the researcher asked questions, interacted with the study participants, and interpreted the results. The researcher identified his assumptions, perspectives, and potential sources of subjectivity. Peshkin (1988) suggests such a process can lessen the impact of researcher bias. In addition, an external audit trail was applied to the researcher's log, verbatim transcripts of the individual and group interviews, the coding procedures, the resulting themes, and the text of the findings to ensure that the participants' experiences were accurately represented.

Connected to issues of researcher subjectivity, observer effect concerned the researcher because of his role as dean of students. Students who were interviewed may have changed their behaviors and responses to try to please the researcher. The researcher encouraged students to realize the importance of their contributing perceptions and the value of their true, honest insights. With the exception of one who could not schedule an interview, they were more than willing to share their stories. In the process of establishing rapport for the individual interviews, the researcher included statements that assured the students that he was willing to hear their negative and positive experiences at the study community college. The reason that the researcher believed that students were frank is that they had all participated in the Freshmen Year Experience where they had been encouraged to provide frank evaluations. Interview questions were designed to encourage participants to attest to both positive and negative experiences and recount both facilitators and barriers. Throughout the interview interactions, the researcher emphasized how important it was to attest to both sides of the record. Ultimately, the researcher's goal was to allow their voices to be heard with respect to the meaning they attached to their experiences.

Data Sources and Data Collection

Multiple sources of evidence were obtained. First, an interview protocol derived from a review of the literature was developed to capture and explore individual differences among participants' experiences (including academic and social outcomes) so as to understand the meaning of their lived experiences. Individual interviews lasted approximately one and one-half to two hours for each participant. The interview method involved a specific type of in-depth semi-structured individual interviews designed to study the experiences of the participants and help the researcher discover meaning of experiences

shared by the interviewees (Marshall & Rossman, 2006). Second, archived data on withdrawal and failure rates in required classes as well as demographic characteristics were acquired. Demographics included (a) retention, (b) grade point average, (c) age, (d) ethnicity, (e) gender, (f) status as first-generation-in-college, and (g) learning community participation. Anonymity/confidentiality protections were assured as per protocols required by the human subjects review boards at the respective institutions.

Data Analysis

Archived data on participants were analyzed in terms of status variables such as race, ethnicity, gender, and grade point average. To analyze the verbatim transcripts of the individual interviews, the researcher employed the constant comparative method (Bogdan & Biklen, 2003). The texts of the transcribed individual and group interviews along with the researcher's logs and memos were compared to each subsequent interview, then across all individual interviewees and later to the literature review. The researcher deconstructed and reconstructed their responses to make sense of their experiences within the larger context of the research study. Data analysis did not focus exclusively on similarities, but instead sought to identify relationships that connect statements and events within a context. Core categories were identified until saturation of categories was achieved, that is, no new themes emerged. Data analysis began immediately after finishing the first interview and continued throughout the process. Meaning and coherence among the themes were framed in the following manner.

First, the researcher derived participant profiles which provided word pictures of the lives of the participants. Second, the results were presented in terms of themes that represented their perceptions of their experiences as uncovered in the individual and group interviews. Each theme was substantiated with rich descriptions using the participants' words based on the verbatim interview transcripts. Third, the researcher examined the themes from the perspectives of persisters from various factors that emerged from the review of the literature.

Procedures to Increase Validity and Credibility

The procedures to establish trustworthiness of the data helped the researcher keep in mind the iterative nature of the research procedures between data collection, data analysis, and outcomes. Three of the eight verification procedures recommended by Creswell (1998) were incorporated in this study. The researcher selected these procedures so as to verify the trustworthiness of the study at three important points: (a) the data collection process (triangulation of data sources), (b) the researcher's steps to analyze the data (external audit trail through expert reviewers), and (c) the themes that emerge from the analysis (member check).

Triangulation of data sources required that the researcher look at themes as they emerged from the analysis of the interview transcripts and then confirmed the theme from other sources (e.g., researcher log and archived data). The audit trail to verify the analysis process was conducted by 2 expert reviewers (members of the dissertation committee) who provided feedback on the researcher's data analysis procedures. The expert reviewers independently (a) reviewed the researcher's records (e.g., interview transcripts, researcher log, archived data), and (b) followed the procedures detailed by the researcher in coding the transcripts so as to trace the themes to the data sources. The researcher met individually with each of the expert reviewers to discuss results of the audit trail and took corrective action towards refining the descriptions of the procedures where indicated. Member checking, a procedure where the participants were asked to examine rough drafts of the researcher's conclusions, was conducted individually through email contact with each participant after the interviews. In the event that the member check revealed disagreement with the researcher, that disagreement was noted as part of the record and lead the researcher to reformulate the theme and/or re-analyze the data.

Results

The demographic data, profiles, and identify themes that captured the experiences of underprepared college students who persisted to graduation from ABC Community College are reported. The researcher identified all students who had completed the FYE program and who had completed their developmental courses, and

had graduated, earned 60 credits or transferred to the upper division of a 4-year institution.

Table 1 shows the demographic information of the 7 students who met the qualifications. Note that all the graduates represented the ethnic and racial diversity of ABC Community College student population. The graduates included 6 female students and 1 male student. Although six students were categorized as Black and one student as Asian, they self-identified by their cultural identities. Two students identified themselves as Haitian-American (Frieda and Sara), 2 as Jamaican-American (Janice and Nekee), 1 African-American (LeLe), and 1 as Indian (Absum). One student graduated in 2006 and transferred to University of South Florida (USF); 1 student graduated in December 2007 and transferred to Florida Atlantic University (FAU); 2 transferred to FAU with over 60 hours, only needing to complete math or the math portion of CLAST; 1 transferred to Keiser College and graduated with an AS in Physical Therapy Assistant and 1 graduated in December 2007 and is working full-time as she contemplates her options of 4-year institutions. As shown in Table 2, the participants persisted in taking courses that were difficult for them to pass. Inspection of the table indicates that the majority of graduates had to re-take remedial math classes, college-level algebra classes, and science classes.

Profiles of the Interviewees

Six of the 7 graduates were interviewed: Absum, Frieda, Janice, LeLe, Nekee, and Sara The researcher constructed an individual profile of each participant based on the analysis of the interviews and the archived data. Representative verbatim quotes from the interviews were included to illustrate key points about how each participant experienced their programs of study at ABC Community College. To protect the anonymity of participants, participants selected pseudonyms for their profiles. The profiles are presented in alphabetical order of their pseudonym with a short descriptive quote that captures their overall experiences with ABC Community College.

Absum -- "Just keep going...keep going"

Absum" is a 23 year old, Indian-American senior at the University of South Florida (USF) majoring in Civil and Environmental Engineering. He and his family immigrated to the United States from India when he was a senior in high school. He is the middle child. His older brother, who resides in India, attended college and is an accountant. Absum's younger sister moved to the United States in 2002 as a high school junior and is currently a student at ABC Community College pursuing an Associate in Science degree in nursing. Unlike the other FYE participants, both of his parents attended college. His father is an engineer and his mother has a technical degree. Absum is the first of all FYE students to graduate in May 2006 and the only student to transfer to a 4-year institution outside the immediate area of ABC Community College. When asked to describe an item that he carries that best represents him, he said, "My TI89 calculator because I'm really good at math...and I like something I can prove". He chose ABC Community College because "it was the closest" and "just to take classes". His advice to new freshmen: "Make sure you know where you're going...just don't pick random classes. That wastes too much time...just know where you're going." Absum goal is to "be successful...earn money and live a happy life."

Frieda -- "Education is number one"

"Frieda" is a Haitian-American, 21 year old New York native. She moved to Florida in 2001 as a high school freshman, currently lives with her mother and stepfather, and visits her father who lives in Port St. Lucie at least once per month. Her mother graduated college and is a registered nurse while her father graduated high school. She is engaged to be married; she met her fiancée in high school. Currently, she needs one more math class to complete her associate in arts degree. She is majoring in psychology. While attending ABC Community College, she was active on campus, serving as president of the Dynamic Soul Dancers. However, math is difficult for her. While at ABC, she withdrew or failed Elementary Algebra, Intermediate Algebra, and Statistics, for a total of 4 times. Frieda reported that the FYE program helped her "make friends...with all the classes we had each other" and overcome the fear of public speaking. One of her best friends, whom she met in high school, also attended ABC and joined FYE. Frieda's family serves as a source of motivation. Frieda said, "My mom works really hard...she pays for my education and that motivates me to just keep working harder and harder so she can

see that her money is well spent and that it was worth it." Her advice to peers, "Take your first semester, the first year of college very seriously... the grades you get in the beginning affect you if your gpa is a little low, it takes a lot to bring it back up."

Janice -- "Do something"

"Janice" is a Jamaican-American, 23 year old graduate of Keiser College. She moved to the United States from Jamaica when she was 9 years old. An only child, she said, "It was just me and my mom all the time ...I'm always on the phone with mom." Her mother did not attend college, works 2 jobs and as Janice said, "She doesn't force me in helping her out. My concentration is on school". While attending ABC, she was active on campus, serving as president of the Peer Educators Club and Student Ambassador. She changed her major to PTA and transferred to Keiser because of her difficulty with mathematics courses at the community college. As a student born outside the United States, she said, "Being the fact that I'm not a born American, you have something even more to work for...your family don't come to American to just do nothing...otherwise, why? You come for a better life...to get an education. I'm going to do something with my life and I'm going to do as much as I can."

LeLe -- "Open to New Experiences"

"LeLe" is a 22 year old, African-American ABC Community College graduate. Interested in working with children with special needs, her major is special education and she has not yet decided whether she will continue her education locally or transfer to a historically Black college in Daytona Beach. As she said, "I think one of the reasons I want to go there is because it's a historically Black college and I've never had that aspect where it's just predominately Black...I've never had that experience...I want to get a different aspect of my culture." LeLe was active on campus as she joined Intervarsity Christian Fellowship and worked in Student Life, attended several leadership retreats, and participated in several trips. Born in Florida, she has 4 siblings – 2 older brothers, 1 older sister, and 1 younger sister. She is the second in her family to graduate from college. Her older brother attended Kent State University while her mother currently attends ABC Community College. LeLe has a close relationship with her mother, father, and older brother who provided both encouragement and financial support. She recounts, "If I needed anything for school...if it was clothes or shoes or book bags, he'd get it no matter what." Her advice to fellow students: "Be open...there's so much...if you fail at ABC, you fail because you choose to fail, not because you didn't have the opportunity. Don't let anyone let you feel less of anything because you're going to a community college."

Nekee -- "Be proud of me"

"Nekee" is 23 year old Caribbean-American junior at Florida Atlantic University (FAU). Born in Jamaica, she immigrated to the United States with her family when she was 8 years old. She has two siblings: an older sister who did not attend college and a younger brother who is currently enrolled at University of North Floirda (UNF). She and her family are U.S. citizens. She said, "America...gives you a lot...it provides for you." Nekee chose to participate in FYE as a result of her mother's encouragement. She stated, "Because we had the same people in the class, you worked together more and you helped each other out...I'm still friends with people." Although the first in her family to attend college, Nekee has strong family support. She said, "My parents influenced it [my college experiences] a lot. I felt like I had to prove something to them...I had to strive to do better in my life...to get an education so they'd be proud of me...'cause they did not have that opportunity, I should take advantage of it."

Sara -- "I want to be successful"

"Sara" is a recent ABC graduate and FYE participant. She is a 20 year old, Caribbean-American junior at Florida Atlantic University (FAU) majoring in Business Administration with a specialization in Management. Born in New Jersey, her parents immigrated to the United States approximately 25 years ago from Haiti, and when she was four, they moved to South Florida. She is the eldest of three children and is the first in her family to graduate from college. She said, "My parents never got the education they wanted...when they came here, it was really hard for them. My father always wanted my brothers and I to get the education, do our homework. Even if we didn't too well, he always encouraged us to try harder and do better." Sara

has a strong family support and peer network and talks of her parents, brothers, grandparents, and friends. She said, "College is really hard for some people. I would just say have faith, be strong, find either one or two friends that you know, probably have the same values will help you out and not lead you down the wrong path."

Member Checks to Verify Profiles

To verify the accuracy of the profiles constructed from the interviews and archived data, the researcher contacted each participant via email. Each participant received a copy of the profile and was asked to review the profile to ensure that the participant agreed with the content. Four students accepted the profile as written while two students added details about when they moved to Florida or to confirm that the information was accurate.

Audit Trail by Expert Reviewers

The researcher asked two members of his dissertation committee with expertise in qualitative research to conduct an audit trail of the research process. They independently reviewed selected verbatim transcripts of the interviews, traced the researcher's codes to the themes, verified or expanded the emerging themes, and offered ideas for the conclusions and recommendations.

Themes

The researcher reviewed verbatim transcripts of each participant's interview individually, identifying recurring concepts and coding the transcript. Then the researcher reviewed all six transcripts to search for common concepts and codes across all interviews. Using the constant-comparative method, the researcher inductively generated four themes organized as follows: (a) pre-college characteristics, (b) external college support/community influences, (c) social involvement, and (d) academic integration. Each theme also contains several sub-themes, which provide further detail in interpreting the experience. Figure 1 displays the themes and subthemes. Each theme is described including verbatim quotes from the participants to explain and support the theme. The themes are presented in no particular order.

Pre College Characteristics and Traits

The theme of pre-college characteristics and traits theme includes those attributes students that bring to college – internal factors. There are 6 sub-themes: (a) sense of responsibility, (b) goal oriented, (c) resourcefulness, (d) persistence, (e) culture, and (f) faith. The participants shared internal characteristics that may contribute to educational achievement.

Sense of responsibility. The first sub-theme in the pre-college characteristics and traits theme is sense of responsibility. Several of the students talked about "knowing what needs to be done" and "following through."

Janice said, "I guess, you know, with me...I never grew up with a father...it was just me and my mom all the time...I never grew around men...so, I don't...like when I think about the future, I always think...okay, I need to do what I need to do to support myself...I see it from her [my mom]...it's what I know...be a strong woman." From a young age, LeLe felt responsible. She said, "I've always had that in me...even as a child. My mother had my little sister when I was 6 years old, and I thought that was just the greatest thing because I learned to help take care of a baby and everything I've always done has been around children...some of my first jobs were babysitting." She added, "Someone told me success is what you make it. So, I know what I want from life and I know how to get it...so I think that's what motivates me that I...for me to get what I want I have to...I know what I have to do..." Similar to LeLe, Sara shared, "From the time I was 9, I was taking care of my brothers...so I'm very responsible."

Goal oriented. The second sub-theme in the pre-college characteristics and traits is goal oriented. All graduates indicated the importance of having goals and a plan. Most of the participants realized that a college education leads to more opportunities. For example, Absum said, "I plan to be a civil/environmental engineer. My father is an engineer, my uncle is an engineer, my cousin's an engineer...there are a lot of engineers in our family...I want to be successful...earn money and live a happy life."

Concern for her future ability to provide for her family motivated Frieda. She said, "I knew that stopping with just high school

wouldn't really...it wouldn't really help me in the long run 'cause I do wanna have a family and be able to provide for my kids...and the higher in education I go, the better I'll be". Similarly, Janice said, "I didn't think of any other reason to do anything else but go to college, get a college education, get a degree, and get a job... it's like an automatic from 12th grade..." LeLe said, "I want to be a teacher...I always wanted to be a teacher since I was 7...I know there was nothing else other than college to become a teacher...so, that's one of the reasons to pursue it further to receive a BA or maybe more." Sara spoke of her goals, "I just want to be successful. I want to be able to...seeing what my parents went through...they weren't really able to either afford it."

Resourcefulness. The third sub-theme in the pre-college characteristics and traits theme is resourcefulness. Several participants transferred to the upper division without earning the AA degree.

Janice transferred to Keiser College and graduated with an AS in PTA to avoid completing college level math at ABC. She said, "I just figured...I was getting tired after awhile...and there was one particular class I couldn't pass and I was getting frustrated (laughter) and I just felt like I wasn't going to get anywhere, really..." Similar to Janice, Frieda transferred to the upper division and needs to complete the math portion of the CLAST. She remembered, "This last semester I didn't get a "C" in my statistics course and I thought FAU wouldn't accept me because I still needed CLAST. I found out about an appeals program where I met with a committee to allow me in. They did for one semester while I retake the CLAST...I'm glad I went to that committee."

Persistence. The fourth sub-theme in the pre-college characteristics and traits theme is persistence. Despite several challenges, the participants stayed in school.

In talking about grades, Absum said, "Getting a bad grade doesn't disappoint me. It just makes me work a littler harder. I know that I can do better and I guess, I'm more disappointed in myself. When I do good, it just makes me feel like I accomplished something...makes me feel like I should keep going." Frieda talked about her challenge: "I'm a very resilient person...this past semester at ABC, was my hardest semester...the last one...and I had so many obstacles, but I kept telling myself...I'm determined to further my college career...I did it...and I felt like I'm never supposed to give up on anything ...my fiancée got into a car accident and that was stressful...and I got into a minor car accident...I don't let other obstacles discourage me...it just pushed me to keep working hard...I couldn't see myself not in school."

Similar to Frieda, Sara had some problems. She said, "Dropping the Chemistry class was the hardest thing I ever did, 'cause I didn't want to drop any classes, especially being so close to...it was this year...being so close to graduation. Having to drop that class, it was really hard for me. And changing my major...I had so many things going on in my mind...my grandfather passed away and my grandmother was feeling sick for all that...and also my father got in this car accident and doctors said he might not live..." She added, "I know what I want and I strive for that." Similarly, Janice explained, "I have the motivation and I have the strong will...ever since high school...ever since school, I have my goals that I'm striving for...so, I just one big picture in mind."

Culture. The fifth sub-theme in the pre-college characteristics and traits theme is culture. The participants were either born in another country (e.g., India, Haiti, or Jamaica) or represent the first generation born in the United States. Their perceptions revealed how their respective cultural heritages influenced their views about the importance of an education and the concept of hard work leading to success. For example, Absum, an immigrant from India, explained, "I think the Indian culture...they're more toward education. Basically, my dad says when you're in school, you do what you're supposed to do...you study hard and you don't mess around and...you live life later on." Similarly, Frieda spoke of her Haitian heritage: "Actually in the Haitian culture they really...they really...like, school is number one. I can't speak for other nationalities or cultures, but I feel like in the Haitian culture, education is a very important factor. If you don't have an education, what do you have? Whether you're a guy or a girl, you're expected to go to school and make something of themselves." Janice described her Jamaican culture: "When I was 9 years old, I moved from Jamaica. Being the fact that I'm not a born American, you have something even more to work for, you

know...your family don't come to America to just do nothing...otherwise why? You know...you come for a better life...to get an education and...so knowing that...I'm from Jamaica and my family...my mother...we're here to do something for ourselves...I'm going to do something with my life and I'm going to do as much as I can and get everything out of it possible." As an African-American, LeLe shared her experiences: "I think my race has affected me more because before people meet me...before people know your name, before people know anything about you, they see your race. No matter who it is, no matter what it is...before anybody knows LeLe – the person, they know LeLe – the black girl...

Faith. The sixth sub-theme in the pre-college characteristics and traits theme is faith. Although not consistently mentioned among all participants, 3 spoke of their religious convictions and quoted the Bible. For example, when faced with challenges, Nekee referred to the verse, "I can do all things through Christ who strengthens me." Frieda also quoted the same scripture when talking about challenges. She said, "When I feel like quitting, I remember I can do all things through Christ who strengthens me." She added, "Yeah, it's [faith] very important. I feel like if you don't have faith in God, like...you won't be able to...I want to say succeed, but you won't be able to...work to the best of your ability." Janice added, "I do believe in God. I...haven't really, as far as going to church every Sunday...lately...especially since I've been a college student, I don't go every Sunday...maybe because my schedule...work..." Similarly, Sara said, "I have a strong faith in Jesus Christ and whenever I feel like giving up I just...I have to pray...even if I don't feel like it...I pray and that gives me motivation and I think I can do anything."

External Support/Community Influences

Participants attributed their success to supportive families who include parents, particularly mothers, siblings, grandparents, cousin, and fiancée.

Parents. The first sub-theme in the external support/community influences theme is parents. Because the students were younger and straight out of high school, their parents had a strong influence. For example, many parents attempted to help their children with schoolwork, despite having little or no post secondary education. Mothers were more frequently mentioned than fathers. Several mothers of the participants directed them to join FYE.

Absum said, "They kept pushing me that I need to graduate and I need to get my degree, so I guess that helped me a lot...coming from India, education is stressed in my family, both my parents went to college. ... I think my family...they had a great impact on me. They never let me quit...they kept pushing me." Similarly, Nekee said, "My parents... influenced it a lot...because the way it was...umm...since no one had education, I felt like, you know, I had to prove something to them...I had to strive to do better in my life, you know, to get an education so they'd be proud of me...'cause they did not have that opportunity...so I should take advantage of it...[my] parents helped me with my work, that's encouragement, or like when I do something...umm...when I do my work...they, like, tell me...like give me...I guess encouragement...so making me want to stay in school." In fact, Nekee explained that she joined the FYE program because, "Mom made me do it."

Janice echoed the same sentiment saying, "My mom...she always, like...I guess...motivates me to keep on going. ... I mean that's, you know, as far as helping me in anyway, they really couldn't...but as far as motivational support...she would help me as much as she can...like, when I have a problem or something...my mom was there to talk me through it...to help me through it...she was there when I was freaking out about the exam in that class."

As an only child, Frieda talked about her family: "Well, my mom, she influences me the most because she's...she's like...really, she's the type of person that...she wants me to do very well with school...like, school's number one. And, umm...my father, as well...he always pushes me...my stepdad's there whenever I need to talk to him about anything that has to do with school...yeah, they influenced me a lot." LeLe spoke of her mother who, "attended ABC but she ended up leaving to pursue a career in something else, and she ended up having children so she never came back...but I actually convinced her to come back, so now she's back at ABC." Similar to other participants, LeLe's mother encouraged her to join. She remembered, "My

mother came with me to orientation." Sara talked about her parents: "Well, my father, because my parents never really got the education they wanted to in Haiti, when they came here, it was really hard for them. My father always wanted my brothers and I to get the education, do our homework. Even if we didn't do too well, he always encouraged us to try harder, to do better. But they have been a great influence."

Siblings/extended family. The second sub-theme in the community influences theme is siblings/extended family. Beyond the parents, family is important.

Absum said, "My family I guess I would say. My parents are always pushing me to get my education. Also, my uncle, my dad's brother...they have been pushing me too. So, I guess...that's the biggest motivation." When asked about quitting school, Nekee stated, "I don't remember a time when I almost quit...I'll say maybe when like I failed a couple of my classes, I may have thought about quitting...and then I thought about my family and I didn't want to do it." Although she has 6 siblings, LeLe described her relationship with her older brother as, "the one that pushed me to start school and I was really grateful for that...my brother is one of those people that motivates me the most... when my financial aid didn't give me as much money as I thought it would...and I would call him and he would say that's fine, don't worry about it...I'll pay for your books." Sara described her relationship with her grandfather: "My grandfather...he passed away last year...he was someone very close to me...he used to always tell me, if you can't do it...if you try your hardest, than at least you know you tried. Even if you didn't succeed at it, at least trying it sometimes is better than succeeding. That's something I'll always remember."

Peers. The third sub-theme in the community influences theme is peers. Participants indicated positive peer influence to include friends and the FYE cohort. The majority of the participants' friends did not attend ABC Community College, but other postsecondary institutions. The participants expressed common interests with their peers to include college attendance, "right crowd", and providers of support and encouragement. In Absum's words, "They are my friends because we share goals...umm...same majors...I needed some help from them and they needed help from me for classes. He also added, "Definitely picking classes...umm...and telling me how the teachers were at ABC." Nekee added, "Nicole is a supportive friend...because sometimes...like...I don't want to do my work and then she's always like there motivating me." Sara spoke about the importance of her peers who have "the same values, we are all Christian ... Even when we had homework to do and I didn't feel like doing it, my friends would encourage me ...we all wanted to graduate all together."

In talking about her friends, Frieda said, "Overall, I think me and my friends have a lot in common, we all have the same goals, we all want to be successful, we all are in school...we all complement each other." Janice talked about peers: "I was always kinda [sic] with the right crowd...(laughter) with [my friend Raquel] being at a university, she kinda encouraged me to like...stay in school and I would talk with her and then vice-versa when I had a problem, I'd call her." LeLe also said, "Most of [my friends] were on the same journey that I was in...like my friends from high school, we worked together all the time and most of them are education majors."

Social Involvement

Social involvement is related to students who are involved on campus in different clubs and organizations and their interaction with other students. Much of the literature indicates that involvement outside the classroom contributes positively to student success. In regarding to his findings from a study of more than 20,000 students, 25,000 faculty members and 200 institutions, Astin (1993) wrote:

> The review once again underscores the tremendous potential that student involvement has for enhancing most aspects of the undergraduate student's cognitive and affective development. Learning, academic performance, and retention are positively associated with academic involvement, involvement with faculty, and involvement with student peer groups. (p. 394)

Participants of this study expressed many of the same benefits when sharing their own experiences.

Student life. Participants discussed student activities, clubs and organizations which seemed to give their college experience purpose and to develop a peer network. In talking about student clubs, Nekee said, "Yeah, the dance team...student ambassadors...part of everything. I joined like every club. Student Life made...umm...me very comfortable... because before when I first started here, I wasn't comfortable at all. So, now I'm like comfortable with everything. Student Life made everything easy." Frieda agreed with the importance of the dance team: "I was the president or captain and we had different cubicles and I just felt comfortable going to my advisor, talking to him about different issues that I had about the team or...everyone in Student Life is really nice and made me feel like we were a big family."

Janice echoed a similar sentiment about friendships: "What made me feel comfortable was the friendships that I made...with not only with the students in my class, but with other people, like in Student Life. Like, they were also a big support, like, you know, I just felt like they were a second family...and I felt really good, you know, coming...I felt comfortable." LeLe provided an example of how she felt connected, "Student Life and the coffee house were important to us. The coffee house is where we would meet in the morning...where most of the FYE students would meet before class...if somebody wasn't there, we would be like, "Somebody's not here today", and we'd call them, "Where are you? Are you coming to school today?" Sara said, "In high school I was on a step team and I wanted to be doing something like that in college and we heard about a dance team, but at the end of the semester, they kinda cancelled the whole thing. So, my friends and I decided that we wanted to be dancing so we met and picked a captain and everything...we ended up being pretty successful ... at the beginning I was kinda a shy person...I was not putting myself out there like that...but ...being on a dance team...people knowing me and participating in a lot of the events, that made me comfortable with the [ABC] school."

Academic Integration

Academic integration refers to the students' inclusion to the campus academic culture and their interface with academia. Underprepared students who may have had limited academic success in the past gain an understanding and develop skills essential for success. This often includes the development of positive faculty relationships, recognition of college expectations, and effective study habits. There are 3 sub-themes (a) faculty, (b) campus resources, and (c) time management.

Faculty. The first sub-theme in the academic integration theme is faculty. Each participant identified at least one faculty member who had a great impact. Further, they discussed beneficial characteristics to include engagers, passionate about their discipline, helpfulness, care. In comparing faculty at the university to the community college, Absum said, "ABC classes are more smaller...ABC teachers do care about students. They know you personally..." Nekee also compares the university faculty to the community college. She adds, "the [university] professors...they are always trying to remind you...oh...this is not ABC...this is, you know, the university...so, more students in the class...and they don't really kinda care about you...kinda...teachers at ABC...they kinda care about you more..." Frieda echoed these sentiments when she said, "The professors I had at ABC...they were all pretty much good professors...they always willing to help. If I was having trouble in a class, I would talk to them and they always give me suggestions on what I should do." Janice spoke of her professors saying, "They were energetic, motivational, upbeat...they never rejected me." LeLe agreed: "The professors are good...and even when I got out of FYE and I had to register for classes or I had questions...if I had a question, I went to [Mrs. M.]." Sara also agreed: "The professors that were in the FYE program helped me a lot...I'm not good at English at all and whenever I did an essay or anything like that...she would help me. My last semester I had to do a 20 page paper and with her help...I got better throughout the years."

Campus Resources. The second sub-theme in the academic integration theme is campus resources. Participants identified several campus resources or departments that contributed toward their success to include math lab, tutors and advisors and the FYE program and Student Life Skills class. Participants claimed the program provided consistency, peer support and structure. For example, Absum said, "The SLS class helped me be more organized...umm...just planning things out...taking notes...regular college stuff." Nekee

discussed the FYE program and how it helped her. She said, "Because we had the same people in the class, so it's like, you worked together more and you helped each out, 'cause now I'm still friends with people...in FYE...so it helps you because you actually work together..." Frieda agreed, "Making friends made a difference...with all the classes we had with each other...all of our classes helped us to clique. Also, umm...made me comfortable because we used to do presentations and things like that...public speaking..." LeLe echoed the sentiments: "FYE helped me in becoming more...driven...more outspoken... more...it was...it became more comfortable...I was able to meet new people who I wouldn't have met...otherwise...I was able to make more friends...I was able to do more things in the college." Sara agreed and said, "I went to the math lab and I spoke to some of the tutors in there that would help with a problem. They really helped me."

Time management. The third sub-theme in the academic integration theme is time management. Participants discussed essential time management skills. Students spend more time studying. Most averaged 10 hours per week although Absum said, "While at ABC I studied 12 -15 hours per week. Now at USF, I'm studying 20 -24 hours." LeLe explained, "Time management was something that I learned in college. SLS was a good class in the fact that it taught me time management and it taught me planning out...I study 20 hours a week...I would try to study before everyone started coming because then it would get noisy and hectic..."

Discussion

An emerging model to explain persistence of under-prepared college students is presented in Figure 1. The size of the circles indicated that some themes have a stronger impact (i.e., family). Implications for practice are offered.

Overall, the results of this study of ethnically diverse underprepared community college students resonate with research conducted by Byrd and MacDonald (2005) who found that time management, goal setting, and self-advocacy helped non-traditional students succeed. In contrast to Smith and Commander (1999) who found that underprepared students lacked tacit intelligence, failed to understand or use campus resources, the participants in this study were keenly aware of the resources they could utilize. In contrast to Valdez (1993) who found that underprepared students do not have the cultural capital in regards to family or friends who can help negotiate college bureaucracies, the participants in this study were able to draw on family support, peer influence and contacts made during the Freshman Year Experience to succeed.

Family and Peer Support

Family and peers have influence on students. Students who attend a community college are more apt to live at home with parents. In addition, peers influence behavior. Attendance at a community college where incoming students had relatively high level of degree plans had stronger positive effects on end-of-first-year degree plans for individuals who started postsecondary education with plans for less than a bachelor's degree than it did for their peers who planned to obtain a bachelor's degree or higher (Pascarella et al., 2003). This became apparent as the peer support of many of the FYE students were external constituents who did not attend ABC. Of the 6 graduates interviewed, 4 described friends who were attending UF, UNF, and FSU. As Sara defined "the right crowd", each participant had another peer or family member who held them accountable and encouraged them to complete their goals.

Internal Characteristics

Characteristics such as positive self-image, self-esteem, and internal locus of control have been found to correlate with successful academic achievement (Harvey-Smith, 2002). In this study, students who had a strong sense of persistence, responsibility and had concrete goals, tend to complete their program of study. (For example, Frieda is delaying marriage to her fiancée until graduation.) In spite of life crises or failed classes, which may decelerate time to degree completion, the participants returned to school to graduate.

Classroom Instruction and Pedagogy

Although the curriculum and basic skills should have been learned in secondary education, the pedagogy and the format in which the discipline is critical. Faculty who incorporate group learning and encouraged students to

support each other create a positive experience. (For example, LeLe illustrated where her sociology professor encouraged students to talk about current events and subsequently relate it to the discipline). Current formal classroom teaching techniques are beginning to focus more on the peer group. Growing literature on cooperative learning (Wild & Ebbers, 2002) where students work together on classroom material in small groups and serve as teachers of each other is much more effective than traditional classroom instructional techniques. It involves students more in the learning process (Astin, 1996).

Faculty Interaction

Related to pedagogy and classroom instruction, the interaction between students and faculty emerged from several studies as having a tremendous impact on retention. Students who are provided opportunities to interact with faculty at greater levels also tend to perform better academically (Harvey-Smith, 2002). Modeling is important and cited as essential for student success. Both the availability of quality role models and the opportunity for high quality faculty interactions have been found to be prime factors in retaining students (Harvey-Smith, 2002). All students at length described both positive and negative faculty experiences. Professors who were engaging, passionate about their discipline, encouraging and open tend to have the greatest influence.

Education as Liberation

As indicated by Freire (1970), education can serve as a liberatory experience from the present situation. Although all the participants mentioned finances, none perceived or at least represented themselves as members of an oppressed lower socioeconomic class. Yet, they wanted something better. As for race and ethnicity being an influence, except for the African American participant (LeLe), the others did not refer to race. However, all referred to the influence of coming from heritages where education was valued. Critical perspective is not part of the ABC curriculum. Not all classes induce students to challenge the dominant power structure and social stratification or develop a critical consciousness which Kincheloe (2008) defines as "developing new forms of understanding that connect the faculty member to understanding, empathizing and acting to alleviate suffering" (p. 13). Institutions need to be cognizant that education is always political as it supports the needs of the dominant culture while subverting the interests of marginalized cultures.

Rather than reject their ethnic backgrounds, the participants in this study embraced their culture which seemed to help them be successful graduates. For example, Absum emphasized education as a way to be independent and "be successful...earn money and live a happy life." Frieda said, "I knew that stopping with just high school wouldn't...help me in the long run 'cause I do wanna have a family and be able to provide for my kids...and the higher in education I go, the better I'll be." Janice emphasized the fact that her family came to America from Jamaica so she could look "for a better life...to get an education." Nekee wanted to gain an education as "the opportunity" her parents did not have and felt compelled "to take advantage of it." Sara spoke about her parents emigrating from Haiti and how they "wanted my brothers and I to get an education." LeLe, as an African American born in the United States, said, "After high school, there was no 'what do I do now?' ...there was always college...you had to go somewhere..."

Implications

Based on the findings of the pilot study, the researcher poses implications for practice. While those intended for practice are offered as a result of this specific study, it is anticipated that some may also be appropriate to higher education administrators, faculty, and staff working with underprepared students.

First, colleges should involve parents and extended family because they are so instrumental in the lives of the underprepared ethnically diverse college students who participated in this study. Rather than alienate the families and expect students to create new social support systems, colleges can engage parents. In fact, several parents attended orientation and encouraged their students to join the FYE program. Perhaps a "Parents Going to College" orientation can be offered to include information on degree requirements, campus resources, and financial aid. It appears they need to be involved. When a son or daughter attends college, it's the family, not just the enrollee.

Home culture should not be considered a distraction.

Second, faculty and administrators must develop new programs based on the types of learning experiences known to support student success and persistence to graduation. The failure to connect with others on campus (e.g., peers, student organizations, faculty and or staff) contributes more to voluntary withdrawal than almost any other factor (Brittenham, et al., 2003). The ethnically diverse underprepared participants in this study valued several co-curricular activities (e.g., leadership retreats, field experiences) where the classroom lessons were supported by Student Life. Many other underprepared community college students could benefit from such clubs and organizations that are tied to their major if incorporated more in the classroom. Personnel in post secondary institutions need to expand the definition of "learning" to include affective outcomes such as leadership, self-understanding, and citizenship, as well as cognitive outcomes. It is a serious mistake to limit learning outcomes to only cognitive values (Astin, 1996).

Third, the delivery system, particularly in developmental mathematics, should change. The underprepared ethnically diverse participants in this study criticized those courses, especially developmental courses, that tare taught with techniques similar to high school. Furthermore, the concepts are taught in an abstract manner which makes little sense to them. As Frieda said, "after I graduated, I talked to one of my friends...that I went to high school with and I told her that I graduated and everything and she asked me if I took any prep classes and I said, "Yeah, I took a couple of prep classes", and she said she feels that people that take prep classes...it's like they're never going to graduate. ... the prep classes make the students feel like ... it's going to take them forever to get out..." Perhaps classes should be taught in a modular format where students focus on specific competencies where students can achieve success and feel as if they are making timely progress. Janice noted, after transferring to Keiser College and experiencing success,, "It's one class a month. So, you're just concentrating on that one class which I like."

Fourth, underprepared college students should be allowed to earn transferable credits while enrolled in remediation (Killacky et al 2002). Many feel developmental courses are a repeat of high school and can be discouraging. Many mentioned the amount of time to complete the developmental courses as a concern. If skills learned in the developmental courses such as reading can be applied in a related college-level course such as computer or sociology, this would contextualize the learning. And students would earn college-level credits simultaneously with completing remedial coursework. In this way, they would discover interdisciplinary application and make progress toward their degree. Courses should not be taught in silos but rather in ways that allow students to see the connected relationships among disciplines.

Fifth, the results of the study indicate that college administrators and staff could improve the transition of students as they enter the mainstream. Some students missed the peer support they had while in FYE and recommended that the program be extended. Perhaps colleges should consider the implementation of a Sophomore Year Experience where not all classes are block scheduled, but perhaps 2 of the required general education.

Sixth, to increase the sense of academic integration, administrators could arrange to group students based on major to increase the identification with academic discipline. One participant reported, "If I had the same major of students with me who were focusing on...in the same direction, I think, it would have helped a lot." Perhaps more of these peer support relationships would continue beyond the first year if they were in the same program of study.

The results of the study may be significant because the ideals of learning communities are consistent with the values of community colleges. Key factors in retention included high level of faculty-student interaction, integration of academic and social activities, opportunity for involvement, mentoring, leadership experiences, cultural and social support, and use of campus resources and student services (Harvey-Smith, 2002). Learning communities appeared to promote these elements. Analyzing the impact of learning communities on students who are most at-risk for attrition may inform community college administrators, admissions personnel, and faculty about the at-risk students' experience. With increased understanding of the lived experiences

of underprepared community college students who persisted until graduation, perhaps this more holistic initiative can make a difference with the at-risk, developmental student population and thus experience greater success in their post-secondary education programs. In the final analysis, understanding the experiences of developmental students can help college faculty and administrators structure more effective mentoring relationships when working with the population of the underprepared ethnically diverse community college student.

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Table 1.

Demographic Profile of the 7 Graduates and the 6 Interviewees (I)

Name	Year in FYE	# of Credits Earned at ABC	Age	Gender	Race/Ethnicity Self-Identity	Major	Overall Cumulative G.P.A.
Absum	2004-05	60	23	M	Asian Indian	Engineering	2.76
Frieda	2005-06*	60	20	F	Black Haitian	Psychology	2.55
Janice	2003-04**	41	23	F	Black Jamaican	Physical Therapy Assisting	2.65
LeLe	2004-05	64	22	F	Black African American	Special Education	2.89
Nekee	2003-04	68	23	F	Black Jamaican	Business	2.48
Sara	2005-06	60	20	F	Black Haitian	Business	2.52
Shandra	2004-05	61	22	F	Black American	Biology	3.31

*Transferred to the upper division before earning AA degree
**Transferred after 41 credits to earn PTA degree at a private proprietary college

Table 2.

Summary of Number of Course Withdrawals and Failures for Graduates

Name	# of Semesters at ABC	# of Withdrawals	# of Failures	Courses (Grade) in which Participants Withdrew or Earned a Grade less than "C"
Absum	7	1	2	Biology (W) Preparatory Reading II (F) Trigonometry (F)
Frieda	6*	2	2	Elementary Algebra (W) Intermediate Algebra (W, F) Statistics (D)
Janice	5**	1	2	Pre Algebra (D) Pre Algebra (F) National Government (W)
LeLe	9	5	4	Astronomy (W) Elementary Algebra (D) College Algebra (W, F) Statistics (D) Western Civilization (W) Biology (F) Environmental Science (F) Short Story: Fiction (W)
Nekee	12*	4	3	Pre Algebra (W, F) College Algebra (D, F) Statistics (W) Liberal Arts Math (W) Biology Lab (W)
Sara	6	3	0	Biology (W) Biology Lab (W) Chemistry (W)

*Transferred to local state university before earning A.A. degree
**Transferred to local proprietary college to complete A.S. degree

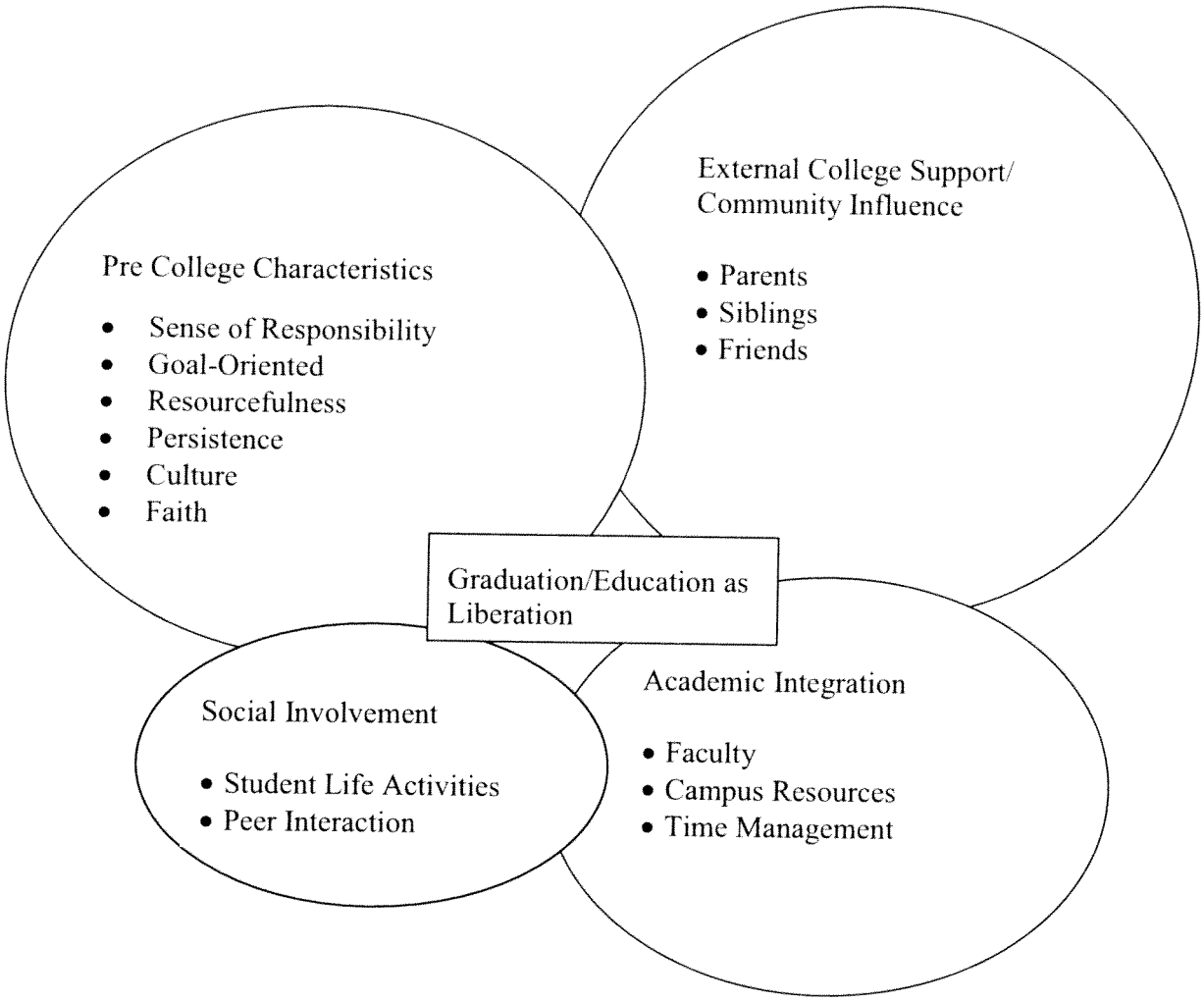

Figure 1. An emerging model of the factors that influence underprepared college students' persistence to graduation and education as liberation.

Teacher and Administrator Perceptions of Teacher Motivation

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This study compared perceptions of teacher intrinsic and extrinsic motivation,dependent variables, among the independent variables of job type (teachers and administrators), years of experience (novice, experienced, and veteran), and gender. Teachers, N = 793, and administrators, N = 90, indicated indicated that teachers rated themselves significantly higher on intrinsic items and lower on extrinsic items that administrators rated teachers. Further analysis of the teacher responses revealed that females rated themselves higher on the intrinsic scale than males.

Motivation has been described as "one of the most pivotal concerns of modern organizational research" (Baron, 1991, p.1). Understanding human behavior and *what* motivates individuals to behave and act the way that they do is an ongoing issue in the social sciences. Motivation shapes not only our personal choices, but also our professional behaviors. Researchers traditionally distinguish between intrinsic and extrinsic motivation. Individuals who are intrinsically motivated engage in behaviors out of enjoyment from the behavior or from a sense of pride or accomplishment in the results. Extrinsic motivation is derived from the desire for a reward; giving something out of the expectation of getting something in return. Are teachers more intrinsically motivated by the joy of helping students learn or by extrinsic factors such as salary or work schedule? Do the school leaders, whose responsibility it is to enhance teacher motivation, accurately perceive the factors that motivate teachers?

As society increasingly holds teachers accountable for student achievement, it is important to explore the factors that motivate teachers. The "what" that motivates teachers may vary from classroom to classroom, school to school, and district to district; yet motivation as a construct is an important aspect of teacher quality studies (So, Sharpe, Klockow, & Martin, 2002). When teachers perform, students produce and achieve (Tucker et al., 2005). Richardson, Short, and Prickett (1993) argued that "without teachers who are motivated to teach, the search for [student] excellence will be in vain" (p. 171). Data have indicated that retirements and resignations are far exceeding the profession's capacity for replacement; especially in a climate where teacher education program enrollments are declining (Prince, 1990). Identifying teacher needs and effectively supervising in a way that maximizes how teachers feel about their jobs ultimately enhances their motivation to do their jobs (Blasé & Kirby, 2000). If teachers perceive that principals do not care, they may be less likely to share ideas and possibly improve conditions at a school for fear that they may not be heard, recognized, or even reprimanded (Whitaker, Whitaker, & Lumpa, 2000). Inquiry into how differing perceptions between principals and teachers affect teacher motivation may offer solutions to this issue. Yet, current literature on this topic is scarce leaving administrators seeking information about teacher motivation with little empirical evidence to guide them.

It is imperative that principals perceive the needs of their teachers, yet a disconnect may exist between administrator perceptions of teacher motivation and actual motivation (Blasé & Kirby, 2000; Whitaker, et al., 2000). Rendos (2005) explored the differences in perceptions of teacher motivation to participate in professional development and found statistically significant differences between teachers and administrators ratings of collegiality, career stage, monetary rewards, and administrative support. If administrator perceptions of teacher motivation

are skewed, then leadership decisions could be erroneous.

Administrators do impact teacher motivation. Specifically, Pitre (2003) found a significant relationship between teacher motivation and leadership style. Unfortunately, external pressures such as school rankings and standardized test scores increase the pressure of external motivators. Brown (2005) studied the use of incentives to motivate teachers in charter schools and found a strong association between political, local, and organizational factors and the use of incentives. Moreover, teachers in the charter schools that offered more external incentives were more motivated. However, does extrinsic motivation always manifest itself as teacher salaries? Teacher interviews by Sederberg and Clark (1990) indicated that respect was actually the most important teacher incentive. This leads to the question, "Can administrators increase teacher motivation more through extrinsic or intrinsic appeals?" Lashaway-Bokina (2000) questioned the traditional focus on external motivation of teachers. Among the greatest tasks of teachers is to inspire students to acquire a love of learning, an intrinsic motivation, and would it not be easier for teachers to inspire something within their students that flourishes within themselves? Deci and Ryan (1985, 1994) presented the Self Determination Theory as a means to outline ways in which individuals can become intrinsically motivated. Intrinsically motivated behaviors satisfy the basic human needs (as introduced by Maslow in 1954) for competence, autonomy, and relatedness, and guide the process toward self-determination.

In addition to the classifications of intrinsic and extrinsic motivation, studies have revealed differences among teacher attribute variables (Brimblecombe, Ormston, & Shaw, 1996; Lucarelli, 1991; Ma & MacMillan 1999). Teachers' extrinsic motivation was found to be significantly related to gender, years of experience, and educational experience (Porter, 1993) and both intrinsic and extrinsic motivation to teacher age (Lucarelli, 1991); however, not all studies support these relationships. Studying Catholic school teachers in Guam, Lee (1991) found no relationship between teachers' extrinsic motivation and teacher age, grade level taught, or years of experience. More research is needed to clarify these divergent findings.

The purpose of this study was to offer additional insights into teacher motivation. Specifically the researchers explored potential differences in perceptions of both intrinsic and extrinsic teacher motivation, the dependent variables, among the independent variables of job type (teachers and administrators), years of experience (novice, experienced, and veteran), and gender. Here is a great place to state your research question(s).

Methodology

Participants

Study participants included 793 elementary and secondary teachers and 90 administrators from an educational cooperative area in a southern state. Of those who indicated their gender, 80% (N = 648) were female and experience ranged from 93 novice, 389 experienced, and 340 veteran educators. Students in the cooperative area were 84% white with 48% receiving free or reduced lunches.

Instrumentation

All data were collected with a questionnaire comprised of 32 Likert items which measured intrinsic and extrinsic motivational factors. The 13 intrinsic items inquired, for example, if "teachers are motivated by sense of accomplishment, empowerment, and professional growth". Extrinsic survey items included such statements as "teachers are motivated by benefits, merit pay, and salary". Bexley (2004) created the instrument and granted permission for use in this study prior to data collection. Bexley found internal consistency measures of Cronbach's alpha of 0.702 for teachers and .693 for administrators; estimates from the current study are presented in the results section of this paper. How would you describe the level of validity achieved by the Bexley instrument?

Demographic data pertaining to the independent variables were also collected. For years of experience, respondents selected: novice, experienced, or veteran. Administrators defined what level of leadership they served: building level or central office. Additionally, teachers classified whether they taught elementary, middle/junior high, or high school. Teachers and administrators completed separate forms differing only by the leading statements.

The teacher survey began "I am motivated by..." and the administrator survey began "Teachers are motivated by..."

Procedures

Following IRB approval, the researcher placed all 26 districts in the educational service cooperative in a database and randomly selected 13 districts for participation. Contact with the superintendents of the 13 selected districts was made by email and followed up by phone to obtain permission to conduct the study. Permission was granted, and principals were contacted by phone to see when the researcher could visit to collect data. To ensure adequate participation, all administrators and teachers from all selected districts were invited to participate. At the arranged times, the researcher visited all schools and met with the survey administrator. Generally, the survey administrator was the administrator of the building or one of the counselors. In a few cases, the administrator delegated the responsibility to a lead teacher. Each teacher and administrator completed a letter of consent, and the survey which included demographic information such as job level, gender and years of experience. The survey for teachers and administrators was printed on different color paper for convenience. All participants received a value card from Sonic for participating.

Results

Participation resulted in 793 completed teacher surveys and 90 administrator surveys. The instrument contained 32 Likert items across two scales of intrinsic and extrinsic motivation. Internal consistency reliability estimates for the intrinsic and extrinsic scales were 0.82 and 0.86 respectively which exceeds Bexley's (2004) administration. Teachers were asked to indicate their level of agreement with the statements about what motivates them and administrators were asked to indicate their level of agreement with statements about what motivates their teachers.

The data analysis plan was to conduct a 3 x 2 MANOVA (Multivariate analysis of variance), however, the correlation between the dependent variables was only $r = 0.55$ and the cell size for novice administrators was too small with only $n = 6$ per cell. Instead, the researcher applied a Bonferroni adjustment and required a significance level .017 for the univariate analyses. Two independent t-tests were conducted to compare teacher and administrator responses to the intrinsic and extrinsic scales.

To assess the construct validity, the researcher conducted a principle components factor analysis with a varimax rotation. Based on the Eigenvalues, scree plot, and instrument structure, two factors were identified. The factors were labeled intrinsic motivation and extrinsic motivation and accounted for 35.27% of the variance. Items loaded in the expected factors except for 11, 13, 16, 17, 22, 26, 31. Those each favored the opposite scale. Items 5, 10, and 20 did not load highly on either factor and were included on the scale that each favored more to mirror the original instrumentational design. The factor loadings for rotated two-factor solution are presented in Table 1.

Descriptive Statistics

This study explored the impacts of the three factors of job level, gender, and experience on the dependent variables of intrinsic and extrinsic motivation. Job level included 793 teachers and 90 administrators; gender included 162 males and 648 females; and experience included 93 novice, 389 experienced and 340 veteran educators.

Additionally, descriptive statistics were run for each of the survey items to determine how teachers and administrators responded on the intrinsic and extrinsic scales. Table 2 presents the means and standard deviations of each of the intrinsic survey items and Table 3 presents the means and standard deviation of each of the extrinsic survey items. Examination of the data revealed the highest scores for intrinsic items were "pride in work" ($M = 4.78$, $SD = 0.86$), "sense of accomplishment" ($M = 4.76$, $SD = 0.49$), and both "supportive, open principal" ($M = 4.57$, $SD = 0.77$) and "knowing what is expected" ($M = 4.57$, $SD = 0.68$) scored the same. The highest scored extrinsic items were "time off / holidays" ($M = 3.90$, $SD = 1.11$), "supervisor recognition" ($M = 3.73$, $SD = 1.15$) and "salary" ($M = 3.65$, $SD = 1.26$).

Teacher and Administrator Responses to Intrinsic and Extrinsic Scales

To compare teachers' stated motivated with administrators' perceptions of teacher

motivation, the researchers conducted independent samples *t*-tests for the intrinsic and extrinsic motivation scales. Prior to the test, the researchers examined the assumptions of normality and homogeneity of variance. Results from the Kolmogorov-Smirnov tests for normality indicated that normality was questionable for teachers' intrinsic scores ($KS(652) = 0.10$, $p < .001$), teachers' extrinsic scores KS(652) = 0.05, $p = .001$), and administrators' intrinsic scores ($KS(75) = 0.13$, $p = .003$) and reasonable for administrators' extrinsic scores ($KS(75) = 0.08$, $p = .200$). A visual inspection of the scores revealed approximate normal distributions with only a few outliers on the lower ends of the distributions. Because even small deviations from normality can result in distributions that are significantly different from normal with large samples and since the independent samples *t*-test is robust with respect to this assumption, the researchers choose to proceed with the analysis. The homogeneity of variance assumption appeared reasonable for intrinsic scores (*Levene* = 3.06, $p = .08$). For extrinsic scores, the homogeneity of variance assumption did not appear reasonable (*Levene* = 6.61, $p = .01$); therefore, the test results were adjusted for this violation.

Results indicated that teacher ratings of the intrinsic motivation items ($M = 4.35$, $SD = 0.41$) were statistically significantly more than ($t(803) = 2.62$, $p = .01$) the ratings of administrators perceptions of teachers' intrinsic motivation ($M = 4.22$, $SD = 0.49$). The effect size, Cohen's *d*, was small at 0.30 standard deviations (Cohen, 1998). Results of teacher ratings on the extrinsic motivation items ($M = 3.46$, $SD = 0.61$) were statistically significant less than ($t(112.51) = 5.31$, $p < .001$) the ratings of administrators perceptions of teachers' extrinsic motivation ($M = 3.76$, $SD = 0.45$). The effect size, Cohen's *d*, was small at 0.36 standard deviations.

Intrinsic and Extrinsic Motivation

To compare the intrinsic and extrinsic scores of teachers, a dependent samples *t*–test was conducted. Results indicated that teachers' more strongly agreed with the intrinsic motivation items ($M = 4.35$, $SD = 0.41$) than the extrinsic items ($M = 3.46$, $SD = 0.611$); $t(651) = 45.85$, $p < .001$. Moreover, the effect size, Cohen's *d*, was large at 1.80 standard deviations.

Gender and Teacher Experience

To compare teacher scores on the intrinsic and extrinsic scales (dependent variables) by gender and years of experience (independent variables), the researchers conducted two factorial ANOVAs. The homogeneity of variances assumption appeared reasonable for both the intrinsic scores ($F(5, 645) = 1.08$, $p = .37$) and the extrinsic scores ($F(5, 620) = 0.66$, p = .66).

The ANOVA results for the intrinsic scores indicated no significant interaction between gender and experience, $F(2, 645) = 0.01$, $p = .99$. Therefore, main effects were interpreted directly. The main effect for gender was significant, $F(1, 645) = 5.48$, $p = .02$; with a very small effect size of $\eta^2 = .01$; showing that females indicated higher intrinsic motivation scores ($M = 4.37$, $SD = 0.38$) than their male counterparts ($M = 4.25$, $SD = .04$). The main effect for experience levels was not significant, $F(2, 645) = 0.31$, $p = .74$, $\eta^2 < .01$.

The ANOVA results for the extrinsic scores indicated no significant interaction between gender and experience, $F(1, 620) = 0.72$, $p = .47$. Therefore, main effects were interpreted directly. The main effects for gender ($F(1, 620) = 0.62$, $p = .43$) and experience levels were also not significant ($F(2, 620) = 2.37$, $p = .94$).

Discussion

As practitioners continue to search for what motivates teachers, there is a consensus that motivated teachers are essential in ensuring that students learn, schools improve, and education continues to progress (Richard, et al., 1993; Tucker et al., 2005). As teachers are the lifeline of education, administrators are assigned the role of creating a motivating atmosphere that is conducive by perceiving the needs of teachers (Blasé & Kirby, 2000; Whitaker, et al., 2000). This study examined the differences in perceptions of what motivates teachers from both the teacher and administrator perspective. This study sought to offer evidence on increasing teacher performance by identifying factors that motivate teachers to perform. Intrinsic and extrinsic factors were identified. Additionally, gender and experience were studied to gain more

insights into the impact each had on teacher motivation.

An overall comparison of intrinsic (M = 4.35, SD = .40) and extrinsic (M = 3.45, SD = .61) responses revealed higher scores for intrinsic factors. Of note, the mean difference between the intrinsic and extrinsic scales was at least one full measure on the Likert scale with an effect size of 1.80 standard deviations. This finding is encouraging if Lashaway-Bokina's (2000) supposition that students need teachers who are more intrinsically motivated to foster their love for learning is correct.

A closer inspection of the top scoring intrinsic item "pride in work" paralleled the findings of Maslow's (1970) highest level of need for self-actualization. An individual who has reached this level seeks internal means for motivation. Furthermore, a self-determined individual exhibits pride in work after the basic needs of autonomy, competence, and relatedness are fulfilled. Self-determination is the ultimate in an individual becoming intrinsically motivated (Ryan & Deci, 2000a). The next highest scoring intrinsic item was "sense of accomplishment." This further illustrates the need for teachers to internalize the need for doing well and then accomplish a task or directive because success is important to them.

Teachers and administrators scored "time off/ holidays" as the highest scoring extrinsic item. This item was followed by "supervisor recognition" and then "salary." Interestingly, "parent recognition" followed closely after "salary." Ryan and Deci (2000b) recommended a process by which individuals can move from being extrinsically motivated by an action to being intrinsically motivated by that action. Their research suggested that, "The more one internalizes the reasons for an action and assimilates them to the self, the more one's extrinsically motivated actions become self-determined" (Ryan & Deci, 2000a, p. 62).

The primary research question addressed differences in teachers and administrators opinions of what motivates teachers. Results indicated statistically significant differences on both intrinsic and extrinsic scales for teachers and administrators. Teachers rated intrinsic items higher than administrators and administrators rated extrinsic items higher than teachers rated for themselves. The findings indicate that there is a disparity between administrator perceptions of teacher motivation and actual teacher motivation. Administrators in this study viewed teachers as more extrinsically motivated and less intrinsically motivated than teachers' responses indicated of themselves. This finding contributes additional empirical evidence to the body of literature and extends Bexley's (2004) findings. Bexley surveyed 382 teachers and 118 administrators from elementary, middle, and secondary schools in a southern state and found significant differences in intrinsic factors, but not extrinsic factors. Thus, both studies revealed a misperception of administer views of teachers' intrinsic motivation; yet the findings from the two studies differ with respect to extrinsic motivation.

With respect to gender, perhaps women are somewhat more intrinsically motivated than men. While this sample only included participants from one Service Cooperative, the demographic of teachers within this Cooperative includes 77% white females and correspondingly the majority of teachers within the state are also white females (72%). Earlier studies reported significant gender differences (Brimblecombe, et al., 1996; Ma & Macmillan, 1999;). With respect to administrators, the Service Cooperative is comprised of 95% white, male administrators. Therefore, the external validity of the administrator results may be limited to white, male administrators. With respect to gender and extrinsic motivation, the findings from this study mirrored that of Lee's (1991) finding of no relationship and contradicted Porter's (1993) findings. Lack of statistical significance does not prove a lack of relationship and a significant difference was found for teachers' intrinsic motivation and gender. Therefore, it is likely that future studies will further illuminate the issue of teacher attribute variables and motivation.

Implications for Administrators

Administrators can use the empirical evidence found in this study to make decisions that are conducive to enhancing intrinsic motivation. The results of this study imply that teachers and administrators had slightly differing perceptions on what is motivating to teachers. An administrator must not only be an instructional leader, manager, disciplinarian, and counselor, but also an effective motivator. As Sergiovanni (1990a, 1990b) surmised, a moral

leader contains four dimensions that allow them to be motivational and lead change: leadership by bartering, leadership by building, leadership by bonding, and leadership by banking.

Administrators continue to have the awesome task of understanding that motivational factors for one teacher may not necessarily prove motivating to other teachers (Lehman, 1989). The differing perceptions between teachers and administrators of teacher motivation found in this study illustrate the need for administrators to alter their views on what motivates teachers. The significant difference in teacher and administrator perceptions illustrated differences and thus, it is possible that the current practices of administrators may not be contributing to motivational factors for teachers. Strategies for administrators that will enhance teacher motivation include talking with teachers, promoting teachers' professional growth, and fostering teacher reflection.

Administrators and teachers alike ranked intrinsic factors as being more important to teachers than extrinsic factors. However, this study found a significant difference in how high teachers and administrators rated the intrinsic factors. Teachers preferred intrinsic factors more favorably. Ryan and Deci (2000a) proclaimed that extrinsic motivation varies depending on the level of autonomy. They suggested that teachers who are extrinsically motivated are in a process to attain intrinsic outcomes through a taxonomy of the organismic integration theory (2000b). In this theory, the teacher transitions through six steps of having no control to having full control of a situation—thus internalizing the reason for an action and becoming self-determined.

As characterized by Deci and Ryan (2000a) and confirmed in this study, administrators must ensure that teachers' needs for competence, relatedness, and autonomy are met. Teachers are no different than any other professional in that they want to be good at their jobs. Administrators must provide training that allows teachers to reach this level of success and then offer support and genuine feedback based on performance. Moreover, relationships are paramount to improving teacher motivation and ultimately teacher performance. Teachers need to perceive that they belong to and are a part of the vision of the school. Administrators must have practices that foster these relationships and not hinder these relationships. Finally, after teachers are trained and are connected to the mission, they desire autonomy to carry out their tasks to teach. Administrators have to trust that they have equipped teachers with the necessary tools to be successful and to be high performing.

This study resulted in higher scores for intrinsic items, but it is important that administrators understand that extrinsic motivators have a place in motivating teachers. A closer look at the top three scores for extrinsic factors "time off / holidays", "supervisor recognition" and "salary" revealed administrators have an important role in ensuring that practices are in place to enhance teacher motivation. Perhaps, administrators could offer compensation time as a way to motivate teachers. Also, the results implied that teachers appreciate recognition for their actions and efforts to increase student achievement and improve schools. Finally, teachers and administrators selected salary as the third highest factor that extrinsically motivates teachers. Building level administrators, or central office administrators for that matter, do not have much control over how much teachers are paid. However, serving as an advocate for teacher salary increases could prove to be a successful way to motivate teachers.

Recommendations for Further Research

Administrators can have a great impact on motivational factors of teachers through strong leadership. Research presented in this study suggests that administrators who have a combination of great leadership with a shared vision will gain the better outcomes from teachers. Future studies should perhaps focus on a comparison of leadership style and motivational factors. Furthermore, research should be conducted to gain insight on whether motivating factors will change for elementary, middle and secondary teachers. Using a smaller sample, a qualitative study could probe more deeply into understanding how teachers are motivated.

Additionally, it would be interesting to focus on demographics and teacher motivation. Factors such as socioeconomic status of teachers, race of teacher or student, or whether the income of teacher is primary or secondary could offer more insight as to motivational factors for teachers. Lastly, it would be interesting to see if the results of this study were consistent with

another sample in other states using the same design, research questions and instruments.

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Table 1.

Summary of Items and Factor Loadings for Varimax Orthogonal Two-Factor Solution for the Teacher Motivation Questionnaire (N=652)

Item	Factor Loading	
	1	2
Salary	.036	.602
Job Prestige	.021	.640
Time off/holidays	-.011	.507
Easy hours	-.056	.526
Love for children	.289	-.076
Public recognition	.208	.635
Supervisor recognition	.315	.606
Parent recognition	.307	.555
Improving student's achievement	.386	.037
Parent involvement	.439	.289
Scores on 'high stakes' testing	.220	.435
Effective staff development	.600	.262
Pride in work	.571	-.065
Professional growth	.572	.074
Teacher empowerment	.460	.325
Supportive open principal	.651	.112
Shared vision/goals with colleagues	.692	.091
Shared responsibility with peers	.659	.135
Influence of former teacher	.347	.037
Participation in decision making	.606	.233
Atmosphere of school setting	.607	.216
Benefits (insurance; retirement)	.106	.495
Merit pay	-.017	.606
School based performance awards	.185	.591
Teacher mentoring	.424	.343
Positive colleague relationships	.645	.107
Sense of accomplishment	.598	-.003
Supportive evaluations	.637	.201
Knowing what is expected	.674	.070
Having needed materials	.571	.115
Rank/title (lead teacher, chair)	.088	.578

Table 2.

Descriptive Statistics of Intrinsic Survey Items

Item	*Mean*	*SD*
Pride in work	4.78	0.86
Sense of accomplishment	4.76	0.49
Supportive, open principal	4.57	0.77
Knowing what is expected	4.57	0.68
Having needed materials	4.48	0.81
Positive colleague relationships	4.46	0.7
Atmosphere of school setting	4.45	0.79
Professional growth	4.34	0.76
Supportive evaluations	4.33	0.84
Shared vision/goals with colleagues	4.31	0.74
Shared responsibility with peers	4.16	0.84
Participation in decision making	4.12	0.86
Effective staff development	3.81	1.08
Teacher empowerment	3.69	1.09
Parent Involvement	3.68	1.01
Teacher mentoring	3.43	1.07

Table 3.

Descriptive Statistics of Extrinsic Survey Items

Item	*Means*	*SD*
Time off / holidays	3.90	1.11
Supervisor recognition	3.73	1.15
Salary	3.65	1.26
Parent recognition	3.62	1.1
Benefits (insurance, retirement)	3.55	1.24
Job prestige	3.32	1.22
Scores on 'high stakes' testing	3.28	1.3
Peer recognition	3.27	1.21
Rank / title (lead teacher, chair)	2.84	1.2
School based performance rewards	2.75	1.24
Public recognition	2.70	1.21
Easy hours	2.42	1.38
Merit Pay	2.39	1.31

The Use of Formative Assessment in University Level Mathematics Courses

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This is an empirical analysis of formative assessment implementation in university differential equations courses where a regression was performed with the student's final course points as the dependent variable. Controlling for differences in ability, being in one of the formative assessment sections added 10.30 points to the final score, the equivalent of a whole grade difference, that is, a "B," instead of a "C". Difference scores, predicted score minus actual score, were calculated for each student. The students were then sorted into those who achieved well above what was expected (80^{th} -100^{th} percentile) and those who achieved well below what was expected (0- 20^{th} percentile). Students in the first group devoted time early in the semester to their course work, while those in the other group spent almost twice as many hours at a paid job at the beginning of the semester and then reallocated their time at the end.

The issues of assessment and accountability have gone beyond the classroom and entered the political arena. With this development they have become less nuanced as broad generalizations and policies are sought. What sometimes gets lost in many of these discussions is the fact that the educational sector is incredibly varied by grade, by subject, and by instructional format. Yet, at every level of instruction within the educational sector, the focus continues to be on improving instructor practices and raising student achievement. In this research paper we are going to consider an aspect of assessment that has been garnering increasing interest, specifically formative assessment, and consider how what types of students benefit most from its use.

Assessment

According to one report on the subject, "Assessments provide an operational definition of standards in that they define in measurable terms what instructors should teach and students should learn. When students engage in assessments, they should learn from those assessments." (National Education Standards, 2001) Thus assessment, whatever form it takes, defines the playing field of academic interaction where the processes of teaching and of learning should be mutually reinforcing. However, in an era where accountability through standardized tests has become a driving force in educational reform, the definition of how and what an instructor should teach and how and what a student should learn is becoming significantly narrower.

As usually understood, assessment is used by most instructors to determine what learning has occurred, and serves as the basis for the assignment of grades. Such assessment is *summative* as it is the end point of the teaching-learning sequence. Assessment is *formative* when the evidence is used as an on-going process within the class to adapt the teaching to meet student needs as well as provide feedback to students (Black & Wiliam, 1998). It is very difficult for instructors not to focus on summative assessment measures since the prevailing standards and accountability pressures drive them inevitably in this direction. Some have indicated that the time has come when formative assessment, occurring within the learning process, needs greater prominence (Black & Wiliam, 1998; Layng, Strikeleather, & Twyman, 2004). In reality, both perspectives need to be incorporated into a total learning process.

Formative assessment informs both instructors and their students as to the degree to which the students have mastered the material. Feedback to the students serves two functions, to identify problem areas and to provide reinforcement of successful learning and

achievement. Feedback to the instructor serves to identify the degree to which instruction was successful and identify needed changes in instruction. It can be used to distinguish between individual and group problems that can then be used to suggest solutions – revision of instruction, specific group work, or individual remediation. Yorke (2003) offers a prescription for an approach to formative assessment. In the model as depicted in Figure 1.

1. The instructor constructs a lesson module and related assessments based on the perception of the students' readiness and prior knowledge and then presents the module (Stage 1).

2. The instructor administers an assessment (Stage 2).

3. Both the instructor and the students consider the assessment results. (Stage 3).

4. Dialogue between the instructor and the student begins (Stage 4). Depending on dialogue with the instructor, the student adjusts learning style or proceeds with current style. Depending on the dialogue, the instructor adjusts teaching or proceeds to the next learning module (Stage 5).

As is apparent from Figure 1, the conceptualization of the process is not difficult. However, the measurement of the degree to which it has been implemented and the degree to which it results in a measurable effect is another situation. Also, not only is this a staged process, but there are two different perspectives to consider, that of the student and that of the instructor. Further, variations within the educational process – different grades, different subjects, and different classroom characteristics such as size and instructional format make estimations of effect difficult.

For the instructor, formative assessment generally implies frequent assessments that vary by: a.) length, b.) depth of knowledge expected, c.) relative importance, and d.) format; altered instruction based on assessments; instruction on the interpretation and use of the assessment results; and perhaps altered classroom interaction to increase student engagement. For the student formative assessment means considering adjustments in studying and perhaps in classroom behavior in light of assessments (see Figure 1).

The research base on formative assessment and the efforts to demonstrate its effectiveness in improving teaching and learning have focused very heavily on K-12 classrooms and the professional development of in-service instructors, has generally focused on the role of the student and the student reactions, and has been based on small samples (Boston, 2002; Hattie & Jaeger, 1998; Ruston, 2005; Taras, 2002). Further, while Ruiz-Primo and Furtak (2004) do broaden the discussion of assessment to informal interactions, more attention has been paid to formal, planned assessment contexts. However, not enough attention has been paid to the fact that this teaching/learning process can be operationalized in different ways, that there can be different levels of implementation, and that the focus can be on instructor, students, or both.

Sadler, in an article about formative assessment, argued that grades may be counter-productive to formative assessment in that they are focused on what has been accomplished and not what needs to be done (Sadler, 1989). Taras (2002) argues that grades often have the unfortunate effect of distracting students from what they should be focused on and that is learning. Specifically, "I reiterate that marks have a place even in formative assessment, but not in isolation and not before feedback and judgments have been interiorized." (p. 507.)

Research Conditions

In this study a type of formative assessment, increased feedback to students, was tried under different conditions in four sections of a differential equations course during two semesters at an urban university. The university where the research was done is very large thus reducing within semester and between semester contamination threats. None of the students were to be told about the study. Initially the plan was to include four sections of the same course taught by the same instructor, two each in the Spring 2007 and the Fall 2007 semesters. In each semester there was to be one section that incorporated formative assessment elements and one that did not resulting in two experimental condition courses and two control courses. The sections were generally of the same size (N=30 students) and did not differ in gender and

race/ethnicity distributions, nor on their ability as measured by their entrance SAT scores.

The same materials and the same number of tests (4) were administered in each class. What differed was the number and weight of the quizzes. The course instructor, an experienced mathematician, opted to implement a number of quizzes in each course, but put only grades on some and detailed analyses on others, a strategy that had been found effective with younger children. However, since the instructor had decided to implement the same treatment in Spring 2007, but in different order, it was decided that both of these sections had to be treated as having a formative assessment technique as the pre and post tests were only given on a semester wide basis. In the Fall 2007 classes the control class did not experience the quizzes. Thus, in this study there were three formative assessment sections, and one control section. Lastly, in addition to a content based pre and post test, pre and post survey attitudinal and behavior data were collected as well. The number of students was reduced from 117 to 79 because of the need to have data from different sources (pretest results, post test result, pre-survey results, and post survey results. The students for whom data were complete were not different from those for whom the data were incomplete. Thus any generalizations of the findings are not compromised. The means and standard deviations for the variables that remained in the analyses are presented in Table 1.

In these analyses, the dependent variable is the post test content score. To control for confounding factors such as variability in the initial knowledge base, a regression analysis was performed (see Table 2 for details). The interpretation of R Square is that 24 percent of the variation in the dependent variable is explained by the independent variables taken together. The variable most strongly related to the dependent variable was the student's pretest content score as evidenced by the Beta value of .408. However, controlling for differences in ability, being in one of the formative assessment sections added 10.30 points to the final score as shown by the regression coefficient, which is equivalent to a whole grade difference, that is, a "B," instead of a "C".

Analysis of Residuals

To assess how implementation of FA affected the students, an analysis of residuals was conducted. Here, the actual test score was subtracted from the predicted test score. A negative result means that the student performed higher than expected and a positive result means that the student performed lower than predicted. In all, 58.2% of the students performed higher than expected. The difference score ranged from a student whose predicted score was 51.62 points higher than the actual score earned to a student who's predicted score was 31.81 points lower than what was actually earned. The first student performed below expectations which the latter student performed above expectations.

Next the data were divided into three groups: those who achieved well above what was expected (80^{th} percentile and above), those who achieved well below what was expected (20^{th} percentile and below), and those in the middle percentiles. A student classified in the 80^{th} percentile or higher on this difference score need not have achieved at the highest level, but certainly did achieve significantly higher than predicted. Also it is possible for a student to have achieved a good grade, yet be in the 20^{th} percentile of lower on the difference score. What would be true of such a student is that they achieved significantly less well than predicted. The difference score is a value added model designed to capture the effects of what happened in the classes. While not statistically significant, a greater percentage of those achieving well above expectations were in the formative assessment sections than was the case for those students in the control or non formative assessment section.

On the attitudinal survey given at the beginning of the semester, those students who performed well above what was predicted, had the highest mean on the academic confidence scale and the highest mean on the "like science" scale. Those students performing as expected, had the highest mean on the "science is difficult" scale and were the most interested in doing well so that they could "get a good job." Those students performing well below expectation, had the highest percentage responding that they do the best they can to learn and the lowest percentage on the "like science" item.

On the attitudinal survey given at the end of the semester, those students performing well above expectations, had the highest percentage of students responding that they felt those doing well in mathematics and science had special abilities, were certain that they could do well in mathematics, and felt that they learned the skills to get a good job in college. Those students performing as expected had the highest percentage agreeing that they could ensure that they would not get poor grades if they decided that would be the case. The also felt that they could do an excellent job in a mathematics course. The students performing well below expectations had the highest percentage agreeing that they tried to do the best they could in mathematics classes and that they were certain they could learn the materials when they tried.

Student time allocation decisions: Where the difference became apparent

Students were asked to estimate the number of hours per week that they spent in eight areas both at the beginning of the semester and at the end. At the beginning of the semester, on average, 30.65 hours were spent per week on academic activities, going to class (18.32) and doing homework (14.33). The next area was talking to friends (12.26). At the end of the semester, the number of hours talking to friends declined and the number of hours doing homework increased. When the students are divided according to whether they performed well above what was predicted (80 percentile and higher), as expected (21^{st} to 79^{th} percentiles), or well below what was predicted (20^{th} percentile and lower), interesting patterns emerge.

It is apparent that those students who performed below predicted had time allocation problems from the start as they spent almost twice as much time at a paying job as those students who performed well above what was predicted (see Table 3 for details). This was at the expense of going to class, doing homework, and doing household chores. At the end of the semester, these students had reduced the number of hours working and increased the hours doing homework. It is apparent that getting a good start is crucial.

Conclusion

It is apparent that integrating formative assessment techniques, in this case multiple quizzes during the semester, into a university course did have a significant affect on student performance. In this case, students allocated their time differently. Those students who performed significantly above expectations devoted time early in the semester to their course work, while those who performed significantly below expectations did not. At the end of the semester, students in this latter group reallocated their time and most likely were playing "catch up." A number of issues still need to be addressed. Is this the only effect that the integration of formative assessment can have? Are some students affected more than others? Do some students need to be affected more than others? A larger student base is needed to address these issues and will be in the next study.

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Acknowledgements

The work herein was supported in part by the National Science Foundation grant #0455786 through a grant to Temple University. The opinions expressed do not necessarily reflect the position of the supporting agencies and no official endorsement should be inferred. Please address any correspondence to J. Stull, Institute for Schools and Society, Temple University, Philadelphia, PA 19122, stullj@temple.edu).

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Appendix

Verification of Scale Reliabilities

Academic Self Confidence Scale

Most people can learn to be good at math.
You have to be born with the ability to be good at math.
I'm certain that I can do an excellent job on my math tests.
I'm certain I can understand the most difficult material presented in math texts.
I'm certain I can understand the most difficult material presented in science texts.
I study to get a good job.
When I sit myself down to learn something really hard, I can learn it.
I'm sure I can understand the most complex material presented by my science professor.
When I study, I make sure to remember the most important things.
I study to increase my job opportunities.
I'm sure I can do an excellent job on my English assignments.
When studying, I try to work as hard as possible.
I'm sure I can do an excellent job on my English tests.
I'm confident I can understand the most complex material presented by my math teacher.
If I decide not to get any bad grades, I can really do it.
I keep working even if the material is difficult.
I study to ensure that my future will be financially secure.
If I decide not to get any problems wrong, I can really do it.
I'm sure I can do an excellent job on my math assignments.
I try to do my best to learn the knowledge and skills taught.
If I want to learn something well, I can.
I'm certain I can learn the skills being taught in my math class.
When studying, I put forth my best effort.

Cronbach's α =.953

Science is not difficult scale

I would like science much more if it were not so difficult (Disagree)
Although I do my best, science is more difficult for me than for many of my classmates (Disagree)
Nobody can be good in every subject, and I am just not talented in science (Disagree)
Science is not one of my strengths (Disagree)

Cronbach's α =.859

Positive attitude toward school scale

I think the subjects I'm taking are interesting and challenging
I get a feeling of satisfaction from doing what I'm supposed to do in class
I have nothing better to do
It's important for getting a job later on
It's a place to meet my friends
I play on a team or belong to a club
I'm learning skills that I will need for a job
All my friends are in college
My parents expect me to

Cronbach's α =.833

Figure 1. *Stages of formative assessment process*

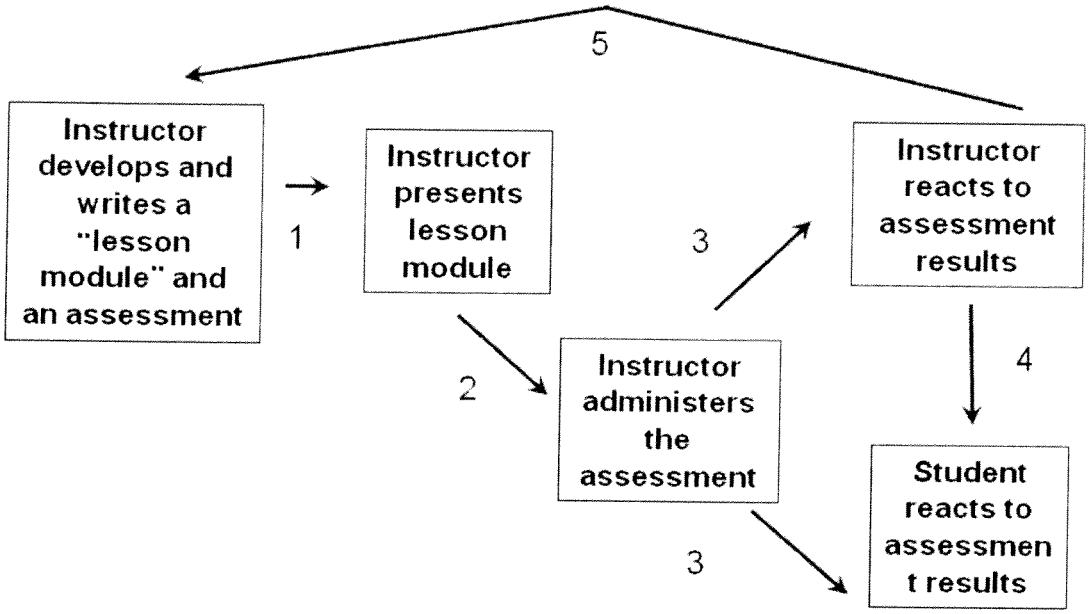

Table 1.

Measures of central tendency and dispersion

			Mean	Standard Deviation	Minimum	Maximum	N
Regression analysis	Dependent Variable	Post test content score	77.20	20.91	0.00	100.00	
	Independent Variables	Student in FA section dummy	0.75				129
		Number of hours spent per week on going to class and doing homework	32.55	13.68	10.00	80.00	108
		End of course academic self confidence dummy	2.95		1.00	4.00	78
		Course pretest results	48.25	37.76	0.00	100.00	124
Residual analysis		Predicted test score minus the actual test score	0.00	15.29	31.81	51.62	79

Table 2.

Regression Analysis

	Regression coefficients	Significance
Student in FA section dummy	10.30	0.028
Number of hours spent per week on going to class and doing homework	0.30	0.022
End of course academic self confidence dummy	5.09	0.082
Course pretest results	0.17	0.002
Constant	40.55	

Table 3.

Number of Hours Per Week Devoted to Various Activities

	At the beginning of the semester				At the end of the semester			
	Overall mean	Students performing well above expect-ations	Students performing as expected	Students performing well below expectations	Overall mean	Students performing well above expectations	Students performing as expected	Students performing well below expectations
Watch TV	6.49	5.53	4.96	4.59	6.26	8.43	4.94	8.56
Play computer games	3.11	2.89	2.58	3.68	2.93	2.22	2.27	5.66
Talk to friends	12.26	13.11	11.44	10.55	9.88	11.09	9.83	8.50
Do household chores	5.88	4.11	7.13	7.15	6.53	4.72	6.88	7.60
Play sports	4.00	4.86	3.72	2.27	4.06	4.47	4.62	2.22
Work at a paying job	14.28	10.29	14.39	19.86	11.54	9.66	11.82	12.00
Go to class	18.32	18.43	18.00	15.63	17.67	17.19	17.99	17.34
Do homework	14.33	12.71	15.52	12.00	17.28	14.56	18.23	17.44

The Dialogic Spirit of Advanced Literacy: Participatory Learning of Disciplinary Content

Wen Ma
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There are few studies that focus on how doctoral students perceive and participate in class discussions amidst reading, writing, and doing projects to learn disciplinary content. This qualitative case study explored three doctoral students' participatory learning experiences in a graduate seminar for qualitative research methods for education. The findings revealed complexity and diversity in the participants' intellectual engagement with the same disciplinary content. These findings suggest that a dialogic spirit transcends across the various discussion, reading and writing activities in advanced literacy practices. This work helps educators to better understand more mature learners' complex sense-making endeavors in diverse dialogic settings.

In recent years a discussion-based instructional approach has been promoted to help students learn literacy skills, to comprehend texts, and to acquire academic knowledge. For example, studies at the elementary level looked into models for incorporating discussion groups into language arts, social studies and science classes (Daniels, 2001; Evans, 2002; Kong & Pearson, 2003; Wells, 2001). Research at the secondary levels further explored the potential of using discussion for learning English, literature and a broad array of content areas (Applebee, Langer, Nystrand & Gamoran, 2003; Barnes & Todd, 1995; Glazier & Seo, 2005; Miller, 2003). Beyond the secondary level, there are investigations on how class discussions help college students acquire disciplinary content, e.g., Goldblatt and Smith (1995) examined four first-year college students' conceptions of good discussions, and Nowacek (2007) called for interdisciplinary connections through class discussions. To date, there are few studies of class discussions at the doctoral level (Brookfield & Preskill, 2005).

Such a gap in research sparked the need to determine how doctoral learners perceive and participate in discussions amidst reading, writing, and doing projects to acquire disciplinary content. Theoretically, such inquiry helps to extend the existing research base on class discussion across different grade, ability and curriculum levels. Pedagogically, findings from such studies may be useful to help professors to better understand advanced learners' sense-making endeavors and thus to engage them accordingly in diverse dialogic settings. Therefore, inquiry about this issue is important to the educational community. In this study, I explored three doctoral students' participatory learning experiences in a seminar for qualitative research methods for education. My focus was on how these students engaged with the content, rather than what they actually learned.

Theoretical Framework

Drawing on Vygotsky's (1978, 1987) sociocultural perspective, Applebee (1996), Lee and Smagorinsky (2000), and Miller (2003) highlighted a number of theoretical propositions concerning social interaction for sense-making and problem-solving. Discussion as the most prominent form of language-mediated social interaction provides the needed context for learners in a particular class to interact with each other about the specific content. In addition, peer discussions provide open opportunities for learners to talk out issues of importance, the process of which further expands each individual's thinking through expressing his or her ideas, and by hearing the alternative views of others. As elaborated by Britton (1990), using language to express oneself offers the avenue to produce, reshape, or extend one's ideas from an often fuzzy and work-in-progress state to a more clear and meaningful form. In all, class discussions make it possible for students to make sense of any curricular content.

Importantly, social construction of

meaning encompasses a variety of language-mediated, meaning-making endeavors and activities. Bakhtin's (1981, 1986) notion of dialogism provided a useful lens to look at the role that dialogue plays in facilitating thinking and understanding. Following Bakhtin's theorization, dialogism means more than face-to-face, interpersonal verbal exchanges; it is dialogic in spirit (K. Gutierrez, personal communication, December 6, 2002). In other words, dialogism embodies dialogic interactions between an individual and the vast number of voices represented by other conversationalists, by the texts, and between an individual's previous experiences and the evolving new experiences (Wertsch, 1991).

Based on these ideas, dialogic activities may include verbalized and audible interactions, as well as other sense-making endeavors involving multiple textual voices. For example, what one read, wrote, spoke, heard, perceived or encountered in the past may be continuously reflected in one's current thinking and understanding. These prior experiences further condition newer ones in a ceaseless process of social and dialogic interactions. Therefore, social-dialogic interaction for learning needs to be understood broadly in order not to lose the cross-time and cross-place interconnectedness in Bakhtin's (1981-1986) notion of dialogism.

There exists rich research literature, particularly from composition, rhetoric and genre studies, on how graduate students socialize into discipline-specific discourse community through writing and reading (Berkenkotter & Huckin, 1995; Geisler, 1994; Olson, 1994). For example, Prior (1998) showed in a range of case studies how graduate students engaged in disciplinary learning through writing academic papers and interacting with their peers and professors. In particular, viewing disciplinary enculturation as acquiring a domain of knowledge and practice taken for granted by a particular discipline, he argued that "In disciplinary, much of the work of [disciplinary] alignment is centered around texts, around the literate activities of reading and writing" (p. 27). The disciplinary content of the present study is qualitative research methods, to be learned through discussion, reading, and writing activities in a doctoral seminar.

Also pertinent to this inquiry is the concept of discussion. Nystrand (1997) envisioned discussion as using open-ended questions and substantive uptake to engage with literary texts by secondary teachers and students. Drawing from neo-Marxist structural analysis, post-structuralism, and repressive tolerance as contemporary theoretical concepts to support the use of discussion, Brookfield and Preskill (2005) further proposed employing discussion as a way of teaching. Here the term refers to the open-ended, course-related discussion as an instructional tool. In the research described below, the professor engaged the class to collectively examine varied aspects of the disciplinary content, instead of giving lengthy lectures. As a result of articulating one's thinking and understanding of the assigned reading, writing, and the research projects, as well as hearing others' interpretations of the course material, the class community came to absorb the discipline-specific vocabulary, understand the epistemological framework of the qualitative techniques, and learn the procedures for doing qualitative research in education. As such, the class discussions helped students to acquire the disciplinary content.

In summary, there is much more to a dialogic approach than having face-to-face discussions, especially for more mature learners. Such a viewpoint places the use of discussion into a broad sociocultural perspective. It also provides the theoretical thrust for the present inquiry of doctoral student's participatory learning experiences through discussing, reading and writing activities in an advanced seminar. Insight gained from this study may thus help educators in diverse educational settings to tap the full potential of social-dialogic interaction for teaching varied disciplinary content. Specifically, it addressed this question: In what ways did a dialogic spirit transcend across the doctoral students' engagement with the content through the discussing, reading and writing activities in the seminar?

Method

The Research Design

This study used a qualitative case study design (Creswell, 2005), which is "an intensive, holistic description and analysis of a single instance, phenomenon, or social unit" (Merriam, 1998, p. 27). I felt the qualitative dimension in the design helped me to view each participant as a whole person engaged in specific learning activities, while the situated and rich account

helped me to minimize potential researcher or research design bias. As such, it allowed me to use thick descriptions to present both the nuances and the big picture within the boundary of the seminar.

The Setting and the Participants

The site was a research-intensive state university in the Northeast. As a required, three-credit research methods course for all doctoral students in the university's Graduate School of Education, the class met for 3 hours every week for a whole semester. The content of the seminar ranges from epistemological foundations, methodological considerations, to actual steps needed to conduct a qualitative study. The readings focused on concepts and on methods of doing qualitative research in the field of education, ranging from the qualitative paradigm, to research statements, research questions, design, and procedures for data collection and data analysis. Actual field work was also included for students to put what they learned into practice, including the completion of an interview case study and a final observational field study. Amidst these reading, writing and doing research projects, a variety of discussion formats were employed, including whole class discussion and small group discussion. The assessment of the content mastery was for all students to finish the assigned reading materials, submit the written responses, participate in class discussions, and complete the two actual research projects.

In the seminar, there were 16 doctoral students: 10 European American students and 6 international students (it happened that 5 of the 6 non-native students came from Korea). I used the purposeful sampling method to select the participants to study the Korean international and American students' learning experiences (Ma, 2004). Specifically, I first focused on 4 of the 5 Korean students (I had intended to recruit all of them, but the fifth one did not have time to participate). Then, I randomly selected four American students who had similar backgrounds, such as similar educational experience, approximate age, or same gender as the Korean students did. The two groups each included one male and one female in the first year of their doctoral studies and one male and one female in the second year. Half way into the semester, however, the second-year male American participant dropped the course due to a family emergency. Thus, I collected data from four Korean and three American students.

Through comparing these diverse participants' learning experiences, I found that as a group the mainstream American students appeared more proficient and adept in utilizing dialogic interactions to materialize their developing ideas as thoughts-in-progress, thus using discussion to further their thinking, clarify any confusion, and extend personal understanding. In contrast, the Korean students adjusted painfully from their familiar lecture-based model to the discussion-based model of instruction, as well as from a Korean to an English language environment. Their participation became problematic because of difficulties interwoven on three dimensions simultaneously: language, culture, and disciplinary discourse (Ma, 2004).

The research described here extended the above inquiry by showcasing the intellectual engagement with the content by the three American participants: Bettie, Jerry and Patty (all are pseudonyms). Bettie, at 23, was a second-year doctoral student majoring in educational counseling. Coming from a teacher's family in which "everybody was a big talker," she appeared energetic and confident. She described herself as a good student who gets good grades. Jerry, at 30, was a first-year literacy major. He came from a working class family, and played sports in high school and college. Prior to the start of his doctoral study, he taught English for 6 years at a boarding school for children with physical disabilities. Patty, at 26, was tall and athletic, spoke fast, and came from a doctor's family. She was a part-time science education major and a full-time first-year science teacher at a local middle school. She described herself as being "pretty outgoing, pretty talkative, and pretty open and tolerant to new ideas and perspectives."

The instructor of the seminar, Dr. Jones (also a pseudonym), was a European-American female professor in her thirties. Although the focus of this case study was the three focal participants' learning experiences, it was clear that the Dr. Jones' instruction and scaffolding influenced their talk, reflection, and learning. For example, she often met with students during her office hours, when she listened to their concerns, encouraged them to participate, and provided suggestions. My class observations confirmed

this point as she not only interacted with the more vocal students, but also worked to create opportunities for the less vocal students to participate more in discussions. For instance, she often said, "Let's hear what so and so has to say about this issue," and then provided follow-up questions to clarify or extend points raised by the students. Dr. Jones explained to me that she used students' written work (e.g., weekly responses and research papers) as an indication of their learning and understanding of the content and then used this information to guide their learning in classes. Importantly, while this research focused on the three participants, I am aware that Dr. Jones' explicit instruction and scaffolding, and other students' interactions, inevitably influenced their talk, writing, reflection and learning.

The role I played was a participant observer (Spradley, 1979). In the first class, with Dr. Jones' consent I explained that I was interested in better understanding how they would engage with the disciplinary content in the seminar, and from the start all students accepted me as a member of their class community. During the research process, I viewed the participants as my colleagues progressing at different places on their doctoral journey. During each class, I sat in a corner of the classroom to listen, observe, take notes, and videotape the discussions. On a few occasions when asked by Dr. Jones or the students, I shared my views during discussions. I also had many informal conversations with the participants after classes. This helped me to establish rapport with them, which made them feel comfortable in sharing their views and experiences with me.

Data Collection and Analysis Procedures

To collect my data, I videotaped class discussions from the 3rd week until the end of the semester. In addition, I conducted three semi-structured interviews (audio-taped, see the appendix for the interview protocols) with each participant, which were conducted at the beginning, middle and end of the semester, totaling approximately 12 hours. I also collected the participants' two major papers and the instructor's handouts. Finally, I observed each class and took brief field notes, which I expanded immediately after each class or interview. When did the class meet? What type of classroom? What was the set up---tables, comfy chairs, etc?

For my data analysis in this study, I used the constant comparison method (Glaser & Strauss, 1967; LeCompte & Schensul, 1999). Specifically, I read the interview transcripts repeatedly, identified important sections, used descriptive codes to denote major thematic categories on the margins of the transcript, and drew on other data sources to triangulate the emerging codes. Based on individual case analyses, I then conducted cross-case analyses, paying special attention to similarities and differences. As my analyses proceeded and more categories appeared, I constantly expanded or modified the codes into themes, assuring the emergent themes substantiated and triangulated by other data sources.

I use Bettie as an example. Across the three interviews, Bettie told many anecdotal stories about how she liked to talk as a child and how she liked discussions as a student. These evolved into one major code: Bettie enjoyed discussion as her favorite method of learning. The coding of the discussion transcripts about her actual participation in discussions pointed to how engaged a learner Bettie was, as substantiated by her: (a) asking substantive questions to a guest presenter in Class 7; (b) sharing her analytic procedures and the use of the split-page coding method with the class; and (c) declaring that she was only interested in qualitative research and defended her position by arguing with several classmates in Class 12. Then, I watched the videotapes and considered Bettie's non-verbal behavior and other discursive features (such as pauses, hesitations, etc.) at her think aloud moments not fully captured in the transcripts. I further drew from my field notes (e.g. my reflection on Bettie's queries to the guest presenter in Class 7), as well as from informal conversations with Bettie (e.g. how she changed from having no interest in doing any research to intrigued at becoming a qualitative researcher). Based on all this evidence, "talking to learn" was the theme for Bettie's learning experience in the seminar.

Similar recursive and multiple analyses were conducted for Jerry and Patty, showing that Jerry used writing as a major tool for engaging with the content, and Patty employed varied modes to cope with different activities. All the major codes and themes that emerged from the analyses for Bettie, Jerry and Patty are summarized in Table 1.

Finally, to enhance the trustworthiness of both the research process and the findings of this case study, I repeatedly sought comments and suggestions from two independent researchers on varied methodological issues, ranging from planning the study, choosing the design, to determining the data collection and coding procedures. To further validate my interpretations, I conducted a follow-up interview for confirmation or disconfirmation of the emerging themes with Bettie, Jerry, Patty and the instructor. For example, Bettie shared many personal stories about why she was "not a private person," and Jerry's multiple drafts of his case study paper provided further evidence of the revising processes in which he was engaged. All these measures helped me to understand the varied discussion, reading and writing activities in the larger context of the seminar, and interpret their learning experience from a more holistic perspective.

Findings

In the following, I begin with Bettie's learning experience, detailing her participation in discussion, reading and writing activities, followed by an exemplar account of her engagement with the content. Then, I present findings about Jerry's and Patty's participatory learning experiences respectively. I chose to represent my findings in this fashion in order to present each participant rightfully as a unique, reflective and whole person studying in the same seminar.

Bettie: Talking to Learn

I learn best when I am engaged in discussions. Bettie ranked discussion as her favorite method of learning. Then it was reading, and writing was a distant third. According to Bettie,

> When we're in a discussion, I'm the most engaged. I'm listening the most, I'm ready to join in the most, I'm thinking the most—I'm thinking how the discussion applies to me, I'm thinking how the discussion can be a part of my life; what does it mean to me? When we're discussing, I'm engaged, I'm ready to play the game. (1st Interview)

Bettie perceived that she was more engaged in, and learned more from, discussions because she was not just physically present in the class, but mentally participating in the process as well. Knowing that her input mattered gave her reasons to follow class activities rather than to mentally wander around.

Through participating in discussions, Bettie also developed an emerging sense of self-censorship. For instance, from her program of educational counseling, she learned that "some smart people think quietly, or they may not want to share all their thoughts all the time." Thus, she began to speak out her internal thoughts selectively. Gradually, while talking, she would be thinking about what to say, as well as monitoring the responses from the audience, as if she were watching over her talking and listening through constant mental noting, despite that "my reflection doesn't come out in my talking as I don't share my mental noting at the moment" (Follow-up Interview).

I read to look for things I can talk about. Bettie confessed that the real motivation for her to read and write was that she had to read in order to be able to participate meaningfully in discussions; and she had to write papers in order to get a good grade in the class. If conversing with others functioned as a useful vehicle for learning, reading for Bettie only allowed for a general understanding of concepts. She said she always read the material "just as it was" unless the issues were really interesting, when she might stop from time to time to ponder over parts of what she was reading. A look at the physical appearance of the articles that she read for the seminar revealed that, except for a few underlines and occasional notes in the page margins of one article that she read with her group and co-presented to the whole class in the 4th week, the other articles showed few traces of notes, dog-earring, or things like that, implying that she probably just read them lightly, indeed.

Nevertheless, Bettie felt that it was through talking about the reading that the content became alive to her. This was the time when she perceived that her thinking and understanding became deepened. During my follow-up interview, Dr. Jones commented that she was impressed by Bettie's understanding of the articles as "Bettie had exceptional understanding and memory. For she always had several ideas specific to the readings to glean onto." Based on

my observations, Bettie was able to talk substantively about key issues from the assigned articles.

I hate writing. To write about what she read was a different story. Bettie thought that her writing was rather problematic, and she confided to me that 'my talking impresses others much more than my writing'. Bettie remembered that her mother remarked that she did not know how to organize her ideas logically; one of her professors commented that her paper had too many jumbled sentences. Of all her schoolwork, she procrastinated with writing assignments to the last, usually until she had to do it. As she revealed, "I don't write well, 'cause people didn't make me do it, and I never practice it" (3rd Interview). Consequently she was not confident with writing. Actually, she disdained writing: "I just hate it!"

But the two papers that Bettie wrote for the seminar both received good grades. Take her field study, for example. She studied the group dynamics and the therapeutic value of a university-based drum circle. Besides giving a reasonable justification for changing her researcher's role from non-participant observer to participant observer in the middle of this study, together with rich details of the drum circle, she provided a thorough description of her analytical procedures that runs four full pages, about 15% of the 27-page paper. In this paper, Bettie wrote in a rather colloquial style, which could make her writing appear less academic:

> I peeked in the door, I saw the circle of people moving and beating their drums and it went on my mental list (things I will do when I have more time). The drum circle, like many other missed opportunities as a graduate student became a distant desire, a hope that one day I might sit for a while and listen without other obligations popping into my head as fast as the circle beat their drums. (Introduction of Bettie's Field Study)

Reading her sentences sounds like listening to her talking, and the whole paper flows smoothly from describing the drum circle to interpreting her experience. Both of her papers demonstrated that Bettie began to acquire the basic methodological and analytical tools for qualitative research.

I found my place as a qualitative researcher. While Bettie embraced both the content and the discussion approach used in the course, how did she participate in the learning activities on a week-by-week basis? What happened in Class 7 may be used as an example of how Bettie immersed herself in the discussions. That class consisted of three major activities: a presentation of a qualitative research study by a guest speaker, small group discussions about the students' on-going interview study, and a whole class session, in which students brought unresolved issues to the whole class, and the instructor led the class to further discuss those issues and concerns.

After the guest speaker presented how she conducted her qualitative study and reached her conclusions, Bettie queried whether the researcher ever tried to reach out with her findings to either tell the White teachers to stop the differential treatment, and to tell the Black participants to seize their opportunities and study for a real change in their future life. As a participant observer in the classroom, I felt that Bettie's questions were thought-provoking and pushed everyone's thinking from mere methodological considerations to researcher's ethics and social responsibility because this opened up a new path of thinking for Bettie and others in the discussion present in the dialogic environment to tread.

Later, as the class entered into the small group discussion, Bettie engaged with several classmates about their interview studies. Bettie discussed how she struggled to annotate her data, how she came up with the initial categories in her coding, and what problems she had with her writing. While her peers provided some quick feedback as they listened, Bettie herself kept talking about what she had done and what troubles she still faced, as if lost in, or reliving, her own experience about coding and understanding her data.

In the whole class session that followed, the instructor, after having noticed what Bettie talked about in her small group, asked Bettie to explain her coding process as exemplary work to the whole class, which Bettie did. In this 3-minute talk, she was able to elaborate in detail about the specific steps she went through to come up with her descriptive and interpretative codes, using a split-page transcript format and numerous colored sticky notes. During her

utterances, Bettie made over 20 pauses, hesitations and false starts (one for every 9 seconds), which may be revealing of subtle discursive moves, as she was thinking out loud, about how her thoughts were shaped at various points of utterance.

The above description is only a sketch of how Bettie engaged herself in a variety of learning activities across the semester. I learned that, after taking the qualitative research methods seminar, Bettie became so absorbed in qualitative research in after-class contexts that even when walking down the street or riding the train, she sometimes found herself coming up with fresh questions for herself, engaging in a covert conversation with herself, which showed that she not only grasped some of the vocabulary of the disciplinary content, but also began to utilize qualitative methods in her thinking. The intense engagement that she demonstrated seems suggestive of an inquiry mode by a qualitative researcher at work. Additionally, the covert dialogue Bettie had with herself implies the value of talking at a different level: inquiry-oriented talk with oneself helps to engage and extend one's thinking, as overt discussions with others do.

Jerry: Writing to Learn

I am not going to talk so that I can have my two cents in this conversation. Unlike Bettie, Jerry enjoyed writing. He even wrote short stories as a leisure activity in the past. He completed both papers well before the required deadlines, and wrote more than the expected length as well. Jerry participated actively, although not as much as Bettie did, in both whole class and small group discussions. For him, the important benefits of class discussion at the doctoral level included stimulating intellectual engagement and multiple perspectives on issues under study. In a discussion, Jerry maintained, one view might "lead to a comment from somebody else and bring in things that I hadn't considered when I originally spoke, and that would allow me to rethink and, in a sense, relearn what was already going through my mind" (1st Interview).

Jerry explained to me that he would rather be quiet than say something that he perceived as insignificant, as he was clearly not just "talking for talking's sake." He made it clear that his talking in discussions was more measured and deliberate, as he clearly perceived and formed his comments before articulation because he did not want to sound unintelligent. One difference between his and Bettie's participation was that Bettie participated in discussions relatively more spontaneously, using expressive talking to learn, while Jerry appeared more or less prepared for discussions, consciously shaping his remarks to communicate to others clearly before he spoke out—a more transactional approach to talk (Britton, 1990).

To Jerry, a substantive discussion meant a verbal exchange that was insightful; in his words, "You feel the ideas put on the table were rich, and you feel you are gaining something new and meaningful, and you feel good about it" (2nd Interview). What he meant seemed to be that it is about something that matters, something that is not yet spoken and worth bringing to the attention of others. Jerry felt that public discussion time needs to be used for substantive, larger concerns that involve others and may be collectively examined, such as concepts or theories.

I read for a general understanding of the content. To understand Jerry's engagement with the content, we may take a look at how he read to get prepared for class. He would usually first pick out the weekly reading assignment that was the biggest, which he believed would likely cause him to do the most thinking, and read that first. He admitted that he sometimes had to read difficult journal articles more than once to understand them, especially with those conceptual pieces dealing with qualitative paradigm and epistemology. While reading, he highlighted things important, interesting or confusing to him, wrote down questions that came to his mind, kept notes about his reflections, and jotted down what he wanted to bring to class discussions. Here Jerry used writing as a mediational means to help him to read with understanding.

Jerry felt that he had improved in almost every aspect of his academic abilities, but the biggest progress was with his writing. In comparison with Bettie who expressed some dislike of writing, Jerry appeared to have more balanced abilities in reading, writing and discussing.

I am a writer. Jerry's writing stood out in particular. In Class 13, he admitted to his

peers that he was a writer, and really enjoyed writing. He thought he expressed himself more clearly in writing than in speech. He recalled that, while writing, he experienced constantly having some kind of internal conversation with himself when he played with varied verbal representation for his developing ideas that sometimes seemed to go in many different directions. This process could help him to "see his ideas" more clearly through more conscientious trials of different expressions and prolonged gazing at the data and, consequently, to dig deeper, even to see different things. His efforts showed an intense engagement with data analysis similar to what Wolcott (2001) suggested as a necessary part of shaping the final representation in writing.

Jerry's case study was based on interviewing a veteran reading teacher about her views and experiences on the teaching methods used for physically disabled children, and his field study was an observational study of five students in the same teacher's reading class. What he told me about how he went about doing his writing was even more impressive than what he actually wrote. I thought the recursive process in which he was engaged to write the two papers demonstrated a reciprocal relationship among writing, analyzing, understanding and thinking. Consider his interview paper, for example. While transcribing the tapes, even during the time he was in the field doing the interviewing, he would be thinking about how to go about analyzing what he had heard and seen. At the beginning, he followed the analytical procedures suggested in the textbooks with his coding. Unsatisfied with the initial descriptive codes that he categorized from his interview data, he looked for ways to push his analysis to a deeper level.

I wrote my way out of the fog. One important step Jerry took was to just charge ahead writing about what was still foggy to him. However, the more he wrote, the more he realized that there were issues he had not considered prior to writing. Through reading more related research literature, as well as going over the data repeatedly, he kept transforming the new thoughts that were generated into writing. As he put it, "Each time that I've actually put something down and wrote about it in the case study, something new came to mind," which offered avenues of which he had not thought. Fresh ideas just snowballed. Eventually his writing took him to a place where he acknowledged "I wasn't looking to fit things in just to fit them in, but I found other things that were relevant and that I should have discussed" (2nd Interview). He was now more focused on capturing his interviewee's experiences through his own interpretative eyes.

When still working on the above paper, Jerry was away at a conference. Conscientious about his unfinished writing, he took a printout of the paper with him to the conference, thinking he might be able to find some time to continue with his writing. In a reflective mode, he constantly added more notes to his paper and did additional reading on the topic while still at the conference. As soon as he returned from the trip, although nearing midnight, he started transferring his scratchy notes into writing. This situation illustrated Jerry's tireless attention to his writing. What is revealing, perhaps also more important, is the recursive relationship among writing, understanding and thinking that Jerry illustrated through his study. This appears congruent with the qualitative research methods of the course.

As Jerry summed up in that paper, "This wasn't nearly enough of the work that I had done; it's only a good start at something bigger" (Jerry's Case Study). This conclusion reveals his growing awareness of how writing kept pushing his thinking and understanding to a deeper level and, at the same time, helped him to realize that there was still something larger than he possibly captured in one study. This reflects a point that was also echoed in Bettie's experience—exploring the multilayeredness and social-situatedness of the participant's experiences was what qualitative inquiry was all about.

When Jerry's interpretations became clearer and clearer to him, he had written himself out of the fog. With that act, he not only demonstrated a grasp of some of the essential features of qualitative methods, but also stumbled upon the engaging beauty of doing qualitative research.

Patty: Employing Different Methods to Learn

I didn't like discussions at college. Patty explained that she deliberately avoided any classes in her undergraduate study that required paper writing, and those classes were often discussion-oriented. She stayed away from paper

classes mainly for two reasons. As a science (biology) major in her undergraduate program, she was taught to "think in equations and numbers." Trained to believe that there were always right or wrong answers for problems, which can then be proven or disproven by experiment results, she did not appreciate the value of discussing or writing for making an argument. Another more personal reason was that she played hockey in college, and did not want to spend the time in the library or laboratory doing research to prepare for a paper. If one could get A's, she figured, why not do it the easier way?

When thinking within a dichotomous frame for things, it was a simplistic world to her, and there was not much epistemological space for dialogue and exchange. Now that she started teaching, Patty realized that the right-or-wrong perspective did not apply to all persons and all situations. When she became aware of the multiple perspectives and the complexities in her students, she came to realize the value of engaging in discussions with others.

Discussion helps me to digest what I read. Although Patty considered herself a reader all her life, she did not feel confident about the heavy reading assignments at the beginning, especially the articles that deal with epistemology, paradigm and what she called "grand tour ideas." From small group interactions, however, she came to know that other students struggled similarly with the journal articles and the notions of epistemology and paradigm. She confessed that this discovery almost made her happy because she realized that she was not alone. Knowing that everyone was having some difficulty digesting the content somehow gave her more confidence trying to engage with the course materials. Because she was unsure of the journal articles and whether she interpreted them correctly or not, she really appreciated the discussions in the seminar, which served as a debriefing to her.

Patty categorized the readings into two types: the conceptual pieces, which are articles that deal with epistemology, paradigm and grand tour ideas, and the how-to type of readings about methods and analytical procedures. The first type of readings she dreaded, but she considered the second type more reader-friendly because they were quite straight forward, and she enjoyed reading them and applying the ideas to her own research projects for the class.

I like writing now. Patty had not only reconciled with class discussions, her attitude towards writing seemed changed as well. In Class 5, she made a public confession about her dislike of college courses that required any paper writing. Referring to Wolcott's (2001) book on writing qualitative research, she told the whole class that "after I read that book—I was actually at a coffee shop reading the Wolcott book—and I was like 'I need paper and a pen, I'm writing right now. I can do this'" (Class 5). Patty's self-revelation suggests that, when there was something meaningful to write about, writing was not so much an issue for her as it was in the past, compared to when she resorted to changing fonts in order to meet the length requirement of a paper.

Patty's field study was based on her own experience of being mentored to in order to fit in as a new science teacher in a middle school context. However, her probing of her own experiences of navigating around as a new teacher was not substantiated with rich details, although the report had all the basic components of a qualitative study. A persistent problem Patty felt she had was that while writing, she kept backspacing on the computer. This made her feel she was editing her writing style as well as her thoughts. She wished not to edit her thoughts as often, so that her fresh ideas could flow more freely. Patty felt that writing was like a job on her own; everything she wrote had to come from her brain, whereas discussion with others provided more external input for her to begin. To her, writing was more like a useful way to remember and organize things rather than a tool for thinking and understanding her data.

Patty felt that writing up both of her studies made her become aware of things she had not thought of before. She admitted that it took her much more time going to the meetings (teacher meeting, school board meeting, union meeting, teacher-parent meeting, etc.) and writing her field notes than that spent on analyzing and crafting this major paper, that is, only a few hours for the final write-up. It seems that she had not fully followed Wolcott's (2001) advice on using writing as a thinking tool, a useful way to shape and sharpen her understanding of what she was studying.

I can learn with any method, no matter what. Patty thought her personality and teaching experiences may have helped her to adjust to the dialogic approach and to learn the course content. Because she always held strongly that "Everything has a place; everything needs to be in its place" (2nd Interview), these habits actually made it easier for her to read data for codes and categories through out the analytical process. Reflecting on her experience, Patty felt that most of her learning occurred in the first 6 to 7 weeks which was her steepest learning curve. After that, learning in the seminar became more incremental and more technical for her, which amounted to putting everything into place and applying it. She summarized four major steps in her learning in the seminar. The first major hurdle was to understand the characteristics of qualitative research conceptually. Next came the issue of how to do interviews and to get the needed data to answer the research questions in a qualitative study. Thirdly, it was how to analyze the data collected through interview and observation so that the research questions may be addressed. Finally, it was the write-up, an activity that she took as making sense out of what she had collected.

At the same time, the methods Patty used to cope with the learning became increasingly flexible and pragmatic as she realized that different methods fulfilled different purposes. Based on the content and her needs, she was capable of adjusting to reading, writing and discussing, and perhaps some combination of them at times, to engage with the materials. As Patty asserted, "I can learn with any method, no matter what."

In summary, Bettie, Jerry and Patty engaged with the materials and activities through discussion, reading and writing differently in the same seminar. Bettie took discussions as a sounding board for her own developing thinking and understanding of the content, and used talking as a major tool for learning. Jerry used writing as a major tool for learning. As showcased by his case study, he constantly visited his earlier drafts, kept clarifying his ideas as "thought-in-progress," and eventually wrote himself out of the fog. Patty used discussion, reading and writing to engage with the course materials flexibly. Different from young learners who may have to learn literate skills and strategies through discussion interactively, as shown by the literature reviewed earlier, Patty employed discussion to help her to comprehend difficult texts at places of confusion and at points of need.

The point that emerged from their collective experiences is that, although each of them had his or her preferred modes of learning from context to context, to learn qualitative research methods required all of them to be reflectively thinking about and intellectually interacting with any specific task. For example, Jerry's interview data could not communicate to him automatically; without his conscientious and inquisitive reconstructions and revisions, he probably could not have produced thoughtful text based on his data. Equally true, the discussions would fall on deaf ears, however, they became meaningful when Bettie or Patty participated sensibly and engaged reflectively with back-and-forth verbal exchanges. Clearly, the intellectual wrestling with each learning task is irreplaceable for their sense-making endeavors in any mode of engagement, whether it is discussion, writing, reading, or doing projects.

Discussion

As evidenced in the data, Bettie wrestled with qualitative methods through constantly talking and thinking about the course concepts and individual research projects, Jerry tirelessly wrote himself into a better understanding of the qualitative techniques, and a pragmatic stance figured prominently in Patty's learning. Importantly, each of them was flexible and resourceful with varied modalities to learn. Indeed, the three cases show a different blending of talking, writing, reading, listening and doing to engage with the same disciplinary content.

Though only a case study, the findings raise theoretical and pedagogical questions for both university professors and classroom teachers. First, as indicated by the existing research literature, there are clear benefits of using discussion for students to learn English, literature and other content-area knowledge in K-12 grades and beyond. The empirical evidence from this study further shows it is valuable to employ discussions for disciplinary learning at the doctoral level. For example, discussion was useful to Patty when she was working with difficult texts, challenging concepts and tasks. Talk was important to Bettie as she used it to engage her intellectual attention with the learning activities and to generate her thinking

around these activities. For Jerry, discussion with others expanded his own perspective and, when incorporated into his writing, enriched what he brought into his writing. Meanwhile, the findings from this study contribute to a better understanding that, just as dialogic interactions function as a useful vehicle and a social forum for younger students to explore multiple perspectives and complex issues under study, writing and reading by these mature learners are equally significant in helping them to materialize their evolving thoughts or to engage with others' ideas (Geisler, 1994).

Second, Bettie, Jerry and Patty's engagement may be more than just isolated cases. In the same seminar, I noticed varying participation and learning styles that their classmates brought to the interaction, such as the talker, the writer, the theorist, the connector, or the quiet listener. Similar stories seem transposable into other seminars as well, whether it is literary theory or ancient philosophy. In other words, discussion may not be a neutral medium for all learners, nor is it always more valuable than other modalities of engagement (Ma, 2007). To acquire any disciplinary knowledge, a learner needs to bring the learning tasks into his or her intellectual radar and then to transact with the issues using available cognitive and communicative activities. Thus, purposive students learn by being intellectually attentive to and engaged with whatever is being read, written or talked about. They further connect the new information back-and-forth with what is already known, and consciously directs their intellectual inquisition toward questioning and exploring. Having acquired advanced literacy skills and comprehension strategies, that is, having commanded reading, writing, listening, speaking abilities to use at their disposal, accomplished learners are equipped with the needed sense-making and problem-solving tools to tackle disciplinary content strategically and self-sufficiently— they talk, write, read, listen, view, and do projects reflectively, based on the individual preference and the specific task (Berkenkoter & Huckin, 1994; Prior, 1998).

Therefore, it is important for all educators to promote students' engagement with multiple voices and texts—not only with others in the immediate surroundings, but also with those represented in the written text and one's own developing thinking. To make sense of a given task, the strategic learner has to enter into an active inquiry mode to be constantly reflecting upon and dialoguing with what is said, heard, read, written done or viewed in any particular context. As such, a dialogic spirit, unconfined to the physical setting of discussions, transcends across different modalities and contexts of learning. This is intellectual engagement with learning in a holistic manner, meaning-making oriented, and transactional in nature.

Furthermore, the findings from this study help educators in different settings to better understand the complexity and diversity in acquiring any disciplinary knowledge by students who may have different background or cultural upbringing. For example, in addition to using the moment-to-moment discussions, professors may experiment with a variety of participation and response styles in their classes so that all students can find his or her particular niche to engage with the content, and thus participate fully in "the larger curricular conversation that stretches over time and space" (Applebee, 1996, p. 53). To extend such dialogic reasoning (Miller, 2003) from the advanced learners to the younger students in elementary and secondary schools, classroom teachers may similarly use a variety of instructional activities and strategies that integrate reflective reading, writing, listening, speaking and viewing. As such, participatory learning in different classes, whether it is English language, literature, qualitative research methods, or any other disciplinary content, may be facilitated not only through discussions, but through all available modalities for intellectual engagement as well.

Finally, while the present study provided important evidence about how doctoral students strategically blended a variety of literacy skills to acquire qualitative research methods, some limitations must be acknowledged. For example, whereas the study showcased how the three students engaged with the disciplinary content, it did not focus on what they actually learned. Moreover, as these individual learners were situated in a particular class community, it is worthwhile to explore how their instructor's scaffolding and other classmates' reading, writing, and discussion activities may have impacted their learning experience in the seminar. To better understand the dynamics of the seminar, it will also be useful to examine more actual discussions data. All these issues point to the direction for future

research. With further investigations into these critical areas, as well as other graduate seminars involving more participants and different disciplinary areas, possibly over a longer time, we may come to a better understanding of the complex interplay of dialogic reading, writing, talking, listening and doing research projects for more advanced students' intellectual engagement across the curricular spectrum.

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I give my special thanks to all the participants in this study. I also thank Suzanne Miller, Mary McVee, Patricia Schmidt, and Stephen Fleury for their comments and guidance in the development of this article.

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Appendix

Interview Protocol

I. Background Questions:
How old are you? Where were you born? How long have you attended this university?

II. Experiences with Discussion, Reading and Writing:
How do you like discussion-based instruction? How do you feel about discussing with other students at the graduate level? How do you feel about learning qualitative research methods through discussion, reading and writing? What is your favorite method of learning?
How do you think about the notion of co-construction of meaning?

III. Experiences with the Disciplinary Content:
Why do you take this course? What did you know about qualitative research methods before you chose this course? How was it like to be a student in the class? How do you like the content of this course? How do reading, writing, doing, reflecting, and electronic discussion board help you to learn the course content?

IV. Identity, Gender, Ethnicity/Race, Class and Cultural Experiences:
How would you describe yourself as a student? What kind of job, if at all, did you have before you started the current program of study? How would you describe your family's socioeconomic background? What kind of social, cultural background would you identify yourself with?

V. Closing Questions:
What plans do you have after you finish your program of study? Is there anything that you like to tell me about your experience which you have not told me already?

Table 1.

Reading, Writing and Discussing to Learn

Participants	Major Codes	Themes
Bettie	• I learn best when I am engaged in *discussions*. • I *read* to look for things I can talk about. • I hate *writing*. • I found my place as a qualitative researcher.	*Talking to Learn*
Jerry	• I am not going to *talk* so that I can have my two cents in this conversation. • I *read* for a general understanding of the content. • I am a *writer*. • I wrote my way out of the fog.	*Writing to Learn*
Patty	• I didn't like *discussions* at college. • Discussion helps me to digest what I *read*. • I like *writing* now. • I can learn with any method, no matter what.	*Employing Different Modes to Learn*

The Forgiving Child: The Impact of Forgiveness Education on Excessive Anger for Elementary-Aged Children in Milwaukee's Central City

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Research has shown that exposure to negative environmental conditions such as poverty and violence can have adverse influence on young children. Forgiveness education programs are designed to ameliorate this deleterious impact on young children by targeting excessive anger that can arise from deep hurt. Therefore, this series of studies examined the impact of three classroom forgiveness education programs for elementary aged students in Milwaukee's central city. Forgiveness education is a classroom program based on the Enright Process Model of Forgiveness (Enright, 2001) and targets anger and related variables such as depression which often affect children in urban, impoverished communities. Participants for this suite of studies were first, third, and fifth grade students in Catholic and public charter schools. Analysis of the data revealed a significant decrease in anger for the first and fifth grade experimental group when compared to the control group. In third grade, both the experimental and control group decreased in anger. No significant between group differences were detected for depression. The design implementation, significant findings, qualitative components, and implications for forgiveness education programs are discussed.

Children in many urban communities across our country are negatively affected by chronic poverty and violence (Bell & Jenkins, 1993; Overstreet & Braun, 2000). Sustained exposure to violence puts these children at risk for increased mental health problems such as anger, depression, anxiety, and others (Buckner, Beardslee, and Bassuk, 2004; Pynoos, Steinberg, & Goenjian, 1996). Many schools offer special programs or services for their students to address mental health issues (See Gansle, 2005). However, many of these programs have been criticized for being more reactive than preventive, for addressing anger and violence when they occur rather than reducing or eliminating them (Edwards, 2001; Smith & Sandhu, 2004).

One promising alternative to existing programs may be innovative forgiveness education programs that directly address underlying anger and depression associated with deep personal hurt, and incorporate foundational principles of interpersonal forgiveness with developmentally appropriate educational activities (Enright, Gassin, & Knutson, 2003). These forgiveness programs represent an important addition to the traditional model of mental health services by training and empowering the classroom teachers to provide the forgiveness education programs to their students in their normal classroom (Gassin, Enright, & Knutson, 2005). Recent research on this method of forgiveness intervention has demonstrated that developmentally appropriate forgiveness education programs effectively ameliorate negative mental health variables such as anger and depression for young children (ages 5-7) in violent and impoverished communities (Enright, Knutson Enright, Holter, Baskin, & Knutson, 2007).

Research has shown that children in impoverished communities are at great risk for experiencing direct and indirect violence, and the longer these children are exposed to poverty and violence the greater their risk for mental health problems (Bolger, Patterson, Thompson, & Kupersmidt, 1995; Samaan, 2000). The children who live and attend school in Milwaukee's central-city are beleaguered by increasing levels of poverty and violence that consequently endanger their personal mental health and successful development. Therefore, this study seeks to examine the effectiveness of a forgiveness education program on mental health variables for elementary-aged children (ages 5-12) with extended exposure to poverty and community violence in Milwaukee's central-city.

Poverty and Violence

Many children living in impoverished urban communities are negatively impacted by poverty and violence in two significant ways: 1) they often experience increased exposure to violence (direct and indirect violence), and 2) they often lack sufficient social support and resources needed to successfully process their experience of violence (Osofsky, 1995; Overstreet, 2000). The combination of these two conditions contributes to a "persistent and pervasive perception of danger" that can put children at risk for increased mental health problems in childhood and throughout their life (Buckner, Beardslee, and Bassuk, 2004, p. 420; Pynoos, Steinberg, & Goenjian, 1996).

Several studies suggest that children from impoverished communities have more emotional health problems than children from higher socioeconomic strata, including internalizing problems (such as anger, anxiety, or depression) and externalizing problems such as antisocial behavior (Dearing, McCartney, & Taylor, 2006). A recent study by Buckner, Beardslee, and Bassuk (2004) revealed that exposure to violence was the greatest predictor of both internalizing and externalizing mental health problems among children. Furthermore, these disadvantages increase the longer the child remains in poverty (Bolger, Patterson, Thompson, & Kupersmidt, 1995; Samaan, 2000). Longitudinal research in Australia and the United States has found that poverty in the first five years of life negatively affects emotional health in adolescence (Spence, Najman, Bor, O'Callaghan, & Williams, 2002), and that compromised mental health in adolescence is linked to negative mental and physical health in adulthood (Kazdin, 1987; Weissman et al., 1999).

Anger and Depression

The injustices of poverty – such as increased exposure to violence and diminished social support – play a role in increasing a child's anger (Brody, McBride Murry, Kim, & Brown, 2002; Eamon, 2002) and depressive symptoms (Gross, 1998). Recent research demonstrates the link between children's anger and negative outcomes such as poor academic progress, poor interpersonal relationships, and substance abuse (Deffenbacher, Lynch, Oetting, & Kemper, 1996; Enright & Fitzgibbons, 2000; Fryxell & Smith, 2000; Furlong & Smith, 1998; Lipman et al., 2006). Goodwin's (2006) research demonstrates the comorbidity of anger and depression in that certain strategies children may use to cope with anger – such as smoking, arguing, and drinking alcohol – are statistically significantly associated with feelings of depression.

School Programs: Anger and Violence Reduction

Because of the insight into the deleterious effects of anger on children, especially those from impoverished and violent environments, psychologists and educators have taken a renewed interest in anger-reduction programs within school settings. It is unfortunate, however, that the *call* for anger reduction in schools is more consistent in the published literature than actual programs to reduce it. Relatively few programs designed to help students with their anger actually do so (Gansle, 2005; Lipman et al., 2006). Furthermore, many of these programs are designed to provide mechanisms for dealing with expressions of anger only after they occur, and are therefore more reactive than preventive (Edwards, 2001; Smith & Sandhu, 2004).

The Case of Central-City Milwaukee

Milwaukee, Wisconsin has witnessed both economic decline and increased poverty and violence over the past several decades which has disproportionately affected residents in the inner-city or central-city. Decreased population, industrialization, and income levels have precipitated increased poverty levels in the central districts (Levine, 2002). Consequently, many children in Milwaukee's central-city are in great need. A recent report published by the Milwaukee Public School System stated that 77% of all elementary school students in the district qualify for free or reduced lunch and that this percentage has increased 7% over the past decade (Milwaukee Public Schools, 2006). The overwhelming message expressed through these many statistics is that, like other impoverished inner-city communities, the elevated

crime and poverty levels in Milwaukee put children at risk for mental health issues, academic failure, and developmental set-backs. It should be mentioned that many children in Milwaukee's central-city are resilient, have sufficient (even excellent) support structures, enjoy healthy development, and experience success on many levels. However, the literature and statistics indicate that the average child growing up in this at-risk environment is statistically more likely to experience the negative individual and interpersonal consequences of chronic poverty and violence. Many of these children are currently participating in the forgiveness education programs at various schools throughout central-city Milwaukee.

Interpersonal Forgiveness: Definition, Research, and Education

Interpersonal forgiveness is an ancient concept that has only recently received attention and acclaim in the social sciences. There is not a consensus definition among forgiveness researchers, yet most would agree that forgiveness entails at least the relinquishing of negative emotions (anger and resentment). Some also assert that these negative emotions be replaced with positive expressions of benevolence and love. Enright (2001) provides a comprehensive definition of forgiveness that reflects this duality:

> When unjustly hurt by another, we forgive when we overcome the resentment toward the offender, not by denying our right to the resentment, but instead by trying to offer the wrongdoer compassion, benevolence, and love; as we give these, we as forgivers realize that the offender does not necessarily have a right to such gifts (p. 25).

Given Enright's (2001) definition, forgiveness includes cognitive, affective, and behavioral components and is embedded within a process model (See Figure 1). The forgiving person moves at his or her own pace through different developmental guideposts, often revisiting some and sometimes skipping others. Recent meta-analysis of forgiveness interventions confirmed that process oriented therapy for groups (overall effect size = 0.83, $p < .05$) and individuals (overall effect size = 1.66, $p < .05$) outperformed decision-based therapy (overall effect size = -.04) for forgiveness effect size (Baskin & Enright, 2004).

Forgiveness education and therapy has a long history of success across a variety of adult populations and instances of deep hurt (Al-Mabuk, Enright, & Cardis, 1995; Coyle & Enright, 1997; Freedman & Enright, 1996; Hebl & Enright, 1993; Lin et al., 2004; McCullough & Worthington, 1995; Reed & Enright, 2006). Forgiveness education programs for children are self-contained curricula based on the Enright definition and process model of forgiveness, and have been implemented in first through third grade classrooms in Madison, WI and Belfast, Northern Ireland (Enright, 2001; Enright & Fitzgibbons, 2000, Enright and The Human Development Study Group, 1991; Enright, et al., 2007). The concept of unconditional human dignity is central to each of the forgiveness curricula and is the understanding that all people have value and worth that is not advanced or diminished by personal characteristics. This understanding is based on the Piagetian concept of identity – that something non-essential (athletic ability) added to something essential (personhood) does not alter the essential component. Interpersonal forgiveness challenges individuals to grasp this theoretical principal of inherent worth and to enact it.

The Current Study

The current forgiveness study examines whether a developmentally appropriate forgiveness education curriculum can be successfully implemented in violent and impoverished communities in Milwaukee, Wisconsin by teachers who have a considerable number of high need and at-risk students. A series of three independent educational interventions are presented and examine the effectiveness of the sequence of forgiveness curricula on mental health variables for elementary-aged children (study 1 – first grade, study 2 – third grade, and study 3 – fifth grade). Given the past success of forgiveness therapy across a variety of contexts, and the recent success of forgiveness education programs in Belfast, Northern Ireland, it is hypothesized that children who participate in the forgiveness education intervention will 1) demonstrate decreased anger compared to children who do not participate and 2) demonstrate decreased depression compared to children who do not participate.

Study 1

The first study is an evaluation of forgiveness education programs for first grade students attending Catholic and public charter schools in Milwaukee, Wisconsin. This study is a replication of the study conducted by Enright et al. (2007) in Belfast, Northern Ireland.

Method

Participants

The sample of first grade students from Milwaukee, WI consisted of 119 students from ten classrooms. The experimental group consisted of 75 students (35 females, 40 males), and the control group consisted of 44 students (23 females, 21 males). The modal age was seven years.

Instruments

The Beck Anger Inventory for Youth (BANI-Y) was used as the exclusive measure in the first study (Beck, Beck, & Jolly, 2001). It is considered an excellent measure of the affect and cognitions of anger and anger-related behavior. The twenty item scale is designed for children as young as six years of age and reports a high internal consistency of .91 (Beck, Beck, & Jolly, 2001).

Research Design

The ten classrooms were randomly assigned to either the forgiveness intervention (experimental) or wait-list control (no treatment) condition through the use of a table of random numbers. All participants were tested prior to the intervention (pretest) and again approximately one month after the intervention (delayed posttest). Teachers in the experimental classrooms attended a training workshop during which time they studied the definition and process of forgiveness, participated in their own forgiveness experience, and reviewed materials in the *Adventure of Forgiveness* curriculum guide (Knutson & Enright, 2002). Teachers in the control condition did not receive any training or materials until after the study had been completed.

Forgiveness Intervention

The *Adventure of Forgiveness* curriculum was used for study one and consists of 17 sessions, with each session designed for the approximate length of a standard class (approx. 45 minutes), and utilizes the genius of Dr. Seuss' stories (i.e., *Horton Hears a Who*) to provide developmentally appropriate opportunities for the students to explore the foundational concepts of interpersonal forgiveness (Knutson & Enright, 2002) This is done largely through three main components within the curriculum: 1) introduction of forgiveness components (inherent worth, kindness, respect, generosity, and benevolence, 2) exploration of forgiveness components through stories such as *Horton Hears a Who*, and 3) application of (trying out) forgiveness components in real life. It should be noted here that at no time during the program are children forced to forgive. It is always a choice. Furthermore, teachers take special care to distinguish between forgiveness and reconciliation – the children are not required to repair a relationship or continue to associate with others who may have hurt them.

Results and Discussion

Given our directional hypothesis, a one-tailed t-test analysis was conducted on gain scores between the experimental and control conditions. Table 1 indicates that the experimental group demonstrated a statistically significant decrease in anger compared to the control condition ($t = 1.95$; $p < .05$) with a small-to-medium effect size ($d = .37$) by Cohen's criteria (1988). The children in the forgiveness condition at the pretest evaluation were excessively angry (close to the moderately excessively angry category). They decreased in anger so that they were at the lower end of mildly excessively angry at the follow-up testing. On the other hand, the children in the control group became angrier as time passed.

The results indicate that a forgiveness education program for first grade students does, on average, successfully reduce levels of anger compared to students who do not participate in the program. Furthermore, these data replicate the findings for first grade students in Belfast, Northern Ireland presented by Enright et al. (2007). As has been noted elsewhere (Enright et al., 2007), this is particularly encouraging considering that the children spend most of the time learning *about* forgiveness rather than forgiving someone for deeply unfair treatment. They only practice forgiving someone at the end of the curriculum, and only if they choose to do so.

Study 2

The second study is an evaluation of forgiveness education programs for third grade students attending Catholic and public charter schools in Milwaukee, Wisconsin. This study is also a replication of the study conducted by Enright et al. (2007) in Belfast, Northern Ireland. Given the advanced cognitive abilities of third grade students, this study includes a developmentally more sophisticated curriculum guide and an additional dependent measure.

Method

Participants

The sample of third grade students from Milwaukee, WI consisted of 78 students from ten classrooms. The experimental group consisted of 36 students (23 females, 13 males), and the control group consisted of 42 students (22 females, 20 males). The discrepancy in sample size on the results table is due to participants failing to successfully complete certain instruments. The modal age was nine years.

Instruments

In addition to the BANI-Y used in study one, study two employed the Beck Depression Inventory for Youth (BDI-Y). The Beck Depression Inventory for Youth, a popular measure in assessing children's depression, was designed specifically 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. The twenty item instrument is scored on a 0 (never) to 3 (always) scale yielding a score range from 0 to 60.

Research Design

The ten classrooms were randomly assigned to either the forgiveness intervention (experimental) or wait-list control (no treatment) condition through the same randomization technique describe in study one. All participants were tested in the same pre- and posttest format as described in study one. Finally, all teachers were provided instruction and training in the same manner as described in study one.

Forgiveness Intervention

The Joy of Forgiveness was used as the third grade forgiveness curriculum and consists of 15 lessons (Knutson & Enright, 2005). Again, developmentally appropriate stories such as *The Velveteen Rabbit* and *Rising above the Storm Clouds* were used to illustrate the three main components of the curriculum: 1) examine the definition of forgiveness and inherent worth, 2) explore the role of benevolence and compassion in forgiveness, and 3) practice forgiving someone who was hurtful or unfair.

Results and Discussion

As in study one, a one-tailed t-test analysis was conducted on gain scores between the experimental and control conditions. Table 1 indicates that there was no statistically significant difference between the experimental and control conditions in either anger or depression. However, secondary analysis of the data revealed that both the experimental and control conditions demonstrated significant within-group decreases in anger (EXP $t = -2.39$, $p < .05$; CON $t = -1.73$, $p < .05$). From a clinical standpoint, the students in the experimental group began the intervention above the cut-off (55) for excessive anger and went below that threshold at the one-month follow-up. Students in the control group were already below the clinical threshold for excessive anger at pretest and decreased at the one-month follow-up.

The secondary analysis does point to the interesting possibility that the forgiveness interventions are having an effect outside of the experimental classroom. The possibility of this inter-group effect will be addressed in greater detail in the general discussion.

Study 3

The third study is an evaluation of forgiveness education programs for fifth grade students attending Catholic and public charter schools in Milwaukee, Wisconsin. This study extends beyond the findings reported in Enright, et al. (2007) and provides again a more sophisticated version of the forgiveness education curriculum.

Method

Participants

The sample of fifth grade students from Milwaukee, WI consisted of 79 students from eight classrooms. The experimental group consisted of 40 students (20 females, 20 males), and the control group consisted of 39 students (23 females, 16 males). The discrepancy in sample size on the results table is due to participants failing to successfully complete certain instruments. Furthermore, the overall sample was reduced significantly when a teacher from an experimental classroom unexpectedly departed the school for personal reasons. No permanent substitute was identified in time for them to receive training and continue the forgiveness program. Therefore, the experimental and control classrooms from that school were eliminated from analysis ($n = 47$). The modal age was eleven years.

Instruments

This study implemented the same measures as were used in study two: BANI-Y and BDI-Y.

Research Design

The eight classrooms were randomly assigned to either the forgiveness intervention (experimental) or wait-list control (no treatment) condition through the same randomization technique described in study one. All participants were tested in the same pre- and posttest format as described in study one. Finally, all teachers were provided instruction and training in the same manner as described in study one.

Forgiveness Intervention

The *Journey toward Forgiveness* was used as the fifth grade curriculum and consists of fifteen lessons (Knutson & Enright, 2006). Stories such as *Summer Wheels* (Bunting, 1992), *I'm Furious* (Crary, 1994), and *The Lion, the Witch, and the Wardrobe: The Chronicles of Narnia* (Lewis, 2005) provide examples and discussion points for the children to learn that interpersonal conflicts arise in a variety of ways and for many reasons, and that they have a wide range of response options to unfair treatment. As in the other curricula, *The Journey toward Forgiveness* is divided into three main components: 1) definition of forgiveness and how to extend and receive it, 2) appropriate scenarios and methods for expressing forgiveness, and 3) extending forgiveness to school and family communities.

Results and Discussion

As with the previous two studies, a one-tailed t-test analysis was conducted on gain scores between the experimental and control conditions. Table 1 indicates statistically significant differences between the groups on the anger variable ($t = 1.71$, $p < .05$) with a medium effect size ($d = .49$) by Cohen's criteria (1988). No between-group differences were observed for depression. The children in the forgiveness condition at the pretest evaluation were in the normal range for anger, but close to the clinical cut-off for excessive anger. They decreased in anger so that they were farther from the clinical cut-off for excessive anger at the one month follow-up test. On the other hand, the children in the control group, as we found in the first grade study, became angrier as time passed.

In addition to the statistical analysis, case study profiles were assembled for representative members of the experimental condition. Participant name and other identifying information has been changed to preserve anonymity and confidentiality.

Case Study #1. Skylar is eleven years old and a fifth grade student at a math and science charter school in Milwaukee, WI. Skylar was assigned to her current fifth grade teacher in part because of her low reading ability. In this particular school, students are grouped according to ability in core subject areas. At pretest, Skylar reported that her classmate was responsible for the deep interpersonal hurt she had experienced. Skylar wrote that this particular classmate "was laught [sic] at me." The interpersonal hurt Skylar described is classified as verbal, and she reported the severity of the hurt at "Very awful." Her pretest anger score (36) represents an extremely elevated anger level, and her pretest depression score (43) represents an extremely elevated depression level.

After she and her classmates successfully completed the forgiveness education program, Skylar demonstrated levels of anger (11) and depression (4) that are considered average levels. Furthermore, Skylar improved in her forgiveness toward her classmate.

Case Study #2. Diego is ten years old and a fifth grade student at a Catholic elementary school in Milwaukee, WI. The school that Diego attends is in a neighborhood that is known for gang activity. At pretest, Diego reported that his classmate caused a deep interpersonal hurt when she was "calling me names." Diego reported the severity of this verbal expression as "A little bit awful." His pretest anger score (38) represents an extremely elevated anger level, and his pretest depression score (23) represents a mildly elevated depression level.

Diego's posttest scores on the primary mental health measures revealed a thirteen point decrease in anger (25) and a five point decrease in depression (18). His posttest anger levels decreased to a mildly elevated level, and his posttest depression levels decreased to below the average level. Finally, his forgiveness toward his classmate improved.

Methodological Note

It should be noted that the Enright Forgiveness Inventory for Children (EFI-C; Enright, 2000) was among the original suite of dependent measures for all three iterations of the current study. The instrument requires the participant to identify one person who was very unfair to him or her and to describe one incident of unfairness. The results from the instrument were not included in the analysis because the researchers conducting the assessments reported that many of the children displayed difficulty accurately recalling their experience of interpersonal hurt from pre- to posttest (a span of seven months or more). This lack of recall would have compromised the validity of the instrument for the current educational interventions.

General Discussion

The forgiveness education program was designed to elicit significant positive change in key mental health variables for elementary-aged children. Although there was not significant change for depression, the presence of significant anger differences in studies one and three (and significant anger difference from pretest to follow-up in Study 2) are encouraging and are congruent with successful forgiveness education programs conducted in Belfast, Northern Ireland (Enright, et. al., 2007).

Anger

Analysis of individual anger levels yielded significant between-group differences in study one and study three. It is not surprising that there was a statistically significant decrease in anger given the structure of the program and the participants' identification with the lessons targeting emotional responses to hurt such as anger. Although the Beck Anger Inventory (BANI) does not target anger toward a specific individual, the following two conditions indicate how general anger levels might be impacted through a forgiveness intervention.

First, a significant portion of the forgiveness education program is dedicated to learning what forgiveness is, when forgiveness is an appropriate response, and why forgiveness is a worthwhile response to deep hurt. A key component of an activity within this process is identifying personal responses to deep hurt. The stories and discussion questions challenge students to imagine how certain responses – such as anger – may feel like the right response, but may actually cause more hurt. Given the amount of time spent identifying and uncovering unhealthy responses to interpersonal hurt – responses such as anger, frustration, shame, guilt, etc. – it is not surprising that students were able to recognize and thereby reduce their general levels of anger.

Second, as was evident through teacher feedback and communication, the students seemed particularly engaged in the activities and discussions pertaining to their own anger. As one teacher hypothesized, the students' familiarity and general literacy with regard to anger may stem from first-hand experiences of anger and violence at home and in their neighborhoods. Teachers also reported that their students expressed in several discussions that they were personally struggling or dealing with anger toward someone close to them; in one classroom it was a parent who was absent or had otherwise abandoned them. The review of literature pertaining to community violence and anger certainly supports the anecdotal evidence provided by the teachers.

Depression

Gain score analysis for the depression variable did not reveal statistically significant, between-group differences in study two or study three. Although related to anger, depression often consists of more subtle expressions of emotional duress that may not be fully understood by children of this age. Given the focus and energy devoted to uncovering anger toward someone who has hurt the student, it is not entirely surprising that depression was not significantly impacted. The children may need more intensive instruction, perhaps by the school counselor or graduate students training to be counselors, for this variable to show consistent improvement with forgiveness education.

Limitations

Chief among the methodological concerns is the use of a quasi-experimental design whereby classrooms were randomly assigned to a specific condition, and the children within those classrooms were individually assessed. Recent research and theoretical articulations by Cook (2005) herald the use of such cluster assignments for educational or social interventions. Cook states that "the hope is that individual change will be greater in size, performance, and generalization if it is achieved through group- rather than individual-level processes" (p.179). It can be surmised, then, that interventions aimed at isolated individuals within the school – removing the angriest children from class to receive a specific program – limit the ability of that program to impact the overall school community and future students in that school. This very philosophy is core to the forgiveness education program through the consultation model in which psychologists work directly with classroom teachers who deliver the program. Rather than identifying and working with only the angriest or most troubled students – an opportunity not typically afforded in impoverished urban schools – the forgiveness education program seeks to elicit positive individual change within the classroom and through the teaching of the classroom teacher.

Why, then, would we randomly assign at one level and analyze at another, smaller level? The answer to this question is two-fold. Given the structure of school organization, randomly assigning at the school level allows researchers to account for social and demographic realities that would otherwise be difficult to model and control (Cook, Herman, Phillips, & Setterston, 2002). For example, creating a balance of

schools, from geographic areas, socioeconomic classes, or conditions that meet the criteria of the project or questions of interest, reduces the potential for differences of individual students within those schools.

There is a strong argument for cluster analysis at the "smallest" or "lowest" level possible (Cook, 2005, p.187). Since the forgiveness education study does not make claims about wholesale change in the school or community, analysis of the individual student is most congruent with our research design and questions of interest. While this broader category of questions regarding school and community impact presents interesting challenges for implementation and analysis, it is not the primary context or question of interest. Therefore, analysis of individuals within these communities yields the answers that are relevant to our questions of interest. Analysis on the school level is an extrapolation of our questions of interest.

Second, it has been hypothesized that significant "intra-unit communication" can impact social science interventions (Cook, 2005, p. 188). That is to say, the research design may be adversely affected if there is communication between experimental and control conditions by both teachers and students. As is often the case with educational programs that are new, exciting, enjoyable, and effective, teachers are prone to discuss them. In fact, one control teacher indicated to a research assistant that they were excited to finally get the forgiveness curriculum because they had heard so much about it from the third grade teacher. While this is not empirical proof of a significant breach of protocol, it does indicate that there may be some cross-condition sharing of ideas which, in turn, may be incorporated into "control" classrooms.

Furthermore, if the forgiveness programs are indeed as effective as has been demonstrated in the past, then children are likely to share or at least become aware of the key components of forgiveness as they engage each other at recess, during lunch, at home with school friends, etc. There is a potential threat to the research design when students "switch" for math or English from a control to an experimental classroom, or view forgiveness projects and artwork presented in the classrooms or hallways, which happened in the third-grade study reported here.

This is not to say that students in the control condition receive the same forgiveness experience as students in the experimental condition. In fact, it is likely that this "chatter" would dilute the impact of the intervention in that all students are generally exposed to some components of forgiveness. They might likely know what forgiveness is, what it "looks" like, and how to talk about it from the posters on the wall, the actions of their teachers, and the interactions with their peers. However, all students would not necessarily enjoy the same positive outcomes of forgiveness education – such as is evidenced by the between group anger scores – since they are not fully engaged in the program.

Conclusion

The central issue is clear: children exposed to chronic poverty and violence are at risk for deleterious interpersonal and developmental outcomes. Research has shown that forgiveness education programs can have a positive impact on the mental health of children living in violent and impoverished communities (Enright, et. al., 2007). The current suite of studies demonstrates a partial replication of these findings, especially regarding the central variable of excessive anger, and provides suggestions for the improved implementation and assessment of these unique and innovative forgiveness education programs that seek to uplift and empower the forgiving child.

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The authors wish to thank Jane Moore and the Greater Milwaukee Foundation, including GMF's Sylvia and Edward R. Droppers Fund, John Haydon and the Luedke-Smith Fund and the Gustav and Gladys Kindt Foundation, Mary Enroth, the Enroth Family Fund, and the Palmer Foundation, Fleck Foundation, the Clarence Reible Fund and the Alma Smith Fund of the Greater Milwaukee Foundation, Tom Walker and the Walker family, the Madison Community Foundation, and Richard Larsen.

Table 1.
Mean, Standard Deviation, t Statistics, and Effect Size for Dependent Variables

	Pretest		Delayed Posttest		Gain Score		Gain Score t-test	Cohen's d
	M	SD	M	SD	M	SD		
Milwaukee 1st Grade								
Anger (EXP n = 75)	59.91	12.39	57.00	13.16	-2.91	13.48	1.95*	0.37
Anger (CON n = 44)	56.05	13.73	58.43	11.88	2.39	15.62		
Milwaukee 3rd Grade								
Anger (EXP n = 36)	58.39	8.66	54.22	9.99	-4.11	10.11	0.73	
Anger (CON n = 42)	53.55	11.03	52.07	10.51	-2.38	10.77		
Depression (EXP n = 34)	58.62	9.71	55.38	10.35	-3.24	11.05	0.30	
Depression (CON n = 41)	53.05	10.07	50.61	9.04	-2.44	11.50		
Milwaukee 5th Grade								
Anger (EXP n = 40)	54.15	12.63	53.63	11.98	-1.83	11.20	1.71*	0.49
Anger (CON n = 39)	50.84	10.16	52.72	11.78	1.84	7.51		
Depression (EXP n = 39)	50.77	11.65	50.18	11.74	-0.59	11.74	0.35	
Depression (CON n = 39)	46.49	9.92	46.67	9.20	0.18	7.51		

* $p < .05$

Beck T-Scores and Clinical Ranges

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

Figure 1.

The Phases and Units of Forgiving and the Issues Involved

UNCOVERING PHASE

1. Examination of psychological defenses and the issues involved
2. Confrontation of anger; the point is to release, not harbor, the anger
3. Admittance of shame, when this is appropriate
4. Awareness of depleted emotional energy
5. Awareness of cognitive rehearsal of the offense
6. Insight that the injured party may be comparing self with the injurer
7. Realization that oneself may be permanently and adversely changed by the injury
8. Insight into a possibly altered "just world" view

DECISION PHASE

9. A change in heart/conversion/new insights that old resolution strategies are not working
10. Willingness to consider forgiveness as an option
11. Commitment to forgive the offender

WORK PHASE

12. Reframing, through role-taking, who the wrongdoer is by viewing him or her in context
13. Empathy and compassion toward the offender
14. Bearing/accepting the pain
15. Giving a moral gift to the offender

DEEPENING PHASE

16. Finding meaning for self and others in the suffering and in the forgiveness process
17. Realization that self has needed others' forgiveness in the past
18. Insight that one is not alone (universality, support)
19. Realization that self may have new purpose in life because of the injury
20. Awareness of decreased negative affect and, perhaps, increased positive affect, if this begins to emerge, toward the injurer; awareness of internal, emotional release

Note: Reproduced with permission from Enright, R. D. and Fitzgibbons R. P. (2000) *Helping Clients Forgive*

The Development of a Measure of Academic Identity Status

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From the perspective of Ericson's (1963) theory of identity development, students entering college might be in a stage of identity achievement vs. role confusion. It follows that in some aspects of self-identity, college students may have yet to develop an identity. A self-report measure of academic identity status, based on Marcia's (1966) identity stages, was designed and analyzed for validity and reliability. Analysis revealed that responses fit the hypothesized model of four academic identity states. Our results indicate that the measure of academic identity captures variance unique to the domain of academics for university students and that academic identity status may be a distinct aspect of identity development.

The relationship between identity development and academic achievement is one in which educators and researchers continue to discover important implications. Generally, there is agreement among educators and researchers, that the identity status of adolescent students influences the strategies they adopt in learning contexts (e.g., Berzonsky, 1990; Lange and Byrd, 2002), that in turn have an impact on their academic achievement (Pintrich, Smith, Garcia, & McKeachie, 1991). In the current study, we present the development of an academic identity status scale and propose that academic identity is a unique component of identity.

Erikson's (1963, 1968, 1980) psychosocial theory proposed that adolescence is a time of identity crisis. During adolescence and early adulthood, an individual must make choices regarding their values, beliefs, and goals by experiencing a crisis and exploring options. According to Erikson, identity crisis is a time of concentrated examination of one's view of one's self. In Erikson's stages of psychosocial development, the occurrence of an identity crisis occurs during the teenage years and is a time in which individuals struggle between feelings of self-identity versus role confusion. The choices an adolescent or young adult makes commit that individual to an identity. The processes of establishing an identity play an important role in how an individual will cope with not only adversity, but also interactions with others, decisions about vocation paths, and even the strategies they will use as a student. Marcia (1966, 1980, 1993) elaborated on Erikson's work and identified four identity statuses in which an individual may reside in the process of identity development. These four states are determined by the extent to which an individual has explored and committed to an identity. *Identity foreclosure* refers to one adopting the goals, values, and lifestyle that significant others have set forth for them. These influential others are typically parents. In this case, the individual experiences commitment, without the experience of an identity crisis. *Identity diffusion* occurs when the individual makes no conclusion about his or her identity and has no clear direction. The individual has not experienced a crisis nor has he/she committed to a set of values, goals, or beliefs. *Identity moratorium* refers to a healthy and gradual exploration of personal and occupational choices. This status reflects the experience of a crisis, without the resulting commitment. Marcia (1966) refers to this individual as being *in* the crisis. This individual struggles to make commitments and often views identity issues as unresolvable. *Identity achievement* occurs when one surveys options and makes choices to pursue certain options. These individuals have experienced both crisis and commitment.

Kegan's (1982, 1994) constructive-developmental approach proposes qualitatively different stages of development in which one constructs a theory of self. Consistent with development in the college years (Lewis, Forsythe, Sweeney, Bartone, & Bullis 2005) and salient to the current research are Kegan's stages 2, 3 and 4. In Stage 2 the individual recognizes the school and family as authorities. Stage 3 is the first time an individual begins to reflect on their own inner qualities. Stage 4 represents those few individuals who make commitments personal values and standards without external support. Kroger (2002) presented correlation data that connected Marcia's identity states and Kegan's developmental stages. Kegan's stage 2 is most closely related to diffusion and foreclosure, stage 3 to foreclosure and moratorium, and stage 4 to moratorium and achievement.

Identity achievement has received a great deal of attention and has been argued buy some to be essential to academic success (Berger, 1998; Berzonsky, 1989. 1997). For example, in a study of 208 middle school students, Streitmatter (1989) demonstrated that students with an achieved sense of identity performed better on a measure of mathematics achievement than students in moratorium, foreclosure, or diffuse identity statuses. Similarly, in a study of first year university students, Lange and Byrd (2002) found that not only did those with an *adult* identity utilize more effective study strategies, but also they were more accurate at evaluating their probability of success in a particular course. Lange and Byrd defined students with an adult identity as individuals who are in an achieved identity status and as, "A person who has both recognized the need to form an adult identity and has made a commitment to one." (Lange & Byrd, 2002, p. 94).

In light of the findings that identity status affects behavioral outcomes and more specifically academic outcomes, Berzonsky (1989, 1997) recognized identity processing orientations that directly relate to Marcia's (1966) identity statuses. These processing orientations are grounded in a conceptualization of self-identity as "a self-constructed theory of self" (Berzonksy, 1992, p.771). Epstein (1973) proposed that identity structure is an unconsciously constructed self-theory. In other words, an individual's interpretation of environmental and social information, that is self-relevant, is supported by a framework that contains self-schema (Schank & Ableson, 1977). This self-theory determines the types of strategies one uses to interpret self-relevant information in day-to-day life, as well as approaches to problem solving and decision making. Berzonsky (1990) proposed that this self-theory is in part determined by the identity development status in which one is currently found and that the identity status in turn predicts the processing orientation one adopts. Berzonsky, Nurmi, Kinney, and Tammi (1999) described the model of identity processing orientations as operating on three levels:

> Identity *style*, the most general level, pertains to the array of strategies that individuals characteristically use or prefer to utilize across a diversity of environmental and social contexts. Social-cognitive *strategies* consist of organized sets or systems of the basic behavioral and cognitive units. The most specific level consists of the actual *cognitive and behavioral responses* individuals perform as they negotiate identity conflicts and make decisions. (p. 106; see also Berzonksy, 1992).

The different identity processing orientations incorporate different strategies to either revise or safeguard the self-identity. Berzonsky (1992) proposed three identity processing orientations: information orientation, normative orientation and diffuse/avoidant orientation. Berzonsky's (2003) third version of the identity style inventory (ISI 3) measured three identity processing styles adopted by individuals based on their processing orientation. Information oriented individuals seek out self-relevant information when making identity relevant decisions. These individuals are in either Marcia's (1966) moratorium stage or achieved stage. Normative oriented individuals, who are in the foreclosed identity status, conform to the expectations of significant others, most often their parents. Diffuse/avoidant oriented individuals will procrastinate, avoid making self-relevant decisions, and resist considering information that is inconsistent with their view of their identity. These individuals are in the diffuse identity status.

Berzonsky (1997, 2003) also demonstrated that identity commitment is related to identity style, and may act as a mediator between processing styles and outcome behaviors. Commitment, as defined by Berzonsky, refers to choosing options regarding self-relevant decisions and is often the conclusion of the identity achievement vs. role confusion crisis (Erikson, 1963, 1968). Marcia and Archer (1993) describe commitment as an important step in late adolescence, as one is about to transition to adulthood. Commitment as defined by Marcia and Archer (1993) is "a definitive choice among possibilities and adherence to the chosen direction in the face of distracting and inviting alternatives (p. 208)." As previously described, individuals who have experienced the crisis and have made choices regarding identity relevant issues are said to be identity achieved. Those individuals who have made these choices without experiencing the crisis or exploring options are identity foreclosed. The individual who is experiencing a crisis and explores options, but has yet to make choices, are said to be in moratorium. Those who have not experienced the crisis, yet have made no self-relevant choices, are in diffusion.

Significant to the current study is research that indicates that the processing styles are correlated to students' ability to adapt to university life. Although Erikson (1963, 1968) originally hypothesized the identity vs. role confusion crisis to be an attribute of adolescence, a more recent version of his theory stated that this crisis might occur in early adulthood (Erikson, 1980). "Adolescence and the ever more protracted apprenticeship of the later school and college years can, [...] be viewed as a psychosocial *moratorium:* a period

of sexual and cognitive maturation and yet a sanctioned postponement of definitive commitment (Erikson, 1980: pp. 74-75)." Schmidt and Hunt (1994) provided evidence that there are individual differences in first-year college students' psychosocial development and that self-perceptions can greatly influence the degree to which students are prepared to participate in college life. From this perspective, it is clear that how one copes with the transitions that occur during entry into university life might be greatly impacted by identity status and by the identity processing styles the individual adopts to manage self-relevant information.

Several studies have demonstrated the affect of identity status and assimilating into university life. Berzonsky (1989, 1997) provided evidence that student's academic achievement is in part affected by their identity processing styles. Likewise, Lange and Byrd (2002) demonstrated that university students who had achieved commitment to aspects of their identity were more likely to feel as if the could plan and implement effective study strategies. Boyd, Hunt, Kandell, and Lucas (2003) found that male university students that were diffuse/avoidant in their identity processing style were less likely to be in good academic standing three semesters after matriculation as compared to their counterparts utilizing other identity processing styles. Berger (1988) concluded that individuals that have completed the formulation of an adult identity were more likely to succeed as university students. Berzonsky (1997) provided evidence that university students that have achieved an adult identity were more likely to have formulated strategies and plans to obtain their academic goals.

In contrast to hypothesized relationships, Berzonsky (1985) found that students in a diffuse identity status were more likely to demonstrate overachievement in academic pursuits, while foreclosed students were more likely to be underachievers in their first year at college. Berzonsky assumed that the college environment which provides students with much greater freedom and much less parental supervision in part lead to a time of personal and identity crisis for some foreclosed students. The new environment of campus life, including the plethora of lifestyle, value, and ethical choices not faced by these students before, may have them question their commitments. Therefore, it might be assumed that identity processing style not only affects cognitive processing strategies, but also the way students adapt to university life in general.

Berzonksy and Kuk (2000, 2005; see also Berzonsky, Nurmi, Kinney, & Tammi, 1999) concluded that students with an information orientation are best prepared to effectively adapt within a university context, whereas those with a diffuse/avoidant orientation are most apt to encounter difficulties. Experimental measures have demonstrated that individuals in the diffuse status have the most difficulty dealing with stressful situations and use simple cognitive styles as compared to those in the achieved status (Marcia, 1993). It is clear that the identity status of an individual plays an important role in how one deals with self-relevant information as well as the strategies one adopts to cope with everyday life.

Following a review of the ego-identity status research, Kroger (2000) recommended that researches should scrutinize a wider range of contexts in which identity development occurs. The impetus for the current study is the assumption that identity status is context specific. In other words, individuals may be in different identity states in specific areas of their lives. Marcia's (1966) original interview included questions regarding several domains, for example, college major, politics, and religion. Schachter (2005) presented a literature review and case study in which he demonstrated how the multiple socio-cultural contexts in which one must exist, create a multitude of diverse ego-identity structures. Marcia (1966) validated his four identity states in the contexts of occupation and ideology, and later proposed that occupational identity is domain specific (Marcia, 1980). Others have proposed specific contexts in which identity development occurs. Bosma (1992) used cross-validated data from an interview protocol and a questionnaire regarding topics about which adolescents may have concerns. The data from 97 interviews and 303 questionnaires collected with teens from the Netherlands revealed four popular categories in which teens had concerns: education/future occupation, leisure-time, friendship, and parents/home. These areas of concern in turn represent distinct areas where identity status may be in unique stages. For example, in a study undertaken to develop an occupational identity status scale, Melgosa (1987) demonstrated that occupational concerns represent only one part of ego-identity status.

Measures of ego identity processing and status often measure identity by capturing status, commitment, and/or exploration in more than one domain, and yet provide only a global label or score for the individual's identity. For example, Balistreri, Busch-Rossnagel, and Geisinger's (1995) Ego Identity Process Questionnaire (EIPQ) is a 32-item scale that measures the dimensions of exploration and commitment in eight different areas: Occupation, Religion, Politics, Values, Family, Friendships, Dating, and Sex Roles. The EIPQ employs separate exploration

and commitment scores, rather than combining the two as in more traditional measures of identity. However, although the EIPQ utilizes items that incorporate many different life domains, the resulting scores provide global measures of exploration and commitment. Balistreri, et al., (1995) stated that it might be important to investigate scores for each of the separate domains.

Previous studies that have related identity status to academic achievement have also used global measures of identity. For example, using regression analysis Streitmatter (1989) demonstrated that middle school students with higher diffusion scores had lower math achievement scores, those with higher moratorium scores had higher math achievement scores, and high foreclosed scores were negatively related to math and language scores. Streitmatter used the Extended Objective Measure of Ego Identity Status (EOM-EIS; Grotevant & Adams, 1984) to measure identity status. The EOM-EIS is a 64 item measure that contains eight subscales, one for each of the four identity statuses assessed within ideological and interpersonal domains. The ideological measure contains items regarding religion, political lifestyle, philosophical way of life, and occupation. The interpersonal domain concerns issues such as friendships. The instrument produces a score for each identity status within the two large domains (interpersonal and ideological). Although Streitmatter argued that the bivariate correlations across domains provide convergent validity for the identity status subscales, the correlations of status subscales across domains (e.g., Ideological Achievement and Interpersonal Achievement) ranged from $r = .39$ to .53. However, when considering the coefficient of determination, it is evident that the ideological subscales did not predict a great deal of the variability in the corresponding interpersonal subscales ($r^2 = .15$ to .28). One interpretation is that the variability not accounted for is in part due to individuals varying in the identity states in which they reside in the specified domains (interpersonal and ideological). This supports our contention that ego-identity status may be context specific. The unaccounted for variability may also be in part due to the variance among the components within the domains (e.g., religion and occupation within ideological), again providing support for measuring identity status in specific contexts. Archer (1993) stated that individuals might be in one identity statuses in one life domain, while being in different identity statuses in other domains. Marcia and Archer (1993) identified identity status domains similar to those areas of interest indicated by Bosma's (1992) study.

Lannegrand-Willems and Bosma (2006) adapted the Groningen Identity Development Scale (Bosma, 1985) for French students and demonstrated that school context had a significant role in the identity development of 8th grade students. These findings stimulated our research into the development of a measure of academic identity status. Because an individual may be in different identity states in various contexts, the aim of the current study was to develop an identity status instrument that could measure the identity status of an individual particular to one's self-theory in an academic context. If it is the case as described above, that identity status determines the way in which an individual interprets self-relevant information, deals with adversity and influences cognitive behaviors, from an educational perspective, it would be important to understand the way in which students manage these processes. Previous studies have demonstrated that global measures of identity status and processing styles predict how an individual deals with broad domains of self-relevant information. However, it is still unclear as to whether or not students develop a specific academic identity, and if they do, how this affects the cognitive behaviors they employ to navigate academic life.

The self-concept literature also supports the argument that academic self-concept needs to be distinguished from a more global self-concept. Self-concept is often defined in academic literature as belief about one's ability. The evidence for contextualizing self-concept has been repeatedly supported by research based on the model proposed by Shavelson, Hubner, and Stanton (1976; see also Marsh, 1990). The original model proposed by Shavelson, et al., was composed of a hierarchical structure of self-concept with specific subcomponents. Included in the subcomponents was an academic self-concept with even further subcomponents subsumed under academic self-concept (e.g., math and English) being highly correlated. Other studies have found that the subdivisions of academic self-concept were not correlated (Marsh, Byrne, & Shavelson, 1988). In either case, previous research supports the hypothesis that general self-concept contains at minimum a subdivision of academic self-concept from the more global self view. It follows then that if individuals have different perceptions of their ability in various aspects life, then they may also be in differing states of development in particular life areas. Extensive research has supported the conclusion that academic self-concept and academic achievement are highly related. In a review of the literature, Marsh (1993) found that there was a substantial amount of research supporting the conclusion that academic achievement was related to academic self-concept, but not related to global measures of self-concept. Using structural equation modeling and a sample of 603 high school students, Marsh and Yeung (1997) found that prior achievement tended to predict academic self-

concept, but there were also obvious effects of prior academic self-concept on subsequent achievement.

As previously discussed, the identity statuses identified by Marcia (1966, 1980, 1993) are hypothesized to lead to identity processing styles proposed by Berzonsky (1989, 1992). These processing styles determine the types of strategies an individual uses to process self-relevant information. Furthermore, the academic identity status in which a student *resides* will likely affect the types of strategies and behaviors one adopts in an academic achievement setting.

The goal of the current study was to establish the reliability and validity of a self-report survey measure of academic identity status. The academic identity measure (AIM; See Appendix A) was designed to distinguish four academic identity states: foreclosed, moratorium, diffuse, and achieved, as well as ten key topics of concern for young adults/adolescents in college. Identity state classifications for the AIM were chosen based on Marcia's (1966) identity statuses. In the current study, academic identity foreclosure was represented by questionnaire items designed to capture a student's commitment to academic values and ideals adopted on the influence of significant others. ("An important reason I choose to go to college was my family wanted me to go.") Academic identity moratorium was operationalized as a time of academic indecision in which a student attempts to reach conclusions about their academic values and goals. Because this period represents an uncertainty regarding an academic identity, the items in the self-report questionnaire reflect the natural tendency of adolescents and young adults to explore the relevance of academic values that occur to the individual as self-relevant. Take for example the following item: "My priorities in school are in transition. Some days I am serious, others days I have other priorities." This item reflects the individual's academic indecision and consideration of different academic values.

Academic identity diffusion refers to a lack of exploration or commitment often accompanied by procrastination regarding decision pertaining to academic values. ("Finding time to study often takes a back seat to social and recreational activities.") Finally, academic identity achievement refers to a commitment to a set of academic values following a period of exploration. ("Although I have many priorities, learning in school is always one of my most important goals.")

The questions were created using 10 distinct key topics of academic identity decisions adolescent/young adult students must make. These distinct topics are hypothesized to represent the underlying concerns that adolescents/young adults have when transitioning to college. The first decision is *choosing a college*. The purpose that drives the transition from high school to college is an important step in becoming an adult in college. When young adult students have not given this any thought and/or rely on those around them to make the decision about whether they truly want to go on to college, they are likely to have problems with motivation when learning becomes more challenging in post-secondary education. Many students assume that college will be just like high school and do not realize the higher standards of college and the different expectation of college instructors (i.e., self-motivation, independent learning, etc.) When under-prepared students have not taken responsibility for their decision to go to college they are more likely to resist change and have academic difficulty.

The second decision is *reasons for college*. Young adult students who have not taken responsibility for making the decision to go to college are less likely to have clear academic goals and personal reasons for why they want to obtain a college education. This lack of purpose is likely to lead to problems with priorities and motivation as learning tasks increase in difficulty.

Classroom attention is the third distinct topic. Classroom behavior is closely tied to understanding why one is in college. As high school students, adolescents were in class because they were required to be there. As young adults in college they may choose not to go to class or may simply attend as they simply attend as they did in high school with little or no purpose for being in class. Mature college students understand the purpose of being in class is to learn, not to simply attend, and their focus goes beyond the class or the semester.

We identified *priorities* as our fifth key topic. Young adult students just entering college are less likely to see the purpose of education in their future. Because social needs and individual identity are paramount, they are less likely to see the value of a college education for their future which puts academic and life goals lower on their priority list.

As students transition from adolescence in high school to young adults in college their goals typically change although the transition is a slow one, particularly for under-prepared students. *Academic goals,* begin to emerge as college students mature and they recognize that school is about learning and preparing for future careers and not just about "making the grade" and social goals. In conjunction with academic goals, as students transition from high school

adolescence to young adults in college, they are more likely to own *responsibility* for their learning and the outcomes in their courses.

Interest and motivation occur as students mature academically and are able to regulate their motivation and affect to stay engaged in learning even if the instructor or material are not immediately of interest to them. Less mature students do not explore why college tasks may be of value in the future and quickly disengage if they do not see the relevance or interest value of course content. As students mature they are more likely to recognize the value of content for the future.

Discipline and volition are likely to be highly correlated with interest and motivation. Academically mature students are more active in regulating their motivation than less mature students. They are also more conscious of planning ahead and controlling their time and energy.

Responding to failure and *persistence in the face of failure*, complete the key topics. Failure is inevitable for many in college, whether failure is academic probation or receiving a B when the student is expecting all A's. Academically mature students are more likely to learn from their mistakes and adjust their learning to bring about future success. Less mature students often cannot control their emotional reaction to failure which results in withdrawal or disengagement from learning and school. Academically mature students adapt to new learning demands with persistence and accommodations to their study strategies. Academically immature students are likely to maintain their original strategies and/or disengage from learning altogether.

These ten key topics of concern in the transition from high school to college provided the questions for the AIM. For each of the ten key topics an item was generated that related to each of Maria's four identity states. The goal of the current study was to validate and establish the internal reliability of the AIM. Factor analysis, as well as reliability analysis and correlation analysis with the ISI III and course grades were employed.

Method

Participants

Four hundred twenty one undergraduates enrolled in an introductory educational psychology course at a Midwestern state university received course credit for their participation in the study. The course is the first course in the teacher education program at the university and students enroll in the course in their freshmen or sophomore year. Females represented 74% of the participants. Data was collected from several sections of the course beginning in the Fall semester of 2003 and completed in the Spring of 2006. Fourteen of the respondents' data was incomplete. This is equal to 3% missing data.

Measures

Academic Identity Status. The AIM contained four subscales, each with ten items (Appendix A). The four subscales include items designed to measure four academic stages: Moratorium (My priorities in school are in transition. Some days I am serious, others days I have other priorities), Foreclosed (I never decided on my own about college. I just did what friends and family expected of me), Diffuse (Sometimes I think the reason I'm in college is I have nothing better to do), and Achievement (A college education is a high priority for me and I'm willing to make the sacrifices.) academic identity styles. The ten items within each identity status subscale represented each of the ten key topics of concern. Participants responded to each of the items on a 5-point Likert scale of 1 (not at all like me) to 5 (very much like me).

Identity Processing Styles. Berzonksy's (2001, 2003) third version of the identity strategies inventory (ISI 3) was used to measure students identity processing orientations. The ISI 3 consists of four subscales: an 11-item Informational Style scale, a 9-item Normative Style scale, a 10-item Diffuse-avoidant scale, and a 10-item commitment scale. Internal reliabilities for the current data set were as follows: Informational = .72, Normative = .75 and Diffuse-avoidant = .57. Because the commitment scale is reported by Berzonsky (2003) to be a mediator between the processing styles and behavioral outcomes is not included in the current analyses. The current study was undertaken to validate the four academic identity processing states, not the meditating relationship of commitment with these variables.

Course Final Scores. Final scores in the course were calculated as the sum of 12 exams and 12 quizzes that were administered throughout the semester in which the student was enrolled in the course.

Design and Procedures

Participants completed a battery of questionnaires regarding personal development, identity development, motivation, study strategies, and other issues regarding learning and motivation over the course of the semester in which they were enrolled in

the educational psychology course. The measures used in the current study were completed online by each participant with an imposed deadline to complete the questionnaires by specific dates defined by the course syllabus.

Results

The results from the internal consistency and reliability analyses and predictive analyses of the AIM are presented in this section.

Internal Consistency and Reliability Analyses

Table 1 presents the descriptive statistics and coefficient alpha for the four hypothesized subscales in the AIM. Analysis of the AIM consisted of a confirmatory factor analysis using Amos 5 software (Arbuckle, 2005). Performing confirmatory factor analysis using structural equation modeling techniques allows one to test the factor loadings of each item in a measure on the corresponding predicted subscale or latent factor. Figure 1 presents the results from the confirmatory factor analysis of the AIM items and subscales. The standardized solution is presented. Lambda-ksi estimates are analogous to factor loadings in an exploratory factor analysis. Lambda-ksi estimates ranged .30 to .74 with an average value of .54 (median value = .54). Constraining the 40 items to load on the four correlated latent factors (subscales) produced an adequate fit to the input data. Although the chi-square test of fit was significant, χ^2 (734) = 1999.00, $p > .001$, the chi-square to degrees of freedom ratio indicated a good fit between the observed and reproduced correlation matrices (χ^2/df = 2.72). Chi-square to degrees of freedom ratio values of less than 5 are considered indicative of a good fit (Hayduk, 1987). The root mean square error approximation (RMSEA), which indicates an acceptable fit with values less than .08 (Browne and Cudeck, 1992) was .064. These analyses indicated that the data were an acceptable fit to the hypothesized model, which in turn supports the assumption that the measurement items represent the theoretical subscales to a reasonable degree.

The coefficient alphas for all subscales were robust. Cronbach's alpha values indicate good internal consistency. Items measuring a foreclosed identity returned good internal consistency estimates (.77) as did those for achievement (.76) and diffusion (.76). Moratorium had a high alpha (.85). Taken together, reliability analyses and factor analysis of the academic identity status items suggests that the basic model of academic identity status components is a reasonable representation of the data.

Validity

Correlations between the ISI III subscales and the AIM subscales are presented in Table 2. Correlations were significant and occurred in the predicted directions. All correlations were small to moderate. It is reasonable to interpret these relationships to indicate the AIM and ISI III share a portion of variability in identity status captured by the two measures. The variability not shared by the two measures is assumed in part due to the ISI III being a measure of identity processing style, and in part due to the domain specific nature of the AIM versus the more global nature of ISI III, therefore, providing discriminate validity for the AIM as a measure of academic identity states.

Predictive validity of the AIM was evaluated by correlating subscale scores on the AIM with final scores in the educational psychology course in which the students were enrolled (see Table 1). Correlations occurred in the predicted direction. Only achievement was positively correlated with final grades in the course. Indicating that the higher the student scored on the AIM achievement scale, the higher the grade they received in the course. All other subscales were negatively correlated with course grade.

Discussion

The results of our analyses suggest that the Academic Identity Measure has good internal consistency based on the reliability analysis of the four subscales. Confirmatory factor analysis support the model of the measures as containing the four subscales described. Although there is some shared variance among the four subscales, theoretically this is not surprising. The directions of the correlations are all in theoretically valid directions and all subscales attempt to capture a student's academic identity status by measuring whether or not the student has experienced an academic identity crisis (exploration) and whether or not the student has made a commitment to an academic identity.

The correlation analysis with final grade in the course provides a measure of predictive validity for the AIM. More importantly, it is our contention that the correlations among the subscales and the final grade in the course provide further evidence that identity status is a significant factor in college students' academic

achievement. diffuse in their identity were likely to be in poor academic standing three semesters after matriculation. Boyd et al. (2003) used Bersonsky's (1992) Identity Styles Inventory which is a global measure of identity processing style. As demonstrated in the current study, academic identity might be separate and distinguishable from global identity. Boyd et al state that:

> Knowing students' styles of identity processing and how they relate to their initial expectations regarding their success in college could help student affairs professionals conceptualize developmental obstacles and design proactive interventions to support students in their transition from high school to college and help them attain their academic goals (p. 156).

The ability to measure students' academic identity status has a number research and more important, application implications. For example, as Boyd et al. (2003) demonstrated, young males students who were using global measure of identity processing or identity status may not capture a students academic identity status and therefore not identify those student who require proactive interventions in their transition to college. Many students will confront values, beliefs, and goals in their transition to the university that do not match their own. Those with achieved or adult academic identities will thrive in this atmosphere, while those with diffuse or foreclosed academic identities will need support to succeed. The AIM provides a measure of identity status specific to academics. Naturally, the development of a new scale warrants further reliability testing and validation of the construct validity of the measure as well as further study of the predictive validity. However, we feel that the AIM captures variance unique to an individual's academic identity status and this has far reaching implications.

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Appendix

1. Good grades have always been important for me because I like to make my parents proud.
2. Sometimes I think the reason I'm in college is I have nothing better to do.
3. I'm not sure what occupation I want after college and I'm not really concerned about it yet.
4. A college education is a high priority for me and I'm willing to make the sacrifices.
5. I've considered a number of college majors and have decided which one is best for me.
6. I always knew my college major mainly from the guidance I received from my family.
7. I want a college education but sometimes I'm not sure I can make the commitment.
8. I don't worry about grades very often and rarely set academic goals for myself.
9. How I do in school is important to me because others are counting on me to do well.
10. I've never decided on my own about college. I just did what friends and family expected of me.
11. My priorities for school come from my early experiences. I usually just accept what is expected of me.
12. My view of grades and studying fluctuates; sometimes I am conscientious, other times I'm lazy.
13. If I had to pay for my own education I probably wouldn't be in school even if I had the money.
14. Sometimes I feel responsible for my learning but other times I feel it is out of my hands.
15. In class my mind often wanders and I often wish I were someplace else.
16. An important reason I chose to go to college was my family wanted me to go.
17. If a class is important I can concentrate even if the teacher or topic is boring.
18. I feel comfortable being responsible for my education and learning.
19. Of all the reasons to be in college one of my most important reasons is social and friendships.
20. I feel I have to attend every college class, otherwise my parents would be upset.
21. Some days I am enthusiastic about learning but other days I don't really care.
22. I try to write down everything the professors say but I seldom think about applications.
23. If a class is very difficult I will usually give up and blow it off.
24. My priorities in school are in transition. Some days I am serious, others days I have other priorities.
25. When I do poorly on a test I think of what I did wrong and try to solve the problem.
26. I don't have clear priorities for school and life. I usually just go with the flow.
27. I want to complete my school work but I often look back and realize I didn't set aside the time.
28. I find most class topics at least somewhat interesting - I'm seldom bored in class.
29. If a class is very difficult I buckle down and study more so I don't disappoint other people.
30. Although I have many priorities, learning in school is always one of my most important goals.
31. Sometimes I feel confident I know what I want from my education but other days I'm not so sure.
32. I know why I am in college and have clear goals I want to achieve.
33. When I do poorly on a test I get upset and worry what friends and family might think of me.
34. Sometimes I get upset when I do poorly on a test and other times I just let it slide.
35. Finding time to study often takes a back seat to social and recreational activities.
36. When a course is demanding my first reaction is to work harder, but sometimes I give up.
37. Sometime I am interested in what is being discussed in class but other days I am bored.
38. When school is challenging I find a way to learn even if I have to try new ways to study.
39. Most of the material I am asked to learn in my classes is boring.
40. Finding time to study may be difficult so I set aside time to complete my school work.

Table 1.

AIM Descriptive Statistics, Reliability Coefficients, and Correlations with Final Course Grade

Scale	*M* (*SD*)	Coefficient Alpha	*r* with Final Course Grade
AIM Foreclosure	3.34 (.63)	.77	-.16*
AIM Moratorium	3.25 (.73)	.85	-.31**
AIM Diffusion	4.15 (.48)	.76	-.18**
AIM Achievement	2.09 (.48)	.76	.15*

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

Table 2.

Correlations Between Academic Identity Measure (AIM) and Berzonsky's Identity Process Styles (ISI 3).

Variable	1	2	3	4	5	6	7
1. AIM Foreclosure	1.00	.32**	-.21**	.26**	.47**	-.21**	.17**
2. AIM Moratorium		1.00	-.63**	.67**	.08	-.24**	.49**
3. AIM Achievement			1.00	-.71**	.02	-.36**	-.41**
4. AIM Diffusion				1.00	-.04	-.24**	-.54**
5. ISI 3 Normative					1.00	-.01	-.01
6. ISI 3 Information						1.00	-.23**
7. ISI 3 Diffusion							1.00

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

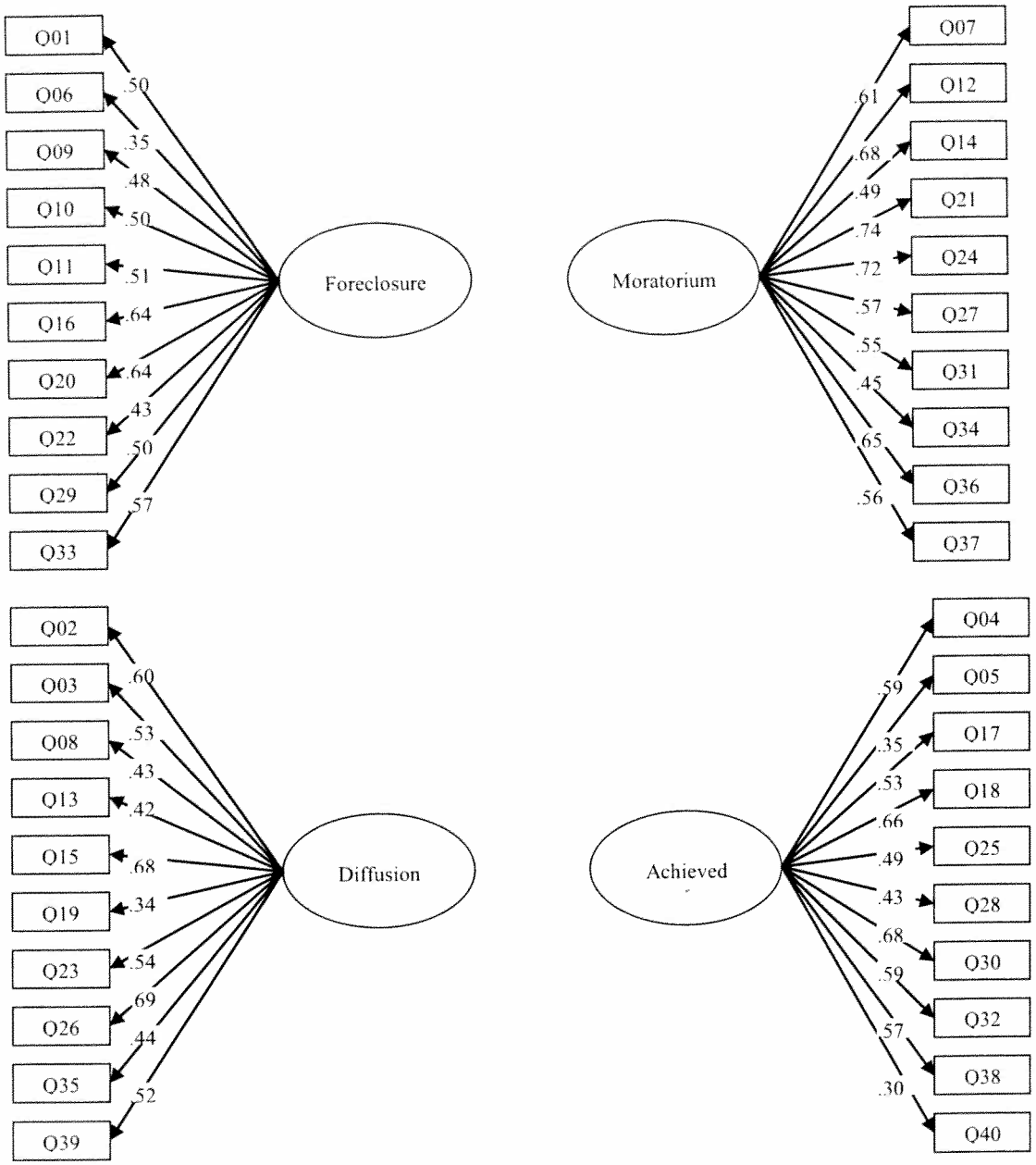

Figure 1. Standardized Solution of the Confirmatory Factor Analysis. Factor correlations and error variances not represented.

Click Here to Submit Your Rating: A Content Analysis of Faculty Rating Sites

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The present study addresses the increasing number of websites offering college students the opportunity to rate their professors. The limited research on this new phenomenon focuses on a single site: RateMyProfessor.com. While RateMyProfessor.com is a popular site, it is not the only site offering this service. The present study utilized a descriptive content analysis to identify the types of sites offering online evaluations of faculty, the features of these sites, and the types of ratings. Four categories of sites were identified: Primarily faculty rating, general college services/information, general rating, and social networking sites. Site features investigated included registration of users, rating guidelines, oversight, other services provided, and site usage. Rating features studied included rating format, types of ratings, comments, course information, and rater information.

Websites that allow students to post their evaluations of faculty are a relatively new addition to the world of student evaluations of teaching. There are a handful of published studies that have examined these sites, all of which focus on one website: RateMyProfessor.com (RMP). These studies either focus on RMP itself (Coladarci & Kornfield, 2007; Felton, Koper, Mitchell, & Stinson, 2006; Felton, Mitchell, & Stinson, 2004; Heyden & Henthorne, 2002; Kindred & Mohammed, 2005) or use the data from RMP to address a general issue with student evaluations, such as the impact of attractiveness on the ratings professors receive (Riniolo, Johnson, Sherman, & Misso, 2006).

RMP is a very popular website, reporting over 1 million ratings of faculty from over 6,000 schools since its founding in 1999. Its sole purpose is to allow students to post ratings of their college faculty. The site allows users to post ratings of faculty in the United States, Canada, and the United Kingdom. Users can rate faculty members on four qualities: easiness, helpfulness, clarity, and appearance. The first three qualities are scored using 5-point scales and the last quality, appearance, is rated hot/not and is reported using pictures of hot peppers. Professors receive hot peppers if their 'hot' ratings outnumber their 'not' ratings. The helpfulness and clarity scores are combined to create an overall quality ranking. Students may also report their grade in the course, their interest in material prior to taking the class, the amount they used the textbook, and the professor's attendance policy. Finally, students may leave written comments about the professor or course (RateMyProfessors.com, 2007).

While RMP is a popular site, it is not the only website offering student evaluations of teaching. Other rating sites cited in the research include CollegeSucks.com, Pick-A-Prof.com, ProfessorPerformance.com, and Virtualratings.com (Heyden & Henthorne, 2002; Kindred & Mohammed, 2005). Despite being mentioned in the literature, no research exists on these other websites. Sites other than RMP may offer information not available on RMP that would be of benefit to faculty interested in getting feedback about their teaching, researchers interested in student evaluations of teaching, and students interested in information concerning professor/courses.

In order to determine whether or not additional or more useful information can be found on websites that offer student evaluations of teaching, research needs to be conducted to determine the variety of websites that provided student evaluations of teaching and the information that can be found on these sites. The purpose of the present study was to conduct an exploratory descriptive analysis of websites offering online student evaluations of teaching in an effort to identify the variety of sites and content of sites offering this service

Review of Literature

The largest number of published studies of online faculty ratings focus on correlational analyses of the relationship between various qualities rated on RMP (Felton et al., 2006; Felton et al., 2004; Riniolo et al., 2006). Specifically, these studies investigate the relationship between ratings of specific qualities, such as hotness and easiness, with the overall quality rating, which is the average of the clarity and helpfulness ratings. These studies consistently find a relationship between easiness, hotness, and overall quality. Professors who were rated as attractive and

easy tended to receive higher overall quality ratings (Felton et al., 2006; Felton et al., 2004; Riniolo et al., 2006). These studies also investigated whether there are difference in ratings between male and female faculty (Riniolo et al., 2006), departments (Felton et al., 2006; Riniolo et al., 2006) and institutions (Felton et al., 2006; Riniolo et al., 2006).

Two studies focus on the relationship between the written comments and numeric ratings found on RMP (Davison & Price, 2006; Kindred & Mohammed, 2005). After coding the comments for the aspects of the instructor addressed by the rater, such as intelligence, personality, entertainment, and politics, both studies correlated the presence of themes in comments with RMPs numeric ratings. Kindred and Mohammed also compared male and female faculty on the number of times that different themes were cited in the comments posted about them.

Both Davison and Price (2006) and Kindred and Mohammed (2005) also investigated students' awareness of, and views about, RMP. Virtually all of the respondents to Davison and Price's survey (92% of 216 respondents) were aware of RMP and believed it to be a helpful and credible website. However, less than a third of students reported posting comments on the site. Kindred and Mohammed found a much more nuanced perspective in their focus group interviews (n = 22). They reported that students claimed to rely more heavily on the written comments to provide them with information about the faculty member and course they were considering. Students in their study also reported paying less attention to the numeric ratings because of the relative difficulty of determining the credibility of results as compared to written comments. The rating students reported the least confidence in was the hotness scale. Kindred and Mohammed reported that students not only disregarded this rating, but believed it detracted from the site's credibility.

While RMP provides researchers with an opportunity to investigate many important issues related to student evaluations of teaching and faculty rating websites, the unique aspects of this site may not make it the most useful site for some questions. Specifically, the types of ratings and rating scales may impact RMP's usefulness. For example, RMP only allows users to rate professors on easiness, helpfulness, clarity, and appearance. This does not allow researchers to investigate other factors impacting student evaluations of teaching such as types of instruction employed, instructor availability, and instructor's knowledge of the course material. Additionally, Kindred and Mohammed's (2005) subjects identified RMP's appearance/hotness rating as detracting from the site's credibility. It is possible that the appearance rating on RMP leads students who are interested in submitting and reading credible ratings to select a site other than RMP.

The presence of the appearance/hotness rating and the limited number of qualities rated have similar implications for faculty and students as they do for researchers. If raters/students interested in serious ratings are discouraged from using RMP by the appearance/hotness scale, faculty and students seeking credible evaluations should be aware of other sites that may attract these raters. Similarly, faculty and students interested in information such as the usefulness of assignments or learning activities may find websites other than RMP useful. The potential benefits of providing researchers, faculty, and students with information concerning websites offering student evaluations of teaching make an investigation of the websites offering this service essential.

Research Questions

The present study addressed the following research questions in order to describe websites that offer student evaluations of faculty: Are there different types of websites that offer student evaluations and what information can be found on websites that offer student evaluations of faculty?

Method

Websites

The present study analyzed 30 websites that allow college students to post evaluations of faculty. The sites were identified via an internet search using Google. The searches combined the keyword professor with one of 7 other terms: Rate, Grade, Evaluate, Ranking, Assess, Review, and Open Rating. The last keyword, open rating, was selected because previous searches identified openrating.com as a site that offered free software to create faculty rating sites. The searches yielded between 1.1 million and 63 million results. The first 200 unique results were evaluated to determine if they met the search criteria. No new sites were found after the 150th unique result in any of the 7 searches. The results where cross-checked by running the same keywords through 2 other search engines: Yahoo and MSN. No new sites were found when Yahoo and MSN were used.

Google, Yahoo, and MSN search engines were selected because they have been consistently rated as the top 3 search engines in the Nielson NetRatings conducted for SearchEngineWatch.com. The Neilson NetRatings are conducted each month based on the searches performed by 500,000 computer users worldwide. The United States ratings are based on the percentage of United States based searches conducted using each search engine (Sullivan, 2006).

Any website that allowed students to post evaluations of faculty was included. University sites that post the results of course evaluations were excluded from the study because the information on these sites was posted by the institution and not by students. Of the 1400 results reviewed, 32 sites met the inclusion criteria. Two single college sites were excluded because they require a valid campus e-mail address from the college to view content and could not be accessed, leaving 30 sites for analysis (See Appendix).

Design and Procedures

The present study utilized a descriptive content analysis in order to answer the research questions. The content analysis process consists of 4 stages: selecting a sample of documents, development of a coding procedure, coding of documents, and interpretation of results (Gall, Gall, & Borg, 2007).

A data collection protocol was developed by reviewing 5 of the websites. This review identified 3 broad aspects of the sites to be included in the analysis: type of rating site, rating site features, and ratings. The first aspect consisted of identifying the types of sites offering faculty ratings by the purpose of the site and the number of colleges included. The last 2 aspects, rating site features and ratings, were each delineated into 5 categories. The 5 categories of rating site features included whether the site registers users, whether guidelines are provided to raters, whether sites report practicing oversight, whether sites provide other services, and reported usage of sites. Lastly, the 5 categories of ratings included whether the sites provided course information, the format of ratings, types of ratings, whether comments were provided, and whether information about the rater was collected. After data were collected, a thematic analysis was used to identify the sub-categories for each category and generate frequency counts for each sub-category.

Results

In order to address the research questions, a descriptive content analysis was conducted. The content analysis was broken down into 3 components: type of rating site, rating site features, and ratings.

Type of Rating Site

Websites that provided student evaluations of faculty were first categorized based on the purpose of the site and the number of colleges the site served (See Table 1). The vast majority of websites' (n = 20) main purpose was to provide student evaluations of faculty. Of these, 12 provided the opportunity for students to rate faculty at more than 15 colleges (Large Selection of Colleges). It should be noted that while the majority of these sites provided the opportunity to rate any college in the United States or the world, very few evaluations, representing a small number of colleges, were posted. Three of the primarily faculty rating sites included between 2 and 15 colleges (Small Selection of Colleges), and 3 sites were dedicated to a single college.

The remaining websites (n = 10) provided student evaluations of faculty as an additional service. Seven sites were general college information and services sites, which offered services such as book exchanges, campus information/message boards, and roommate finders. Of these, 3 were focused on a large selection of colleges and 4 were focused on 1 or 2 colleges. Two sites, RateMyEverything.com and VirtualRatings.com, were general rating sites that allowed users to a rate a number of goods and services including college faculty. One site, MySpace.com, was a social networking site with a faculty rating page. The general rating sites and social networking site allowed users to rate faculty members at any college in the world.

Rating Site Features

Each site was then analyzed to determine its general features, including whether they register users, provided guidelines for ratings, practiced oversight of ratings, provided other services, and provided usage information (See Table 2). Approximately half of the sites (n = 14) did not register users by requiring students to sign-in using an email address/user name and password. The remainder of the sites were divided between those where registration was voluntary (n = 8) and those that required users to register before they could

submit ratings (n = 8). None of the sites required registration to view evaluations.

Slightly more than two-thirds of the sites (n = 22) provided raters with guidelines for rating. Most of the guidelines focused on the comment portion of the ratings. These guidelines generally included a prohibition against posting comments that contained inappropriate or illegal information. For example, one site's policy stated the following:

> You agree, through your use of this service, that you will not use ... to post any material which is knowingly false and/or defamatory, inaccurate, abusive, vulgar, hateful, harassing, obscene, profane, sexually oriented, threatening, invasive of a person's privacy, or otherwise violative [*sic*] of any law.

The most common specific prohibitions were against making threats to harm a professor, racist comments about a professor, and discussions of a professor's sexuality or sex life; specifically, claims concerning a professors sexual orientation or that the professor has sex with students.

In addition to prohibitions, many sites included recommendations on the types of information students should include in their comments. Sites generally asked raters to be honest, objective, accurate, and/or professional. Some sites also included information concerning what aspects of a course or a professor's teaching raters should discuss in their comments. For example, one site's guidelines asked students to "include information about the following to make your review most beneficial: Class Taken, Grade Received; Homework/Projects, Exams, Fairness, Office Hours; Teaching Skills: Notes/Handwriting, Speaking Skills/Clarity, Personality." Several sites included examples of 'good' reviews to highlight the type of information and tone raters should use in their comments.

Many sites included disclaimers in their guidelines. These disclaimers generally stated that the sites post third party reviews and are not liable for the statements made in the reviews. For example, one site's disclaimer stated the following:

> Those who own, operate and maintain the site will attempt to monitor the postings on this site, but inevitably are not liable in any way for:
>
> -The opinions posted and/or the interpretation thereof.
> -Warranties, expressed or implied.
> -Completeness, accuracy or truth of any material contained on the site.
> -The use or mis-use of any of the tools on the site.
> -Any direct or indirect damages resulting form use of the site.

Some of these disclaimers included citations of specific court cases that supported their claim of freedom from liability.

Approximately the same number of sites that provided guidelines also posted information describing their oversight practices (n = 21). These guidelines generally stated that the webmaster had the authority to delete any rating, or portion of any rating, that violated the site's guidelines. For example, one site's oversight policy stated that, "reviews containing vulgar language will be edited or deleted. We reserve the right to edit or delete rude or controversial reviews in the interest of keeping good public reputation." Most sites reported reviewing ratings that were flagged by users as violating the site's policies. A small number of sites reported reviewing every rating, either prior to or after the rating was posted on the site.

Two-thirds (n=20) of the sites provided other services. The most common services were book exchanges (n = 10) and Message Boards/Classified Adds (n = 6). Other services provided by multiple websites included forums (n = 4), other ratings (n = 4), planners/calendars (n = 3), and campus/college information (n = 2). Individual websites provided additional services that varied from e-cards to football tickets. MySpace.com is notable, and unique, due to the large number of additional services it provided, mostly centered around its social networking service. For this reason it was excluded from this portion of the analysis.

A small number of sites (n=8) provided usage information. All of the sites providing usage information were either primarily faculty rating sites (n = 6) or general college service/information sites that served one college (n= 2). It should be noted that even among sites that reported usage information, the type of information varied. Of the 8 sites reporting usage information, 7 provided an estimate of the number of ratings posted, 6 reported the number of faculty that had been rated, 2 reported the number of schools that have been rated (only includes sites catering to multiple colleges), and 1 reported the

number of classes that had been rated. Additionally, it should be noted that these estimates have been provided by the websites and have not been validated by an independent auditor.

The two largest and most widely used sites, by reported usage, were RateMyProfessor.com (RMP) and Pick-A-Prof.com. RateMyProfessor.com reported over 6.75 million ratings of over 1 million faculty from over 6,000 schools. Pick-A-Prof.com reported over 11.49 million ratings of over 880,000 faculty and 3.53 million classes. Pick-A-Prof also provides grading histories gathered from colleges using Freedom of Information Act requests and reports over 98.75 million grade histories. Grading histories are charts indicating the proportion of students earning As, Bs, Cs, Ds, and Fs in all sections of a course taught by a single instructor. These histories may include data from numerous years or a single semester, depending on the number of times an instructor has taught a course. The remaining multiple college sites (n=3) reported fewer ratings (e.g. 22,758 and 226) of fewer professors (e.g. 8,016 and 174) at a smaller number of colleges (e.g. 14). All of the single university sites, which included 2 general college information/services sites and 1 primarily faculty rating site, provided estimates of the number of ratings posted. These estimates ranged from 1,664 to over 4,000. Two of the sites provided estimates of the number of faculty rated, 645 and 926 respectively.

Ratings

The final aspect of the websites that was evaluated was their rating systems. This analysis focused on whether the sites provided course information, the format of ratings, types of ratings, whether comments were provided, and whether information about the rater was collected (See Table 3). The majority of websites (n=26) required users to provide course information including the course name, number, and semester enrolled. On 1 site this information was optional and 3 sites did not have a location for raters to include this information.

In terms of the actual ratings, sites are evenly split in their usage of numeric ratings (n = 10), including sites which used symbols that represent numeric ratings (e.g. * = 1 and ** = 2), and alpha numeric (n = 11) ratings. The majority of alpha numeric scales are A-F scales, similar to those used to grade students. Six sites use a combination of numeric, alpha numeric, and symbolic ratings. One site used only symbolic ratings and 2 included only textual ratings. One textual rating site included only comments and the other included questions answered yes/no or good/okay/poor/not specified. No numeric values were attached to the questions or reported.

The most common types of ratings included overall ratings, difficulty of professor, and specific aspects of instruction. More than three-quarters (n = 26) of the sites provided overall ratings. Overall ratings were presented as either independent items or as cumulative scores of other ratings. Independent items included questions such as "How would you rate the overall teaching effectiveness of this instructor" and "Finally, give this instructor an overall grade for the quarter."

Approximately two-thirds of the sites provided ratings of the difficulty of the professor (n = 18) and specific aspects of the course (n = 20). Difficulty ratings asked students to either rate the class/professor in isolation or as compared to other classes (e.g. "Made me work harder than in most other classes"). Sites that asked students to rate the class/professor in isolation often gave a single word question, such as 'Easiness,' 'Ease,' or 'Challenging,' and a numeric scale. The specific aspects of instruction available to be rated varied greatly from site to site. Many of these aspects focused on specific qualities of the lectures, such as the clarity, organization/preparation, and enthusiasm and competence with which lectures were delivered. Other ratings focused on the instructor's use of assignments/ assessments and their ability to answer questions and explain topics.

Almost all the sites (n=28) allowed students to make written comments about the professors. One site relied solely on written comments. The amount of structure provided for comments varied greatly from site to site. Some sites simply provided a textbox with the header 'comments,' while others provided instructions or questions for students to answer. For example, one site's instructions state, "Please provide any additional details about this course that you feel may be important to other students." One site provided a list of positive and negative comments and asks student to check the comments they would like to include. For example, positive comments included "Is a good professor" and "Is creative." Negative comments included "Is a bad professor" and "Poor sense of humor."

A minority of sites provided information as to the rater's/student's competence in the subject matter (n=11) or interest in the course (n=5). Rater competence was addressed by asking the rater to report their grade in the course. Even when this

information was collected, it was generally not displayed to other users. When it was displayed to other uses, it was usually only visible to users who registered with the site. Rater interest was measured through the use of direct questions, such as "How interested was the student in the CLASS, BEFORE taking it," or through a proxy measure, such as "Major" or "Why did you take the class."

Discussion

An exploratory content analysis of faculty rating sites identified 30 websites that provided the opportunity for college students to evaluate their professors. The identification of these websites is in contrast to the previous literature's focus on a single site – RMP (Coladarci & Kornfield, 2007; Felton, Koper, Mitchell, & Stinson, 2006; Felton, Mitchell, & Stinson, 2004; Heyden & Henthorne, 2002; Kindred & Mohammed, 2005; Riniolo, Johnson, Sherman, & Misso, 2006). Focus on this one site has created an impression of homogeneity in sites offering online ratings of faculty and the information available on these sites. The present study found that sites are not homogeneous but rather show diversity in both the sites themselves and the information available on the sites.

This diversity can be seen in the four categories of websites that provided online student evaluations of faculty: Primarily Faculty Rating Sites, General College Services/Info Site, General Rating Sites, and Social Networking Sites. For only 1 of these categories, Primarily Faculty Rating Sites, was online student evaluations of faculty the primary mission of the site. The other 3 categories provided online student evaluations of faculty as one of many services. This suggests that there is great diversity in sites offering online student evaluations of faculty. Previous investigations of faculty rating sites using RateMyProfessor.com (RMP) only addressed 1 of the 4 categories identified in this analysis. Significant difference may exist between sites in these 4 categories in terms of the numeric scores, types of information provided in comments, and validity of numeric scores and ratings.

Over two-thirds of the sites provided services other than faculty ratings. A broad array of services were provided including: book exchanges, ratings of products and services, and social networking services. In some instances these other services were the primary purpose of the site, and in others they were secondary to the faculty ratings. The range of services provided by each site may influence the types of students that visit that site and the reason students post ratings. Students who logon to a site in order to find a book for a class or update their MySpace page may not take the ratings seriously. Students who seek out the site with the intention of posting a comment on a discussion board/forum about faculty grading policies may have an axe to grind and be overly harsh in their ratings. Other students may go to the site to get information about a class they are considering taking and may leave an extremely objective rating with informative comments about classes they have previously taken in order to help other students using the site for the same purpose.

Rating guidelines and oversight varied greatly between sites. Approximately two-thirds of sites provide guidelines for ratings and reported practicing oversight of ratings/comments. However, only a small number of sites reported screening all ratings to ensure they conformed to their guidelines. The guidelines on most sites appeared to serve a legal purpose, limiting liability for comments made on the site, as opposed being a quality control measure. The type of oversight may provide a clue to both the types of ratings that may be found on the site and the commitment of site operators to ensure the quality of ratings. Rating guidelines do little to ensure the absence of objectionable content, unless they are enforced. This is a fact that many of the site operators appear to be aware of given the legal disclaimers that state the site is not liable for racist, homophobic, slanderous, or threatening statements posted on the site.

The registration practices of the sites bolstered the possibility that rating systems were not necessarily designed to ensure quality control. Only one-quarter of the sites required users to register before they submitted a rating. The rest of the sites offered optional registration or did not register users. While registration would not guarantee that raters had taken the class they are rating, without registration it is impossible to know whether or not raters even attend the college whose professors they are rating. By requiring users to register with a valid campus email address, sites could restrict ratings to students who have attended that college. It should be noted that the 2 single college sites excluded from the analysis required registration with a valid campus email address to view and post ratings. These two sites appear to be attempting to limit the number of ratings submitted by people not attending their respective universities.

The types of ratings each site provided were as varied as the sites themselves. Sites used a variety

of scales including numeric, alpha numeric, and symbolic scales. Most sites provided ratings of the student's overall evaluation of the class or professor, the difficulty of the class or professor, and specific aspects of the course. Over 90% of the sites allowed students to make written comments about the class or professor. A notable omission from most sites' ratings was professor attractiveness – a rating that has been included in numerous studies utilizing RateMyProfessor.com (Felton et al., 2006; Felton et al., 2004; Riniolo et al., 2006). The variation in the qualities rated and types of scales used to measure these qualities suggests that there also may be great diversity in the validity and reliability of the ratings found on different sites.

Self-reported usage information supports the relative popularity of RateMyProfessor.com compared to most other rating sites (Heydegn & Henthorne, 2002; Kindred & Mohammed, 2005). However, at least 1 other site (Pick-A-Prof.com) is equally as popular, based on self-reported usage. While RateMyProfessor.com reports having ratings for more faculty, Pick-A-Prof.com reports more actual ratings. Additionally, Pick-A-Prof.com provides the grading histories of faculty, which may be relevant for addressing various research questions related to the impact of instructor difficulty on student evaluations and the validity of student reports of faculty difficulty. While the large number of ratings and grading histories available on Pick-A-Prof.com may make it a valuable source of information, researchers interested in using other sites should carefully evaluate whether there are an adequate number of ratings. Sites with a limited number of ratings may not provide sufficient information to meaningfully address the researcher's questions.

The present analysis indicates that the domain of faculty rating sites is very diverse. The sites that make up this domain vary in their primary purpose, the number of schools available for rating, the number of ratings, the qualities rated, rating system used, and the oversight of ratings. Future research should focus on investigating the differences between sites and how these differences impact the usefulness and quality of information on each site. Specifically, research should investigate whether website characteristics (e.g. services provided, rating system, amount of oversight) impact the characteristics of students that post ratings and validity and reliability of the ratings. Studies also should investigate how faculty can use the information on these sites to improve their teaching, how students can use the information to select courses, and ways researchers can use the information to investigate general questions related student evaluations of teaching. In conclusion, the large number of student evaluations of teaching, diversity in the qualities rated, and variety in rating systems provide a unique source of information for faculty, students, and researchers.

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Rating Sites

http://jumboaccess.com/
http://pr2.sigkill.com/add.phtml
http://swampboard.com
http://www.beachpride.com
http://www.bruinwalk.com
http://www.collegesucks.net
http://www.coursereviews.com
http://www.educatorater.com
http://www.gopherbooks.com
http://www.gradecalpoly.com
http://www.lifeoncampus.com
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http://www.ratemyprofessors.com
http://www.ratepsu.com
http://www.rateyourprof.com
http://www.rateyourprofessor.net
http://www.ratingsonline.com
http://www.reviewum.com
http://www.sacrate.com
http://www.senatecourseguide.com
http://www.studentinfo.org
http://www.studentsreview.com
http://www.thecollegecafe.com
http://www.virtualratings.com
http://www.whototake.net

Table 1.

Rating Sites Categorized by Purpose and Number of Colleges Served

Type of Site	Frequency	Percentage
Primarily Faculty Rating Site		
Large selection of colleges	12	40%
Small selection of colleges (2-15)	3	10
Single College	5	17
General College Services/Info Site		
Large selection of colleges	3	10
1 or 2 Colleges	4	13
General Rating Site	2	7
Social Networking Site	1	3

Table 2.

Rating Site Features

	Frequency	Percentage
Registers Users		
No	14	47%
Yes, Voluntary	8	27
Yes, Require to Submit Rating	8	27
Has Rating Guidelines		
No	8	27
Yes	22	73
Practices Oversight Over Ratings		
No	9	30
Yes	21	70
Provides Other Services		
No	10	33
Yes	20	67
Provides Usage Information		
No	22	73
Yes	8	27

Table 3.

Ratings

	Frequency	Percentage
Format of Ratings		
Numeric	10	33%
Alpha Numeric	11	37
Textual	2	7
Symbolic	1	3
Mixed	6	20
Types of Ratings		
Overall Rating	26	87
Difficulty	18	60
Specific Aspects of Instruction	20	67
Other Ratings	17	57
Comments		
No	2	7
Yes, Voluntary	26	87
Yes, Required	2	7
Rater Information		
Rater Grade	11	37
Rater Interest	5	17
Provides Course Name or Number		
No	3	10
Yes, Required	26	87
Yes, Optional	1	3

Parent Trust, Student Trust and Identification with School

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This study investigated the effects of parent and student trust on student identification with school. It has been claimed that lack of identification with school is a cause of persistent low academic performance (Osborne, 1997; Steele, 1992; Voelkl, 1997). Existing evidence and theory regarding the effects of trust in schools suggested a relationship between parent and student trust and identification with school. This study explored these relationships using survey data collected from 74 schools in a Midwestern state. Correlational analysis and ordinary least squares multiple regression were used to analyze the data. Authors found that parent and student trust of the school are highly correlated with and salient predictors of student identification with school.

Trust theory and school membership theory are both useful in explaining how students come to identify with school and how they develop a sense of belonging and valuing of school and school related outcomes. This research explored the role of parent trust of the school and student trust of the principal in fostering student identification with school. Students who fail to identify with school and who are emotionally and physically withdrawn from school, often display loss of motivation, lack of participation, failure to do assignments, disruption of class, absenteeism, truancy, behavior problems, delinquency, drug use, school crime, violence, and potentially even dropping out (Finn, 1989, Finn & Voelkl, 1993, Voelkl, 1997).

Thus far research has attempted to explain this failure to identify with school as the result of cultural expectations, prior experience with success in school, the structural environment of the school, the regulatory environment of the school, stereotype threat, poverty, and peer-pressure (Finn, 1989; Finn & Voelkl; 1993, Fordham, 1996; Ogbu & Simons, 1998; Osborne, 1997; Steele, 1992; Voelkl, 1997). These studies have shown that most of these factors matter and have significant consequences not only for student identification with school but also for academic performance. However, of the variables linked to student identification in the past, such as the structural environment of the school (school size and racial/ethnic composition of the school), and the regulatory environment of the school (degree of rigidity of school rules and disciplinary putativeness) (Finn, 1989; Finn & Voelkl, 1993; Voelkl, 1997), only rigidity of school rules can be directly modified to create an atmosphere that is conducive to increased identification with school.

Because identification with school depends on the student's sense of belonging to school, which in turn seems dependent on student-adult relationships that are established in the school, recent research on school trust offers a more promising explanation (Bryk & Schneider, 2002; Smith, Hoy, & Sweetland, 2001; Hoy & Tschannen-Moran & Hoy, 1999). Trust, which has been defined as "one party's willingness to be vulnerable to another party based on the confidence that the later party is (a) benevolent, (b) reliable, (c) competent, (d) honest, and (e) open" (Hoy & Tschannen-Moran, 1999, p. 189) has been shown to have significant effects on student outcome variables such as academic performance. Additionally, trust has been shown to be vital and fundamental to the operation of schools, to the establishment of healthy school climates and to the implementation of reform initiatives. It is an

essential element when focusing on creating an atmosphere that is conducive to the education of students who have traditionally failed to perform at expected levels academically (Bryk & Schneider, 2002; Fuller, 1994; Smith, Hoy, & Sweetland, 2001; Hoy & Tschannen-Moran, 1999).

In a day when educators confront the existing underachievement of a large percentage of our school population, it is important to understand how the contextual environment of the school can foster academic success for all students. Prior investigation into student identification has demonstrated the connection between student identification with school and academic performance (Finn, 1989, Finn & Voelkl, 1993, Voelkl, 1997). However, no study has investigated the relationship between trust and identification with school. Current theory and evidence, however, does suggest the plausibility of a relationship between trust and identification with school. Thus, this study investigated the relationship between parent and student trust of the school and the principal, and student identification with school.

Theoretical Rationale

Clearly, both trust and identification with school are grounded in relationships (Bryk & Schneider, 1996; Wehlage, 1989). Therefore, it is not difficult for us to argue that when parents and students trust the school or the principal, relational ties are enhanced and student identification with school will be strengthened. The following discussion will focus on the concepts of student identification and trust, and the theoretical relationship between the two.

Identification with School

Identification refers to the sense of attachment one has with an individual or with an institution such as a school (Voelkl, 1997). Specifically, identification with school involves (a) feelings of belongingness and (b) valuing of school and school related outcomes. Students who develop this sense of belonging feel that they are an integral part of the school, that they are accepted, valued, and included. They are proud of being a part of the school, and believe that school has consequences for their self-perception. Students who identify with school also value the school as an important social institution and see school as being a significant avenue for accomplishing future life goals.

Identification with School and School Membership Theory

The terms *identification with school* and *school membership* have been used interchangeably in the literature. Wehlage stated that school membership takes place when "students have established a social bond between themselves, the adults in the school, and the norms governing the institution" (1989, p. 10). According to Wehlage, the student's psychological sense of school membership or belonging is in a large part dependent on the extent to which the student is able to bond with significant others in the school. He suggested that these links are what help schools to be successful in deterring drop out for students identified as being at-risk. The strength of the bond that a student develops with school personnel depends on the extent to which the student feels supported and able to experience positive interactions and to establish on-going positive relationships with key significant others in the school. Wehlage stated that in order for students to experience social bonding within schools it is necessary to cultivate a sense of (a) attachment or belonging, (b) commitment towards academic goals, (c) involvement in activities and academics, and (d) belief or trust in the school and its governance.

According to Wehlage (1989), all schools are capable of reducing the risk of student withdrawal and failure to identify with school if they (a) promote academic engagement and (b) foster school membership. The school relationships that students have with adults are considered to be of utmost importance. Positive reciprocal relationships between faculty and students establish the school's governance as legitimate and result in enhanced student acceptance, compliance, and cooperation with expected norms and regulations. Students who have a strong sense of school membership are actively involved in school activities and identify with school. This identification with school is manifest even in the face of challenges and difficulty. In contrast, students who do not have a strong sense of school membership are academically disengaged and fail to identify with school.

Trust

Trust has been described as ubiquitous, yet it goes unnoticed until something happens to threaten its survival (Baier, 1986; Hoy & Tschannen-Moran, 1999). Baier (1986) stated, "We come to realize what trust involves retrospectively and posthumously, once our vulnerability is brought home to us by actual wounds" (p.235). All relationships are based on some

form of trust. Moreover, trust is dynamic in nature, in that there are varying degrees of trust, and varying levels of trust depending on the context and situation and these things change over time (Lewicki & Bunker, 1996). Thus, trust has been described as an essential element for organizational health, an element that functions as a lubricant and glue, both facilitating and solidifying relationships within organizations (Hoy & Tschannen-Moran, 1999).

In a seminal article on trust, Hoy and Tschannen-Moran (1999) traced the empirical study and evolution of trust in the literature over the past four decades. They noted that the emergence of the focus on trust in empirical research began in the 1950's as a response to the Cold War era, and continued to evolve as new occurrences threatened the stability of major institutions within society. This was made evident by the disillusionment with the establishment among youth in America during the Vietnam era, ever rising divorce rates, and the challenges created by changes in technology and information dissemination. This discussion of the importance of trust in organizations continues today and seems even more warranted as a result of the current emphasis on accountability in business, government, and education, as well as looming global concerns about international terrorism.

Trust has been looked at in various ways and through a variety of disciplines. However recent definitions of trust have emphasized its multi-dimensional nature (Bryk & Schneider, 1996; Hoy & Tschannen-Moran, 1999; Mishra, 1996, Shepherd & Sherman, 1998) and despite divergent views and explanations of trust, certain common elements have emerged. Trust involves vulnerability on the part of the truster without which it would not be necessary to trust in the first place (Baier, 1986; Hoy & Tschannen-Moran, 1999; Sheppard & Sherman, 1998). Trust is dynamic and has identifiable stages (Sheppard & Sherman, 1998; Hoy & Tschannen-Moran, 1999). Furthermore, even trust of another individual can vary from situation to situation and from referent to referent. Trust involves psychological attitudes, social interactions, and behaviors (Hoy & Tschannen-Moran, 1999). There are several contextual conditions that pave the way for the development of trust, such as one's disposition to trust and the tendency to trust others who are similar to oneself (Tschannen-Moran & Hoy, 1997). There are different types of trust, depending on whether it has formed in individuals, groups, or entire organizations. Moreover, trust is a vital resource and a necessary element in all forms of relationships that are perceived of as valuable (Baier, 1986; Hoy & Tschannen-Moran, 1999; Tschannen-Moran & Hoy, 1997).

Trust in Schools

The subject of the importance of trust for schools has only recently been addressed. For the past two decades, several scholars have established a consistent line of inquiry into the importance of trust and its consequences for schools (Adams & Forsyth, 2006; Bryk & Schneider, 1996; Forsyth et al., 2006; Goddard, Tschannen-Moran, & Hoy, 2001; Hoy & Kupersmith, 1984, 1985; Hoy & Tschannen-Moran, 1999; Hoy, Tarter, and Witkoskie, 1992; Tarter, Bliss, and Hoy, 1989, 1995; Tschannen-Moran, 2000; Tschannen-Moran & Hoy, 1997). Together these researchers have made significant progress toward understanding the effects of trust in school environments.

It is a commonly held belief that public trust in schools has diminished significantly over the past several decades (Bryk and Schneider, 1996; Tschannen-Moran & Hoy, 1997). This is made evident by recent legislation and mandates regarding parent choice initiatives such as home schooling, charter schools, and/or voucher programs on the one hand, and an increasing emphasis on high-stakes testing, mandated standards, and accountability, on the other. Bryk and Schneider stated, "this distrust reflects a belief that schools are inadequately fulfilling their responsibilities to educate the nation's children to be productive citizens" (2002, p. 1). They also indicated that this increasing distrust of schools is partly due to the erosion of social relationships between school personnel and families due to legislation promoting desegregation, which removed children from the communities they lived in and separated teachers from their communities. Increasing urbanization can also be seen as one of the culprits in the demise of public trust for schools.

Of course, schools are organizations and a significant amount of research has been done on the effects of trust in organizations. Some of these findings may be applied to schools, however; schools are grounded uniquely in relational ties. As Bryk and Schneider (1996) put it, "the academic work of school rests on a foundation of social relations among local school professionals and the parents and community the school is supposed to serve" (p. 2). The kind of trust associated with school has been referred to as *relational trust* (Bryk & Schneider, 1996) or *institution-based trust* (Hoy & Tschannen-Moran, 1999).

Bryk and Schneider defined relational trust as trust that "is formed through the mutual understandings that arise out of the sustained associations among individuals and institutions, each of which is expected to behave in a normative appropriate manner" (1996, p. 6). This type of trust involves personal judgments about individuals' intentions and behavior relative to normative expectations about what should take place within schools. Thus, trust between parents and teachers is based on the perceptions that each party is acting not only according to expectations but is doing so based on right reasons.

Bryk and Schneider (1996) argued that there are at least three major consequences of developing a strong sense of relational trust among all parties within the school. These consequences include (a) a high level of trust fosters increased cooperation between all parties, (b) normative values within high trust organizations act as a social control mechanism, and (c) relational trust acts as a resource during times of transition and change. Tschannen-Moran and Hoy concur with the idea that school trust has positive consequences, stating that "as trust declines the costs of doing business increase" (1997, p. 334). They also agree that trust provides a social control mechanism, claiming that the "social network of relationships within an organization can exert both formal and informal control that encourages people to act in a trustworthy manner" (Tschannen-Moran & Hoy, 1997, p. 334).

Trust therefore can be seen as a vital resource for school effectiveness. In fact, teacher trust in the principal and in colleagues has been linked to school effectiveness (Hoy et al., 1992; Tarter et al., 1995), teacher trust in students and parents has been linked to academic success of students (Goddard et al., 2000), and trust in schools has been linked to teacher efficacy (Hoy & Tschannen-Moran, 1999). A high level of trust improves effectiveness, has consequences for academic performance, and significantly affects collaboration among all the parties within schools.

Trust and Student Identification

Given that both trust and student identification with school are highly dependent on relationships (Bryk & Schneider, 1996, Hoy & Tschannen-Moran, 1999; Wehlage, 1989) it was not difficult to predict that when students and parents trust the school and the principal, students would be more likely to identify with the school. Therefore, the focus of this study was on identifying the effects of student and parent trust on student identification and the extent of those effects. Hoy and Tschannen-Moran's (1999) definition of trust as "an individual's or group's willingness to be vulnerable to another party based on the confidence that the latter party is benevolent, reliable, honest and open" (p. 189) was used for both parent and student trust. It was hypothesized that parent and student trust would predict student identification with school.

Methods

The unit of analysis for this study was the school. Therefore, individual scores for trust and student identification were collected and aggregated to the school level. The independent variables were student trust of the principal and parent trust of school. The dependent variable was student identification with school. School level and socio-economic status were explored as control variables.

Sample

The sample, stratified by grade configuration, consisted of 180 randomly selected schools out of 836 public schools in 26 contiguous counties of the northeastern quadrant of one midwestern state. The initial sample included 60 elementary schools, 60 middle schools, and 60 high schools. Of the 180 schools that were randomly selected to participate in this sample, 101 schools declined participation leaving a final sample of 79 schools. This sample was later reduced to 74 schools, due to low response rates at 5 of the schools. The final sample included 21 elementary schools, 28 middle schools, and 25 high schools. Fifteen students and 15 parents of students in the fifth, seventh or eleventh grades were randomly sampled at each school. There was an overall 50% return rate for instruments distributed: 619 students (52%) and 572 parents (48%).

Measures

Parent Trust of School Scale: Parent trust of school was measured using a short version of the *Parent Trust of School scale* (Forsyth et al., 2002). The scale is a ten item, eight-point Likert-type scale with a response range of 10-80. Sample items include, "This school is always honest with me," "This school does what it is supposed to do," "This school has high standards for all kids," and "I never worry about my child when he/she is there." The psychometric development and properties of the scale have been reported in several published studies (Forsyth, Adams & Barnes, 2002; Tschannen-Moran,

2004; Forsyth, Barnes & Adams, 2006). Uses of the scale with multiple samples have consistently produced alpha reliability coefficients in the .90 plus range. Included in the published discussions is evidence of construct and criterion validity for the measure collected during scale development or emergent in subsequent research.

Student Trust of Principal Scale: Student trust for their principal was measured using the *Student Trust of Principal Scale* (Forsyth et al., 2002), a four-point, 21 item Likert-type scale with a response set ranging from "always" to "never" and an individual response score range from 21-84. Sample items on this scale include, "The principal at my school is nice," "The principal at my school is fair," "The principal at my school is there for students when needed," and "The principal at my school tells the truth to students." The psychometric development and properties of the scale have been reported (See Barnes, Adams & Forsyth (2004) and Tschannen-Moran (2004). Alpha coefficients at both the student level and aggregated school level were in the .90s. Positive correlations with measures of parent trust and school academic performance suggest evidence of construct validity. Experts in child development reviewed all items for readability and relevance to student experience, assuring appropriate use with all age levels to be sampled.

Indentification with School Questionnaire: Identification with school was measured using the *Identification with School Questionnaire* (Voelkl, 1996), a sixteen-item, four-point Likert-type scale given to students. The response set ranges from strongly agree to strongly disagree and it has an individual score range of 16-64. This scale was developed to test students' valuing of school and sense of belonging to school. Sample items include, "School is one of the most important things in my life," "I am treated with as much respect as other students in my class," and "Most of what I learn in school will be useful when I get a job." The psychometric development and properties of the scale have been reported (Voelkl, 1996, 1997). Alpha coefficients indicative of internal consistency reported in earlier studies and in this study are consistently in the mid .80s.

Conrol Variables: A proxy for socioeconomic status was included as a control variable. It was operationalized as the school proportion of students eligible for free and reduced lunch, or "Reverse SES." That is, high socioeconomic status was indicated by a low proportion of student eligibility for free or reduced lunch. Scores for this sample range from seven to 97 percent. The SES proxy was included in these analyses because of its importance in previous research on academic performance in particular. A second control variable, school level was explored. It refers to the general grade configurations defined as elementary (K-5), middle school (6-8), and high school (9-12).

Data Analysis

Descriptive and Correlational Analysis

The first level of investigation involved obtaining descriptive statistics and bivariate correlations for all of the variables in the study. Table 1 includes the mean, standard deviations and the correlations for all of the variables.

Student trust of principal was positively and significantly correlated with student identification with school ($r=.68$, $p<.01$). Parent trust of school was positively and significantly correlated with student identification ($r=.52$, $p<.01$). This would suggest that trust, generally, and identification with school have a direct and positive relationship.

There was a significant inverse correlation between school level and student identification with school ($r = -.62$, $p<.01$). This would suggest that student identification with school is high at the elementary level, declining significantly as individuals reach high school age. There was no relationship between socioeconomic status and student identification with school ($r = .11$, $p>.05$) and only a moderate relationship between Reverse SES and parent trust of school ($r = -.24$, $p<.05$). There was no significant relationship between Reverse SES and student trust of principal ($r = -.02$, $p>.05$). So, while Reverse SES seemed to be related to the way parents trust the school, such that parents in low SES schools seemed less trusting of the school than parents in higher SES schools, it did not seem to be related to how students trust the principal.

Regression Analysis

Next a regression analysis using ordinary least squares multiple regression tested the ability of parent and student trust to predict student identification with school. Table 2 presents the results of student identification regressed on student trust of principal and parent trust of school.

The authors chose a hierarchical regression model to detect the separate effects of control, before

examining the predictors of interest. A preliminary run showed the school level variable to suppress effects of other independent variables due to its high correlation with both independent and dependent variables. Cohen and Cohen advise removal of such variables under this condition (1975, p. 90). The first step of the hierarchical regression, thus, included only Reverse SES. As is clear from Table 2, Reverse SES was not a significant predictor.

In step two, the overall model, including Reverse SES, Student Trust of Principal, and Parent Trust of School, predicts student identification and does so with statistical significance. The R^2 indicates that the three independent variables together explain 60% of the variance in student identification with school. In step two Reverse SES does clearly play a role ($\beta = .21$, $p < .01$). However, both Student Trust of Principal and Parent Trust of School are more important predictors ($\beta = .55$, $p < .01$ and $\beta = .37$, $p < .01$) respectively.

Discussion of Findings

This is the first study to investigate the relationship between student and parent trust and student identification with school. The findings from this study support the hypotheses that parent and student trust are correlated and predict student identification with school. Together parent and student trust explained 60 % of the variance in student identification with school.

The present study also confirmed that students identify more with school at the elementary school level and that this identification, as well as parent and student trust, tends to wane as students advance through the grades (Ryan & Patrick, 2001). It might be suggested that elementary school is the time to intervene and to develop strong positive relationships between parents, students and the school rather than waiting until they begin to withdraw (Everett, Bass, Steele, & McWilliams, 1997).

It was very encouraging to note that Reverse SES was not correlated with student identification with school and only moderately correlated with one of the trust variables; parent trust of the school. The fact that Reverse SES was not significantly correlated with student trust of the principal is a significant and promising finding, lending support to the important role of the principal in both establishing a trusting environment, and in fostering student identification with school, despite the SES of the school.

Implications for Practice

These findings hold important theoretical and practical implications for the role of trust in the promotion of student identification with school. When parents trust the school and students trust the principal, students are more likely to develop a bond with the school and to value school as something that is worthwhile for them. Comer (1999) suggested that trust is the cornerstone for building relationships within communities, and that parents are an essential part of developing a climate of trust, caring, and openness. It is incumbent on schools and administrators to establish trusting relationships with parents and students by fostering an environment of trust and caring. Furthermore, students who have social bonds at school are less likely to reject school and more likely to conform to rules associated with schooling. Students who exhibit a high degree of social bonding tend to identify with the institution (Wehlage, 1989).

Involving parents in the school and establishing strong, caring, and trusting relationships with parents and students is essential. Furthermore enhancing communication with parents, involving parents and students in decision-making, and teaching parents how to negotiate boundaries can improve teacher-parent relationships (Fuller, 1994).

Finally, in order for schools to increase student identification, they must be willing to address impediments that stand in the way of identification with school such as, inappropriate and uninteresting curriculum, lack of parent and student involvement, and pedagogical styles that minimize active student participation in learning (Taylor-Dunlop & Norton, 1995).

Limitations

The fact that the trust variables and the identification with school variable were aggregated to the school may have introduced aggregation bias and the small sample size prevented the researchers from doing higher order statistical analysis such as structural equation modeling. Additionally, this sample is only representative of the northeastern quadrant of one mid-western state; however the sample shared nearly exact demographic characteristics with the state's population.

Implications for future research

This study investigated the relationship between parent and student trust and identification

with school. The results of this investigation are promising. However, much more attention to this topic is needed. The results of this study suggest that parent and student trust beliefs may prove to be vital in understanding why students identify or fail to identify with school. Future studies might also explore the effect that other school level contextual characteristics, such as collective teacher efficacy, academic optimism, enabling school structures, and teacher trust, have on student identification with school. The effect of gender and ethnicity on student identification may also prove to be worthy of further investigation.

Future studies are needed, not only to compare student identification at different levels, but also to investigate within and between school differences. Since this study was designed with school as the unit of analysis, the absence of individual data did not accommodate nested statistical analyses such as hierarchical linear modeling (HLM) or structural equation modeling (SEM). Future studies designed to investigate the relationships between trust, identification with school and academic performance that will allow for such analyses could prove to be very beneficial.

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Table 1.

Descriptive Data and Correlation of Variables

Variable	N	Mean	Standard Deviation	SI	STP	PTS	SL	RSES
Student Identification (SI)	74	51.32	3.94	---	.68**	.52**	-.62**	.11
Student trust of Principal(STP)	74	50.63	5.04		----	.37**	-.57**	-.02
Parent Trust of School (PTS)	74	57.60	9.48			---	-.48**	-.24*
School Level (SL)	74	2.05	.79				---	-.12
REVERSE SES (RSES)	74	45.68	23.49					---

** *Correlation is significant at the 0.01 level (2-tailed).*

* *Correlation is significant at the 0.05 level (2-tailed).*

Table 2.

Hierarchical Regression of Student Identification with School on the Trust Variables

	β	Significance
STEP 1		
Reverse SES	.11	.36NS
R = .11 NS		
R^2 = .01		
STEP 2		
Reverse SES	.21	p < .01
Student Trust of Principal	.55	p < .01
Parent Trust of School	.37	p < .01
R = .77**		
R^2 = .60		
R^2 Change = .58**		

Research in Brief: Differences in Preservice Teachers' Attitudes toward Individuals with Physical, Developmental, and Behavioral Disabilities

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Investigating the nature of attitudes toward individuals with disabilities is important in the context of the classroom. With more students with disabilities being educated in regular education classrooms, there is a need to examine the attitudes that preservice teachers hold toward individuals with disabilities. This research sought to understand the degree to which preservice teachers differ in their attitudes toward individuals with physical, developmental, and behavioral disabilities.

The attitudes that others hold have important influences on individuals with disabilities (Yuker, 1994). Attitudes that others hold affect the quality and availability of services available to individuals with disabilities (Rees, Spreen, & Harnadek, 1991). Cook, Cameron, and Tankersley (2007) found that teachers were significantly more indifferent and rejecting toward their students with disabilities. Teachers' attitudes toward students with disabilities has been identified as a critical variable in the success of managing children with special needs (Bacon & Schultz, 1991) and in the success of the integration of these students into the regular classroom (Stewart, 1990).

Many of the studies performed in the past have treated disabilities as a broad category. Traditional scales ask broad questions about individuals with disabilities in general. There are only a few studies that have investigated attitudes toward individuals with different types of disabilities (i.e., Anderson & Antonak, 1992; Furnham & Gibbs, 1984). None of these studies, however, investigated preservice teachers specifically. This study investigated the differences in preservice teachers' attitudes toward individuals with three different types of disabilities: physical, developmental, and behavioral. It is important to compare attitudes toward different disabilities especially since children with various disabilities are being educated in a variety of classroom settings.

Method

Participants were all education majors recruited from two undergraduate institutions. Of the 140 participants, 20 were male (14%) and 120 were female (86%) with ages ranging from 18 to 21 years, (M = 19.14, SD = .80). None of the participants had completed any form of supervised experiences in schools prior to this research project.

The current study utilized a survey that presented participants with three scenarios portraying an individual with a physical (person in a wheelchair), developmental (mental retardation), and behavioral (ADHD) disability. Following each scenario was the Scale of Attitudes toward Disabled Persons (SADP; Antonak, 1982). The SADP consists of 24 Likert scale items ranging from "I disagree very much (1)" to "I agree very much (6)."

Results

A series of paired samples t-tests were conducted to investigate differences among preservice teachers' attitudes toward the different disabilities. Preservice teachers had significantly more positive attitudes toward individuals with physical disabilities than individuals with developmental disabilities, $t(139) = 14.63$, $p < .01$, and individuals with behavioral disabilities, $t(139) = 5.55$, $p < .01$. Preservice teachers had significantly more positive attitudes toward individuals with behavioral disabilities than individuals with developmental disabilities, $t(139) = 8.67$, $p < .01$.

Discussion

This was the first study to investigate preservice teachers' attitudes toward individuals with different disabilities; physical, developmental, and behavioral. Preservice teachers reported the most positive attitudes toward individuals with physical

disabilities and reported the least positive attitudes toward individuals with developmental disabilities. This is consistent with previous research. Individuals whose disability results in difficulty communicating, as is the case with certain developmental disabilities, are often viewed more negatively and rejected by others (Anderson & Antonak, 1992). Furnham and Gibbs (1984) also found that individuals with developmental disabilities were viewed more negatively than individuals with physical disabilities. Since physical disabilities are evident by looking at those who are affected by them, people may have a better understanding of physical disabilities and may have a fear of the unknown toward the developmentally disabled. This may also hold true for individuals with behavioral disabilities. This suggests that preservice teachers may have more favorable attitudes toward visible rather than unobservable disabilities.

There is research to suggest that greater contact between preservice teachers and individuals with disabilities is likely to improve preservice teachers' attitudes (Jones, Wint, & Ellis, 1990). The way that teachers relate to teaching students with disabilities is influenced by their past experiences (Brownlee & Carrington, 2000). Student teachers with past experiences with individuals with disabilities had more positive attitudes toward such individuals (Hodge & Jansma, 1999; Tait & Purdie, 2000) and more positive attitudes toward mainstreaming students with disabilities in schools (Harvey & Green, 1984). Murphy (1996) claims that if teachers come out from preservice education programs without having developed positive attitudes toward individuals with disabilities, those attitudes will be difficult to change and positive outcomes for students with disabilities will not be maximized within school settings.

This research helps us to understand what attitudes preservice teachers have when entering our training programs. While teacher educators should always strive to improve preservice teachers' attitudes toward individuals with disabilities, it also appears that certain disabilities should be focused on more than others; developmental and behavioral disabilities. This research also can also help us understand the experiences necessary in teacher training. This begs the question of what type of experiences should be required to be accepted into teacher training programs and what type of experiences should be mandatory for preservice teachers, whether regular or special education. This has an impact on how we train future teachers and highlights the need for certain field experiences that future teachers should engage in since more students with disabilities being educated in regular education classrooms. This research can help us to understand how teacher educators can meet the needs of diverse students K-12 through teacher preparation.

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Table 1
SADP Means and Standard Deviations for each Disability

	M	*SD*
Physical Disabilities	5.03	.45
Behavioral Disabilities	4.80	.56
Developmental Disabilities	4.39	.63

Research in Brief
Waging Peace through Forgiveness in Belfast, Northern Ireland III: Correcting a Production Error and a Case Study

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Introductory Note

In the fall, 2007 issue of this journal, we presented a three-study article on our forgiveness education programs for peace in Belfast, Northern Ireland (Enright, Knutson Enright, Holter, Baskin, & Knutson, 2007). After the article was submitted and then accepted for publication, production errors occurred in both data tables just prior to printing. The purpose of this brief article is to explain the two tables, which should be substituted for the erroneous tables in the original 2007 article and to take the opportunity to present a case study of a seven-year-old boy who was considered by his teachers to be at risk because of his intense anger in the school setting. How the forgiveness education program impacted his level of anger is discussed.

Since 2002, our research group has been involved in evaluating forgiveness education programs in the primary grades of Belfast, Northern Ireland. This entails a long-range peace plan in which the children learn concepts of forgiveness with increasing developmental complexity as they advance in the grades. The plan is to have a curriculum at each grade level from Primary 3 (first-grade in the United States) through the end of secondary school. To date, teacher curriculum guides are available for Primary 3 through the first year of secondary school (Enright, Knutson Enright, Holter, Baskin, & Knutson, 2007). Our intent here is to correct production errors in the two tables from the previously published research report (Enright et al., 2007) and to present a case study of a seven-year-old boy who was impacted by the forgiveness curriculum.

Summary of the Forgiveness Research

We have now evaluated the effectiveness of the classroom teacher-led programs, which occur for about one hour per week for one academic semester, in Primary 3 and 5. For Primary 3, we had three classrooms, randomly assigned, in the experimental group (in which the teacher delivered forgiveness education; N=36 students) and four control group classrooms (N=57). For Primary 5, we again had three classrooms, randomly assigned, in the experimental group (N=35) and three control group classrooms (N=49). Catholic and state (with primarily Protestant students) schools are involved on both grade levels. The dependent measures are anger (assessed with the Beck Anger Inventory Youth) for the Primary 3 students, and anger (same instrument as in Primary 3), depression (Beck Depression Inventory Youth), and level of forgiveness (Enright Forgiveness Inventory for Children) for the Primary 5 students.

Corrected Tables

Table 1 presents the findings from Study 1 (Enright et al., 2007), in which we compared the level of anger for both male and female students in Primary 3 classrooms in three communities: Madison and central-city Milwaukee, Wisconsin and Belfast,

Northern Ireland. The data for Belfast did not appear in the original article. As can be seen, the children in Belfast are close to the "mildly elevated" level of anger by Beck, Beck, and Jolly's criteria (2001). This finding, along with the statistically significant finding of no difference between the Belfast and central-city Milwaukee samples, formed the rationale for forgiveness education in Belfast (Studies 2 and 3).

Table 2 details the pretest and follow-up (one month after intervention) data for Primary 3 (Study 2) and Primary 5 (Study 3) children. The corrected tables should now be self-explanatory in light of the existing descriptions in the original article. To summarize, the Primary 3 children in the experimental group classrooms, which had forgiveness education from their own teachers, reduced statistically significantly more in anger than did the children in the control group classrooms. The Primary 5 children in the experimental group classrooms, also which had forgiveness education from their own teachers, reduced statistically significantly more in anger and depression and increased more in forgiveness than did the children in the control group classrooms.

Case Study

Timothy (name changed), a seven-year-old child in Primary 3, attended a school located in an interface area of Belfast, Northern Ireland where Protestants and Catholics live in close, yet segregated, proximity. The environment is more prone to violence and crime and experiences more riots than non-interface areas of Belfast (see Enright et al., 2007 for details).

When Timothy began to learn about forgiveness, he had experienced much turbulence in his young life. At the age of seven, he was struggling academically, and was in frequent conflict with his peers and teachers. At the time of pre-testing, according to the Beck Anger Inventory—Youth mentioned above, Timothy's level of anger was at a clinical level (borderline extreme anger). At the one-month follow-up, upon completion of the forgiveness curriculum, Timothy's anger had been substantially reduced to a level of "no anger." Timothy reported that before the forgiveness lessons: 1) when angry, he stayed that way; 2) he always felt controlled by other people; 3) always felt put down; and 4) always felt people were against him. After the forgiveness lessons, Timothy reported that he rarely experienced any of the above. Before the forgiveness lessons, he reported that he always got mad at other people. After the forgiveness lessons, Timothy reported that he now only sometimes got mad at other people.

In addition to the important changes in Timothy's level of anger, his teacher reported visibly apparent changes in his attitudes about himself and others. His introduction to the concept of inherent worth through the Dr. Seuss' book, *Horton Hears a Who*, is particularly noteworthy. Inherent worth is the concept that people do not have to earn the value that they possess as persons; it is unconditional. The book, *Horton Hears a Who*, teaches this lesson with the frequently repeated refrain, "A person's a person, no matter how small." After learning that all people have worth, regardless of their positions in life, the places they live, their appearance, and/or their abilities, Timothy approached his teacher and asked, "Does this mean that I am as good as Conrad (a boy who excelled in sports)?" The teacher said, "Yes, you are as good as Conrad." Timothy then said, "Does this mean that I am as good as Pamela (a girl who came from a family with a mother and a father who were quite involved with their children)?" The teacher said, "Yes, you are as good as Pamela." Finally, Timothy asked, "Does this mean that I have as much worth as Richard (a boy who did very well in academics)?" The teacher said, "Yes Timothy, you have as much worth as Richard." Timothy smiled and returned to his seat (for the study, all names were changed).

The environmental circumstances of Timothy's life have not improved, but Timothy now has a tool, forgiveness, to help him deal with the injustices of life. His teacher has noticed a change in his social behavior in the classroom toward greater respect for others and for himself.

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Table 1.
Means, Standard Deviations, and Post-Hoc Comparisons for Significant Two-Way ANOVA Results

	Beck Anger T-Scores		ANOVA	Post hoc
	M	SD	F (2, 306)	
(1) Madison 1st (N = 66)	50.53	10.04	7.64**	1 < 2 ** 1 < 3 *
(2) Milwaukee 1st (N = 150)	57.33	12.59		2 > 1 ** 2 = 3
(3) Belfast P3 (N = 93)	54.44	11.87		3 > 1 * 3 = 2

* $p < .05$; ** $p < .001$

Beck T-Scores and Clinical Ranges

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

Table 2.
Means, Standard Deviations, t-tests, and Effect Size for Dependent Variables

	Pretest		Delayed Posttest		Gain Score		Gain Score t-test	Cohen's d
	M	SD	M	SD	M	SD		
Belfast 1st Grade (Primary 3)								
Experimental								
Anger (n=36)	56.19	10.35	50.50	10.27	-5.69	9.99	1.90*	.41
Control								
Anger (n=57)	53.33	11.28	52.23	13.04	-1.11	12.16		
Belfast 3rd Grade (Primary 5)								
Experimental								
Anger (n = 34)	55.53	11.78	50.03	11.15	-5.50	10.57	3.12*	.70
Depression (n = 34)	53.59	11.59	50.12	13.58	-3.47	8.67	1.67*	.38
Forgiveness (n = 35)	68.22	20.43	86.51	18.85	18.29	23.99	2.56*	.57
Control								
Anger (n = 49)	47.42	9.93	49.24	8.68	1.82	10.47		
Depression (n = 49)	50.49	8.35	50.35	10.26	-0.14	9.05		
Forgiveness (n = 47)	77.28	23.91	83.19	22.60	5.91	19.70		

* $p < .05$

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

Research in Brief: Leadership Role of the Department Chair in Private Colleges

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Private colleges and universities offer students a myriad of choices in regard to educational opportunities. Education, engineering, business, science, and fine arts are some of the academic disciplines that students can choose to pursue. Private colleges have a unique place in the higher education industry, as institutions are often described as small, enrolling 3,000 students or fewer, and are fully committed to the education of the whole person. This typically takes the form of small faculty-student ratios, and reliance on faculty who are willing to commit to the ideal of the liberal arts experience (Morris & Miller, 2008). The benefits of these actions to define the private liberal arts college experience are multiple. Students enrolled in these colleges expect and report a greater sense of community (Gaudiani, 1997), a stronger, often personal relationship between students and faculty members (Pascarella, Wolniak, Seifer, Cruce, & Blaich, 2005), faculty who emphasize teaching (Henderson & Buchanan, 2007), an easier access to responsible, senior administrators by faculty and students (Pascarella, Wolniak, Seifer, Cruce, & Blaich, 2005) and students find an ability to express their individuality and experience diversity in ways and to a magnitude that is often not found in large public universities (Umbach & Kuh, 2006). This study explores the department chair as a front line manager in private institutions.

Problem

The department chair is a vital component of the private institution. The position is heavily relied on when it comes to the decision-making process, and no other position plays such a unique role in higher education. Eighty percent of all decisions within an institution are made by the department chair (Roach, 1976). With the department chair having as many roles and responsibilities in a private institution, it is necessary to give this position further examination. The current study was designed to examine the characteristics, roles, and responsibilities of the private college department chair.

Purpose of the Study

The purpose for conducting this study was to understand the unique role and dimensions of the department chair in the private college setting. Specifically, the study analyzed characteristics, roles, and responsibilities of four year private college department chairs. This was completed by exploring the research related to department chairs, and completion of a survey adapted from the Study of Higher Education and Post Secondary Education at the University of Nebraska-Lincoln and the Maricopa Community College National Community College Chair Academy.

Literature Review

The academic leader is among the most misunderstood management positions in the modern world (Gmelch, 2004). Little empirical research has been conducted on the academic leader, especially department chairpersons. According to Roach (1976), 80% of all university decisions are made at the department level. Gmelch and Burns (1994) wrote, "The department chair person has been identified as key in the management of today's colleges and universities" (p. 79). With this many decisions being made at the department level, many researchers promote the importance of department chairs in institutions of higher education. Also, within the academic department the chair has the most influence over faculty and academic support staff members; however, many institutions fail to recognize the importance of this unique and challenging position (Seagren, Cresswell, & Wheeler, 1993).

Methods

A total of 325 private institutions were randomly selected by choosing every third institution of the total population of private colleges and universities. Private institutions that classified themselves as proprietary were excluded from the study. A letter was then sent to the Senior Academic Officer requesting outstanding chair nominations. Approximately 20% of the Senior Academic Officer's sent nominations from their institutions. These

nominations determined the number of surveys sent to department chairs in order to complete the study.

Results

Data indicated that the majority of private college department chairs held the title of chair, was appointed to the position by administrators, coordinated the activities of a unit called a "department" that enrolled 200 or fewer students, had 10 or fewer faculty in the department, academic units operating for more than 20 years, and had the largest academic program areas in Science, Business, and Social Sciences. The institutions had between 11 to 20 chairpersons, were mainly comprised from the North Central accrediting region, and had enrollments of 2000 or less students. The department chairs were over the age of 55, with gender ratio being nearly equal, and the majority having the ethnicity of white. They had over 20 years experience working in private colleges, and had less than 5 years experience as department chair. Most did not have any other professional experience in other administrative positions. There was no significant difference identified in the comparison of perceived roles as department chair in relation to largest program area/academic discipline they represent. The results indicated that dispersing information, planning, and advocating for the department was the primary roles for private college department chairs.

Conclusions

The findings from the study indicated that the majority of department chairs in private colleges do not have large numbers of students and faculty. Results indicated the majority of respondents had over 20 years experience working in private colleges; however the bulk of respondents indicated that they had less than 5 years experience as department chair. Most did not have any other professional experience in other administrative positions. This validates what most researchers have written regarding little previous administrative experience. Findings indicated the majority of department chairs plan to stay at the same college, and reported their primary roles as being: Information Disseminator, Planner, and Advocator.

Recommendations

Examine faith-based versus non faith-based private institutions. There is a difference in culture, mission and values depending on the religious affiliation of a private college. Religious influence can influence the governance decision-making process causing department chairs to make decisions based on religious and moral guidelines.

Study results suggest that the overwhelming majority of department chairs have the ethnicity of white. There are many factors causing this disparity of ethnicity in private colleges, and it is important to recognize this issue. Private colleges will have to implement new hiring plans in order to attract candidates with ethnic diversity.

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Research in Brief: Reconciling the Literature with Professional Judgment: An Evaluation of Assessment in Higher Education

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The purpose, type, and parties demanding assessment is ever evolving in American higher education. This transformation in assessment is prevalent at public and private higher education institutions and is often directly influenced by the federal and state governments. This has caused a significant shift in the professional duties of faculty, staff, and administrators as more demands for assessment data are created by external entities (Slaughter & Leslie, 1997). Therefore, it is important to understand how assessment professionals view this shift, as well as compare those views with the prevailing scholarship on the issue.

According to McPherson, Schapiro, and Winston (1993), the shift in higher education has occurred as the result of a reduction in trust in institutions of higher education by public and government officials. This lack of trust and the ever-present scarcity of resources have brought about a growing need for accountability on institutions as they seek to respond to the scrutiny of various constituents (Bess & Dee, 2008; Bresciani, Zelna, & Anderson, 2004; Miller, Bender, Schuh, & Associates, 2005; Upcraft & Schuh, 1996). Thus, the resultant effects are that external forces driving accountability in higher education are becoming stridently unable to ignore (Cohen, 2001; Cohen & Brawer, 2003; Ewell, 1998; Hurley, 2003; Richardson & de los Santos, 2001).

While recent accountability and productivity measures may be appealing to those outside higher education, they are difficult to quantify in higher educations' multi-dimensional and abstract environment (McPherson et al., 1993; Burke, 2005). Since each institution and state have distinct higher education cultures and serve various stakeholders, external assessment demands have sought to compel homogeny in recent years. This has resulted in a perception that national standards may spawn inflexible systems. While efficiency and uniformity may be optimal in the market and corporate world, many are apprehensive about their wholesale adaptation to higher education (Eaton, 2004).

While, institutions should always strive for efficiency, many scholars contend that this quest should not come at the expense of the student driven mission (Freeman & Patterson, 2006; Newman, Courturier, & Scurry, 2004; Smith, 2004). According to Ritzer (1996), "Rational systems inevitably spawn a series of irrationalities that limit, eventually compromise, and perhaps even undermine their rationality" (p. 121). Rationale systems do not allow for compromise, flexibility, or "messy" situations, which higher education has shown to be a necessity for effective operation (meeting public and private needs). The fear is that institutions may no longer be able to successfully adopt overly-rational systems and thus, the quest for rationality could supplant the long held values of higher education. Therefore, it is in this environment that assessment has taken on a changing and more vital role.

Methods Synopsis

The participants in this study were selected from public and private four-year institutions and community colleges across the U.S. who has staff dedicated to assessment. Institutions were selected to obtain diversity based on Carnegie classification, size, focus, and location. A stratified random sample of 53 institutions was emailed a survey during the fall semester, with fifteen completing surveys for a return rate of 28.3%. The director of institutional assessment or their equivalent was obtained from each identified institution based on current data from institutional websites.

The researchers developed the survey questions specifically for this study. Questions were developed to address specific areas of the study, such as participants' perspective on the state, federal, and accreditation standards influences on higher education. The "yes" and "no" responses to each question were compiled quantitatively and the responses to each open ended question were grouped by question. The themes identified through the participants' perspectives were then compared with the literature that denotes the external impact on assessment in higher education.

Results

Of the respondents, 78% reported that external assessment has influenced their offices, while 77% claim that the number of "must complete" assessment projects had increased. Additionally, 64% reported that the changing criteria for assessment have affected their office significantly. Sixty-four percent of respondents said that they have less time and energy available to meet assessment goals and 87% say that increased external expectations are the cause. Only 53% perceived that state and federal mandates had influenced their responsibilities, while only 43% perceived an increase in mandates from previous years.

It is clear that external demands have altered the type and degree of assessment required, the participants' responses also indicate a reluctance to completely deride the positive influence. While 93% indicated a reluctance to say that federal and state governments should take a more active role in higher education, when they were asked; "has external assessment had a positive effect on higher education," 67% responded "yes". Furthermore, while many of the yes/no responses indicate a negative impression of external assessments, many of the respondent's explanations demonstrate a restrained endorsement of recent assessment requirements.

Most of the comments confirmed that there "was more work, more responsibility, more accountability, and more documentation," but there were many comments that claimed that "it has helped to address concerns about accountability and has required schools to pay more attention to student learning." While most of the respondents would likely agree with the comment that "government could take less of a role" in assessment, they might also agree that "without external pressure, we wouldn't have done it (assessment), and it needed to be done." The data collected from this study is rich and complex simple responses indicating distaste for external assessment may not clearly indicate the respondent's stance on the issue.

Conclusion

The results of the study seem to indicate a confirmation, as well as a disconnect between the literature and the perspectives of assessment personnel interviewed in this study. For instance, the literature indicates that federal and state governments have been overly influential on the assessment conducted in higher education, 93% of the assessment personnel in this study agreed with that statement but, 67% of the respondents agreed that the previous involvement by the government had been positive. This contention was articulated by one respondent as "In a very real way, it (assessment) is making colleges address issues of teaching, learning and getting back to educations' basic foundations." Although assessment personnel believed government intervention has positively driven higher education to respond to the need for assessment and accountability, they were cautious about fully endorsing government's ever increasing role in developing accountability and assessments mandates. This understanding reinforces the increasingly essential need for communication with federal and state governments and accrediting agencies. As noted by many of the respondents, they realize that a failure to appropriately respond to the increasing mandates from the federal and state governments will result in more distrust and greater external intervention. Otherwise, haphazard involvement on the part of state and federal governments to 'improve' higher education through lessening the gap between market accountability and higher education's traditional sovereignty could potentially result in negative consequences (Newman et al., 2004).

Developing these avenues of communication and cooperation between higher education and state and federal governments may have significant benefits, but the status quo of distrust by social and political forces will continue unless higher education can develop an improved transition and preparation for students leaving secondary education and entering higher education along with improving the success rate of underserved and marginalized populations that might be ignored (Freeman, 2007; Smith, 2004). Higher education can no longer ignore its responsibility to improve the transition from secondary and elementary education and serving the greater good of society through ensuring the underserved are provided access and obtain a postsecondary education.

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Research in Brief:
Communicating with College Athletes: The Relationship between Communication Apprehension and Athletic Identity

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The academic, athletic, and social lives of intercollegiate student athletes (S-A) has generated tremendous cross disciplinary interest in this unique subset of the college student population. For starters, scholars highlight the need to recognize that S-A must navigate the same developmental challenges as non-athletes (Broughton & Neyer, 2001). Overall, the empirical literature on college athletes illustrates the need to take a holistic approach to the challenges they face as they seek to successful balance academic, athletic, and social challenges.

Academically, S-A historically have been viewed as lacking the intellectual capacity and motivation needed to succeed in the higher education setting (Zinngg, 1982) often being stereotyped as the "dumb jock" (Engstrom, Sedlascek, & McEwen, 1995). Several theories have attempted to explain their poor academic performances, including: a) the energy expended in competition in revenue generating sports depletes the cognitive resources needed to make the necessary investments in the classroom (Pascarella et al., 1999); b) immersion in a sports culture where athletic success is favored over academics (Shulman & Bowen, 2001; Pascarella et al., 1999); and c) the inordinate time commitment associated with college athletics (Shulman & Bowen, 2001; Simons, Rheenen, and Covington, 1999) Studies in the 1970's and early 1980's suggested there was some truth to that notion, with results consistently showing a negative relationship between athletic participation and academic performance (Cross, 1973; Edwards, 1984; Purdy, Eitzen, & Hufnagel, 1982; Sack & Theil, 1979; Spivey & Jones, 1975). Research has since revealed that the academic motivation and successes of the contemporary S-A closely parallels, and in some cases exceeds, that of their non-athlete peers relative to cognitive development (Pascarella, Bohr, Nora, & Terenzini, 1995), grades (Hood, Craig, & Ferguson, 1992), and the time allotted for classroom related activities (Richards & Aries, 1999; Umbach et al., 2006) Data compiled by the National Intercollegiate Athletic Administration (NCAA), and supported by a recent study by Potuto and O'Hanlon (2007), further dispels the notion that S-A are intellectually inferior as well as academically less motivated or competent than the general college student population. Indeed, the most recent NCAA graduation rate report (2000-01 class) indicates that the overall graduation rates for student-athletes were slightly higher than non-athletes (63% to 62%).

These studies illustrate the continued cross disciplinary interest in the S-A experience, especially the need to be increasingly attentive to the holistic wellness of S-A (Anderson, 2000; Watson & Kissinger, 2007). Sports medicine researchers, for example, this holistic view is underscored by Wiese-Bjornstal and Shaffer's (1999) recognition that any combination of the psychosocial dimensions of sport (physical, psychological, environmental, sociocultural) could predispose athletes to injury, impede their performance, and reduce the chances for positive rehabilitation outcomes. There is also considerable empirical evidence attesting to the vulnerability of student-athletes to a litany of behavioral (Weinstock, Whelan, Meyers, & Watson, 2007), mental health (Brewer & Petrie, 1996), and substance abuse problems (Nelson & Wechsler, 2001). The broad range of potential physical and psychosocial challenges facing S-A exemplifies the need to guard against preconceived notions of elite college athletes as privileged or immune from the daily stressors and pressures of college life and implement a holistic approach to working with S-A.

Another construct drawing the attention of sports researchers is athletic identity, or "the degree to which an individual identifies with the athlete role" (Brewer, Van Raalte, & Linder, 1993). The importance of AI is emphasized by Brewer et al. (1993), who note the saliency of AI to the overall self-concept of athletic competitors. The empirical evidence associated with AI further illustrates the importance of taking a holistic view of the student-athlete. For example, several studies on AI have led to concerns that over identifying with the athlete role

could lead to a sense of [athletic] identity foreclosure that could impede normal psychosocial development (Werthner & Orlick, 1986; Danish, Petitpas, & Hale, 1993). Specific problematic correlates of an overdeveloped AI include unsuitable training methods and anxiety outside one's athletic endeavors, post-injury depression, post-athletic career problems, social isolation, and career immaturity (Baille & Danish, 1992; Brewer, 1993; Brewer et al., 1993; Grove, Lavallee, & Gordon, 1997; Coen & Ogles; Murphy, Petipas, & Brewer, 1996). On the other hand, AI has been positively linked with factors critical to S-A athletic success, including commitment to training and focus on athletic goals (Horton & Mack, 2000), athletic performance (Danish, 1983; Werthner & Orlick, 1986), as well as positive psychological outcomes associated with athletic training, including improved body image, self-confidence, and lower levels of anxiety (Horton & Mack, 2000).

Despite the continued growth of student-athlete research, little, if any research has explored the communication skills of S-A, especially in relation to oral communication. One construct receiving attention in relation to college student communication skills is communication apprehension, or "the fear or anticipated fear or anxiety associated with real or anticipated communication with another person or persons" (McCroskey, 1977, p. 78). Academically, CA is negatively associated with academic achievement (Scott, Yates, & Wheeler, 1975). On a personal level, high CA college students were found to have fewer social interactions and close relationships with peers and faculty and are less positive about the college environment (McCroskey & Sheahan, 1978). Interpersonally, high CA individuals also "experience emotional distress during or anticipating communication, prefer to avoid communication, and are perceived by others and themselves as less competent, skilled, and successful" (McCroskey, Booth-Butterfield, & Payne, 1989, p. 101). In short, understanding these patterns alone or in conjunction with AI, could help in advising or treating S-A over any number of academic, athletic, or personal issues.

Statement of the Problem

While investigations into the personality and behavioral correlates of communication apprehension among the college student population have been fruitful (Butler, Pryor, & Marti, 2004; see also Richmond & McCroskey, 1998), no research has yet investigated the link between CA and S-A of college S-A. Given the potential impact of both CA and AI on the personal and academic success of S-A, the purpose of this article is to investigate the relationship between CA and AI of freshman male student-athletes.

Results

Pearson's correlation coefficients were computed to study the associations among the Personal Report of Communication Apprehension (PRCA-24) and the Athletic Identity Measurement Scale (AIMS). Frequencies were computed on all demographic variables. The median age of the 72 participants in this study was 18, with 67% being Caucasian and 18% being African-American. All participants were male (100%) and the majority were in their freshman year of college (79%). The overall mean communication apprehension score on the PRCA-24 was 60.0 ($s.d.$ = 18.2) and the mean AIMS score was 39.5 ($s.d.$ = 7.1). The mean subscale scores on the PRCA-24 were 14.2 ($s.d.$ = 5.9) for small group, 14.9 ($s.d.$ = 5.1) for large group, 14.2 ($s.d.$ = 4.9) for dyadic interactions, and 16.7 ($s.d.$ = 5.4) for public speaking. Results of the Pearson correlation coefficient indicated that there was a weak positive relationship between the PRCA-24 and the AIMS (r = 0.12). While the dyadic interaction and large group subscales had slightly stronger positive relationships with the AIMS (r = 0.23 and r = 0.16, respectively), indicating that individuals who identify themselves as being an athlete tend to have higher levels of apprehension with dyadic interactions and when speaking in large group settings. However, the results were not statistically significant. Similar results were found when examining the relationships among participants who indicated they plan to pursue a career as a professional athlete. Among these participants, there was a statistically significant positive correlation between the dyadic interaction subscale and the AIMS (r = 0.30, $p < 0.05$). However, athletic identity only accounts for 9% of the variability in dyadic interaction apprehension.

Discussion

This exploratory study was based on the conceptual link between CA and athletic identities given both constructs are shown to have academic and personal implications for college students. Although weak, the significant positive relationship between CA and the AI illustrates the importance of remaining sensitive to the unique communication profile of high AI individuals given the high levels of AI (average score=5.67 out of 7) and the S-A. Such relationships could manifest in unique ways in the classroom and athletic settings. For example, a high

AI student-athlete internalizing the "dumb-jock stereotype" may help account for the significant CA-AI link in dyadic and large group classroom settings where they would be expected to illustrate their intellectual competence. In an athletic setting, In both cases where significant CA-AI relationships are present, however, a larger sample size is recommended.

Recommendations

1. Working knowledge of, and sensitivity to, societal and institutional athletic culture
2. Working knowledge of, and sensitivity to, the academic, athletic, and personal correlates of CA and AI that could impact the holistic wellness of the SA.
3. Early assessment of CA and AI in order to construct individualized intervention strategies subsequent to unique CA-AI profile of S-A. Example: Systematic desensitization techniques targeting specific CA contexts (i.e., dyadic and large group situations) where high AI S-A experience significant CA.
4. Use of teaching strategies/styles that create non-judgmental learning environment for S-A in order to reduce anxiety about their academic ability.
5. Referral to mental health professional for cognitive interventions when high CA levels impair classroom participation that could impact grades.
6. Use of self-regulation techniques in the classroom interventions to reduce CA, such as guided visualization, skills training, humor, and heart rate training to regulate CA among high AI S-A.
7. Psycho education interventions in the classroom aimed at helping S-A explore dimensions outside their AI.
8. Implementation of strategies aimed at increasing communication skills of SA.

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Research in Brief:
School Counseling Production at Universities in the Southeast

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The authors wish to acknowledge Keith Cates for his assistance with data collection for this manuscript. Keith, who currently is a doctoral candidate at Auburn University, was a graduate research assistant in the Counseling and Educational Psychology Department at the University of West Georgia.

The importance of graduating well-trained Professional School Counselors (PSC) is enhanced when one realizes the type of issues school children bring to counselors today to deal with these 21st Century issues (Snow, Boes, Chibbaro, & Sebera, 2008). However it is of the utmost importance to prepare students to achieve academically at the highest level so they will become tomorrow's productive citizens. The Transforming School Counseling Initiative (TSCI) was the impetus that brought counselor education programs to re-connect their work with the academic mission of today's schools (Martin, 2002). Likewise the National Standards for School Counseling Programs (Campbell & Dahir, 1997), the American School Counseling Association's ASCA National Model (ASCA, 2005) and recent revisions to the Council for the Accreditation of Counseling and Related Programs (CACREP, 2001) Standards continue the TSCI's focus on academics without forgoing the social/emotional issues and career preparedness needed to become active citizens. Finally, PSC align their programs with the mission of schools when they work with faculty and administrators to fulfill the mandates of the No Child Left Behind (NCLB, 2001) legislation. This study focused on the number of school counseling graduates being produced by the various institutions of higher education in the southeast, whether or not an institution was accredited by CACREP. While the nation's schools often need more counselors to meet the demand for our children's needs, more graduates may not be enough; graduates from programs that have similar curricula have more opportunity to develop like programs better suited to meet these needs.

CACREP Accredited Programs

Training standards within the counseling profession have been outlined by CACREP since 1981 yet there is a dearth of literature related to graduates of CACREP versus non-CACREP accredited programs. While much of what is published has been from earlier studies, the findings are still accurate. Bobby and Kandor (1992) investigated hindrances that kept counseling programs from seeking CACREP accreditation, they found the 600 clock-hour internship and the student-to-faculty ratios set by CACREP to be barriers. Several other concerns identified were the 48 semester hour program (72 quarter hour), the requirement of a minimum of 2 full-time faculty members (currently 3 full-time faculty members) in an individual program, and the 20-1 (now 10-1) advisor/advisee ratio. Few of the accredited programs noted major difficulties meeting the identified standards, however it was noted that sometimes financial and faculty support are not easy to acquire. No investigations were located specifically addressing the number of school counseling graduates from CACREP versus non-CACREP accredited programs. A reason CACREP accreditation is sought is the direct connection of similar curricula with like programs. In turn, this similarity benefits the nations' school children.

Method

The data collection was based on a review, analysis, and compilation of information found in various directories of members from 1995 to 2002 published by the American Association of Colleges for Teacher Education (AACTE, 1995, 1996, 1997, 1998, 1999, 2002, 2001, 2002). Each directory has an analysis of the productivity at AACTE member institutions. These member universities and colleges submit an annual report through the AACTE/NCATE Professional Education Data System and information is presented for teachers, administrators, and school counselors. The data is about 2 years old when published in each directory so information found in the 2002 directory is actually reporting data from 2000, the 2001 directory from data for 1999 and so on. After the 2002 directory, however information for counseling is not identified specifically but is grouped under "advanced" programs. Information

about school counseling graduates (or completers as used by AACTE), then, was available only through the 2002 directory.

The data collected by AACTE is considerable and is specified for each member institution. The authors are unaware of any databases that even approximate the information about school counselors as that collected by AACTE. Clawson, Henderson, Schweiger, & Collins (2004) along with predecessors, Hollis & Dodson, 2000, Hollis (1997), Hollis & Wantz (1990, 1994) have gathered considerable information about counselor education programs in the United States. While these authors have delineated helpful information including some data relative to admission and graduation rates, most numbers appear as estimates and these works have not been published on a regular basis with specific data for each year.

Using the AACTE database, the authors identified every college or university reporting school counseling graduates (completers) in the southeast. The authors then identified the accreditation status by the Council for Accreditation of Counseling and Related Education Programs (CACREP) of each reporting institution. Those accredited by CACREP were identified with the year accreditation was granted. In the analysis of data, only graduates who completed the school counseling program during or after the year accredited were considered CACREP graduates. Thus, an institution may have both graduates from a CACREP program and graduates from a non-CACREP program.

Results

Top Ten Graduating Programs in the Southern ACES Region

If one looks at the Southern Association of Counselor Education and Supervision (SACES) region for the top 10 producing universities with school counseling graduates from both CACREP accredited programs and programs that are not CACREP accredited for these (1995-2000), the results are interesting. The top 10 producing programs in the southeast include: Western Kentucky University (non-CACREP), the University of West Georgia (CACREP), University of South Carolina (CACREP), Prairie View A& M University (non-CACREP), Eastern Kentucky University (CACREP), Georgia Southern University (non-CACREP), University of Georgia (CACREP), University of South Florida (non-CACREP), Morehead State University (non-CACREP), and Georgia State University (CACREP) (see Table 1 for numbers of graduates) (AACTE, 1995, 1996, 1997, 1998, 1999, 2002, 2001, 2002). Five of these top producers have attained CACREP status while the other five programs are not accredited. Forty percent of the programs are in the state of Georgia, which is notable and three of these programs are CACREP accredited. Thirty percent of the programs are in Kentucky, with one in Florida, South Carolina and Texas. The University of West Georgia was not accredited by CACREP during the years the data in the present study was compiled.

Conclusions

It is interesting to note that the reasons Bobby and Kandor (1992) indicated as barriers to seeking CACREP accreditation are those that make programs outstanding and graduates capable of developing exceptional comprehensive guidance programs connected to academic achievement, as well as career preparedness, and social/emotional development. The 600 clock-hour internship plus a 100 hour Practicum provide graduates a minimum of 700 hours of supervised work in a school counseling setting. This clinical experience allows PSC to work with all issues presented in the school. It is understandable that programs with similar curricula prepare PSC who understand the needs of the nation's children.

Adherence to CACREP standards and licensure guidelines (which tend to follow CACREP requirements) benefits P-12 students in the southeast because similar curricula will ensure school counselors develop similar comprehensive programs. Similarities in curriculum such as depicted in accreditation standards allow school counselors to develop school counseling programs that aid students in their academics, career preparedness, and social/emotional development. While accreditation was not the focus of the study, generally school counseling programs which have acquired this status graduate fewer professional school counselors and the assumption can be made that they will develop similar programs that ultimately benefit students in P-12 schools (Snow, et al, 2008).

Recommendations for Future Research

Pursuing a study that examines the difference between accredited and non-accredited school counseling programs for similar/dissimilar curricular would be appropriate for future research. Additionally, with the new ASCA Standards and National model, it would be helpful to examine

school counseling programs that have aligned/not aligned with these Standards to see how student needs are being met and if the curricula align with the academic mission of schools.

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Table 1

SACES Top Producing School Counseling Programs

Top Ten Universities (1995-2002)

		N	X
Western Kentucky University	(N/A)	931	116
University of West Georgia	(2001)	620	78
University of South Carolina	(1984)	602	75
Prairie View A&M University	(N/A)	517	65
Eastern Kentucky University	(2003)	449	56
Georgia Southern University	(N/A)	427	53
University of Georgia	(1987)	401	50
University of South Florida	(N/A)	375	47
Morehead State University	(N/A)	367	48
Georgia State University	(1980)	349	44

NOTE: These numbers represent the totals as reported to AACTE in a given year. They may not reflect actual numbers for each year as a university may collapse data and report numbers at different time frames.

Dates: Indicate the year first accredited by CACREP.

(N/A): Indicates non-CACREP status.