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Contents

Two Elementary Teachers Reflect on Their Sense of Empowerment and Student Test Anxiety Post NCLB

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Abstract: Teacher empowerment and student test-anxiety are issues at the forefront of educators' concerns in implementing NCLB requirements. Participants in this qualitative study expressed their perceptions of post NCLB elementary classrooms and the perceived changes. Future research implications are discussed concerning investigation of teacher empowerment and student test-anxiety.

NEA Today (Jehlen, 2006) and the American Evaluation Association (2005) have protested the misuse of high-stakes testing under No Child Left Behind (NCLB, 2002) in setting achievement standards. Researchers have acknowledged the teacher as the focal point of implementing educational change and critical to educational reform (Fullan, 1991, 1993; Sarason, 1990, 1996); yet, the teacher's voice has been missing in educational reform (Jones, Jones, & Hargrove, 2003) under NCLB. The teacher's role in creating or feeding test anxiety among students has been cited as a concern in need of serious examination (McDonald, 2001; Sarason, Davidson, Lighthall, Waite, & Ruebush, 1960). However, the teacher's role has been virtually overlooked in the test anxiety versus performance puzzle except as the implementer of intervention strategies (Klingman & Zeidner, 1990) even though research has shown that teacher anxiety and student test-anxiety have a higher correlation than student test-anxiety and any other classroom factor (Cizek & Burg, 2006; Hembree, 1988).

Research on teacher perceptions and reactions to policies can bring new understanding of the teacher's classroom experience, both for the teacher and teacher educators (Kincheloe, 1991; Richardson, 1990). Recognizing the similarities and differences in teacher experiences and educational situations helps others to understand and anticipate what might happen if they were in a similar situation (Kincheloe & Pinar, 1991) and can lead to increased teacher empowerment. Empowerment, in this case, means enabling teachers to gain knowledge that builds their confidence, their sense of authority, and their enthusiasm for their profession (Lichtenstein, McLaughlin, & Knudsen, 1992).

According to Grimmett, MacKinnon, Erickson, and Riecken (1990), reflection helps in the effective implementation of research proven practices, but it can also improve the effectiveness of current practice, to help choose between competing versions of good teaching practice. Schon (1983) emphasized reflective practice as a means by which teachers could resolve value conflicts that occur when a teacher is forced to choose between mastery and coverage of curriculum (Dorgan, 2004). When teachers communicate their perceptions and frustrations, communication becomes a vehicle for change and improving practice. The feelings of isolation that results from high-stakes testing standards and that places responsibility for students passing or failing one test on the individual teacher is replaced with a means to improve practice and improve the teacher's descriptions of self in relation to their performance (Richardson, 1990). The elementary teaching experience has changed in implementing high-stakes testing. Teaching in the high-stakes testing era leads to less student-centered methods (Jones, Jones, & Hargrove, 2003), and to value conflict (Schon, 1983). This value conflict could lead teachers to question whether or not what they are doing in the classroom is good practice (Grimmett, MacKinnon, Erickson, & Reicken, 1990).

The unique perspectives of teachers give them a special kind of educational

knowledge: a practical and valuable knowledge extracted from experience. Through debriefing (Duke,1985) teachers can improve their teaching in response to student needs. Through being informed of these valuable teacher perspectives, teacher educators can improve preparation, also in response to the needs of the students. As noted by Sarson, Davidson, Lighthall, Waite, and Ruebush (1960) and Stipek (2002) students, especially elementary students with their dependent nature on the teacher, will reflect the motivation, empowerment, and performance of teachers.

Purpose

The purpose of this study was to examine teachers' perceptions of the post NCLB elementary classroom, the perceived changes in that classroom, and the implications for teachers' feelings of empowerment and beliefs about student test anxiety. The goal was to gain a better understanding of the experience of selected elementary school teachers in a high-stakes testing environment.

Methodology

Context of the Study

The teachers in this study were recruited from a rural school district in the southeastern United States. The interviews took place in an elementary school after the superintendent granted permission for the teachers to participate in the study. The primary researcher has been a teacher or administrator for 23 years, and this experience provided insight into the experiences reported by the teachers and facilitated interpretation of the data.

Study design

Face-to-face, individual audio-taped interviews were conducted with two volunteer teachers. The researcher kept field notes, in-process notes, and reflexive journal entries to facilitate triangulation of data sources and enhance credibility. Member checks with the participants focusing on the interview transcriptions and data analysis strengthen credibility of the findings. A semi-structured

interview protocol was designed to elicit the telling of teachers' stories about teaching and testing under the standardized requirements of NCLB and their experiences concerning the impact of these requirements on students. Verbatim transcription and analysis of the interview content along with the other forms of qualitative data was conducted and documented in an audit trail of all research procedures.

Limitations.

Limitations to the study design center around the scope and nature of the information provided for analysis. The readers are cautioned to make their own judgments about the transferability of findings from the perspectives of these teachers. It should also be noted that the interpretation is based mainly on self-reports given by the teachers. The findings are informative only as an examination of these teachers' experiences as analyzed using qualitative research procedures.

Participants

The required criteria for participation in this study included being a core subject teacher in elementary grades 3 through 5 and having teaching experience both before and after the implementation of NCLB. This insured involvement in the process pre and post NCLB.   Both participants were Caucasian teachers from grade 3 through 5 with 13 years of experience each and who teach all core subjects to their students. Both participants were 37 years old and also had children of their own. The school where they teach is a Title I school that did not make Adequate Yearly Progress (AYP) in the previous school year, and each teacher had a classroom with a majority of students from a low socio-economic background. The students in both classrooms, as reported by the teachers, also came from a variety of home and family types including single parent, a combination of biological and non-biological parents, or lived with relatives from the extended family.

Procedures

The Institutional Review Board at Virginia Polytechnic Institute and State

University gave approval for conducting this study in February, 2006. Participants were given informed consent forms, and the procedures and possible risks were discussed with them before they agreed to participate in the study. Interviews were scheduled at the convenience of the participants. In the process of transcription and analysis, participants were assigned pseudonyms, and potentially identifying data were replaced with false names or with generic information to maintain confidentiality and the integrity of the data. Following transcription and single case analysis, the participants were each given the opportunity to read the interview transcript and the analysis to verify the accuracy of both documents. The participants made no significant deletions, additions, or revisions.

Data analysis was a narratological approach utilizing the categorical-content perspective analysis of qualitative data expounded by Lieblich, Tuval-Mashiach, and Zilber (2003) to code the data and sort it according to themes. Descriptive narratives for each participant were developed with a focus on their unique experiences. Open readings of the coded data then led to the identification of themes, and then broader categories that defined the major content of the data emerging from the reading, as described by Lieblich, Tuval-Mashiach, and Zilber. These emerging categories revealed patterns in the two teachers' experiences, their perceptions of the changes in teaching methods, and their perceptions of the impact these changes have on their students.

Narrative Descriptions of the Participants

Annie

Annie is a third grade teacher who enjoys being able to incorporate hands on activities in her class and employ what she referred to as "arty" activities to help children apply skills. She is very concerned with "building her students up", preparing them for testing challenges, and preparing them to be productive citizens. She described experiencing a struggle in attempting to help her students achieve according to the standards set by NCLB. While Annie believed that the NCLB ideals and expectations are "good and necessary", she experiences frustration over the difficulty of helping all students achieve to the same level in the same length of time. She felt good about herself and what she was doing prior to the enactment of NCLB, but the stress has had a dominating effect since the enactment of the legislation.

Annie said that she worries about her anxiety level increasing the stress felt by her students, in addition to the problems with which students must cope in their home situations and the stress of achieving required passing percentages. She said that the "weight placed upon these test scores" is stressful and contributes to her personal feeling of failure as a teacher when a student does not achieve a passing score. Annie described administrative pressure to produce passing scores and the method of presentation of test data as "self-defeating" and as giving her the feeling that she's "just not doing enough" despite her best efforts, resulting in increased stress and lowered self-esteem . Annie related that she experiences somatic symptoms of test anxiety herself (upset stomachs), although she said that her students exhibit less somatic symptoms, no discipline problems, and more avoidance behaviors described as a "frequent need to get out of the situation, to either get their pencil sharpened or get a tissue, just something to kind of break the stress."

Annie reported no difficulty with differentiating instruction to meet student needs, but pacing guides and testing dates do not allow her time for differentiation to make achievement equally realistic for all her students. Time constraints have greatly reduced the extent to which she is able to utilize manipulatives and incorporate hands-on activities that increase student learning. Time management and the resulting frustrations were pervasive issues in Annie's discussion. Annie saw flexibility of time lines and testing dates as a possible solution to the pacing dilemma. Annie did not feel that the overall goal of education has changed.

Annie – "I think the goal of education is to try to make our children… knowledgeable and successful and able to get out in the real world and function. …the goal is the same as it's always been, it's just the path that we are trying to get there."

Rebecca

Rebecca is a 37 year-old Caucasian female in her fourteenth year of teaching. She prefers using hands-on methods to teach, but is frustrated because she feels the pressure of time restrictions in doing this to the extent that she believes her students would benefit. She is concerned with doing what benefits her students and helps them grow and achieve their potential. She conveyed a feeling of frustration due to a perceived unfairness of NCLB requirements to students and teachers. Rebecca attributed the testing requirements as being responsible for stresses and pressures felt. She considered the consequences of standardized testing to be a violation of her sense of fairness that causes her to experience value conflicts. Rebecca is hopeful for changes that will alleviate this conflict and the effect that test scores have on her self-esteem and the test anxiety of her students.

Among the things that Rebecca discussed as being unfair was the practice of judging teachers and schools as good or bad based upon test scores. Rebecca stated that she believed that there were too many considerations involved to be able to judge a school's quality solely on a year's test scores. She also said that she believed that teachers were being asked to accomplish an impossible task: the expectation of having students with different backgrounds and ability levels achieve mastery on the entire curriculum at the same time, and being judged as failures as teachers because they could not accomplish "the impossible." As a result of all this, Rebecca said that she feels like a "statistic".

Rebecca also described practices that she believes are unfair. She said she feels forced to use standardized teaching and assessing almost exclusively. Rebecca associated an increase in discipline problems with testing. She connected this to the general lack of developmental readiness by which she believes students in elementary school are handicapped in a standardized testing environment. Rebecca called this a symptom of the "lost childhood" experienced by students under NCLB that has pushed requirements to younger ages.

Rebecca stated that she believes that the overall goal of education has changed since the implementation of NCLB and now is "… more aligned with who can be the best first". She explained that administrators want to have the best school, and each state wants to be the best. She said, "… it becomes to where we've lost sight of actual teaching and learning." Rebecca believes it is a deceptive practice to ignore individual student abilities and encourage parents to think that all students would be at the same level at the end of the year; therefore, testing can also be misleading to parents.

Change in the Teacher's Experiences

Both teachers described their experiences in the classrooms as changing significantly since the enactment of NCLB. *Change in the Teacher's Experiences* represents the perceptions of the teachers related to teaching and testing under the standardized requirements of NCLB. This category contained the richest data and the largest number of themes. Each area discussed includes exact words from the teachers.

Stress and Pressures for Teachers

Stress and pressure was a prominent theme in both interviews with both teachers using a variety of synonyms for these concepts (see Figure 1). The pressure to pace instruction rapidly was described as a cause of stress and frustration.
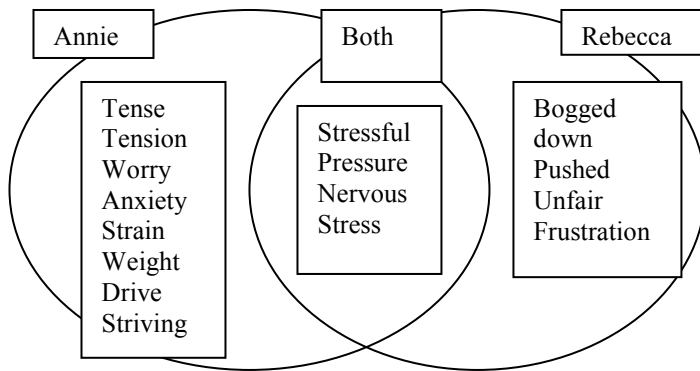
Figure 1. Stress-related Language used by the Participants

> *Annie-* "I just feel that we have a lot of pressure on us to cover many things."
> *Rebecca-* "Sometimes we have to go on before all in the classroom are proficient…"

Both teachers make a concentrated effort to mask the stress and tension that they feel themselves to keep the students from picking up on their anxiety and, as Annie said, to prevent students from "feeding" off of that. This is a legitimate concern for the teachers as documented in Hembree's 1988 meta-analysis showing evidence of a higher correlation between teacher anxiety and student test anxiety than any other two variables in his study.

The greatest concern described by both teachers was test scores. Rebecca related that she always cries on the day that test scores come back. Annie cried softly in the interview when talking about her self-esteem in relation to student performance and test scores. Both teachers experienced self-doubt and second-guessed themselves about whether or not they did everything they could have done to ensure their students' successes. They both reflected on the frustration that their best effort was not good enough to accomplish the task at hand, i.e., helping students with differing ability levels achieve success to the performance expectation level. Annie said, "When they don't make *the* [italics added] score, I feel like a failure."

Teaching Methods

Annie and Rebecca talked about not having time for what they called extras: doing hands-on activities, enhancement activities, and activities to reinforce application of skills. These were considered extras due to the amount of time it would take to incorporate these activities as opposed to forging ahead with curriculum coverage. Both teachers noted that standardized teaching and standardized assessment have replaced the other more product-based teaching and assessment for which both articulated a preference.

> *Annie-* " I don't feel that I have the time to do a whole lot of extra things to reinforce how to apply skills."
> *Rebecca-* "I feel like the more hands-on they do, the better they learn, although you don't have time for all that anymore."

Both teachers described concern that students are being asked to do more than they are developmentally ready to do. Annie noted that students are not always at a cognitive stage to learn the skills that are required by the curriculum. Rebecca noted that students at elementary age are not at an appropriate life point to handle the stress and pressure of high stakes testing. She expressed that they have neither the physical endurance, nor the maturity level to deal with the stress caused by the high-stakes testing in an appropriate manner.

In an attempt to help students deal with high-stakes testing requirements, both teachers have focused their teaching on incorporating test-taking strategies. They have supplemented the language of practice, or teaching vocabulary, with the teaching of strategy vocabulary and test vocabulary. Both types of vocabulary were taught in a purposeful manner using games, vocabulary notebooks, and visual cues to help students remember the vocabulary that they need to master to be successful on the standardized test (ST).

Lost Instructional Time

Annie and Rebecca described "pushing through" to cover the curriculum in time to

have at least a month left to do intensive review before the ST at the end of the year. Time is spent teaching the students how to take the test. Both teachers discussed a trend toward a continued focus on assessment throughout the school year taking away from instructional time. This focus on testing and assessment combined with the necessity for keeping a rapid pace to cover the entire curriculum have reportedly worked together to cause the teachers to feel a lost flexibility to reteach a concept. Both teachers stated that they no longer have the flexibility to differentiate as they should for students with differing ability levels because the rapid pace required to complete the curriculum will not allow extra time to be spent on differentiation.

Annie- "We really have a year's worth of teaching in less than that time frame."

Rebecca- "If we weren't so geared into standardized testing at the end of the year…I'd grade kids on products and projects."

Self-esteem

Annie and Rebecca both expressed a high level of stress felt due to the comparison of the test scores of different teachers and stated that this stress has damaged their self-esteem. They also felt great pressure to have high test scores, regardless of the ability levels of the students in their classrooms. These differing ability levels reportedly have a great deal to do with the discomfort that the teachers feel over the comparison of scores.

Annie- "It is stressful, on the first faculty workday to sit in a meeting and have your scores flashed up in bar graphs….you start second guessing yourself."

Rebecca- "You start… second guessing yourself, if you did what you've been taught to do, what you've been trained to do. Did I do it well enough?"

The comparison of scores and differing ability levels of the students in their classes combined with varying success levels of the students in achieving proficiency on test scores have resulted in the teachers questioning their efforts and experiencing self-

doubt about their teaching abilities. Annie noted that this negative impact of scores on her self-esteem began when she started teaching in a tested grade level. Both teachers noted that even when a student achieves a year's worth of growth, if that same student has not achieved a passing score on the ST, the teacher feels like a failure. The teachers commented, "…you are just not doing enough", or "I must not be a very good … teacher." Such comments reflect their low self-esteem.

Educational Direction

Both Annie and Rebecca discussed how their own priorities in teaching have shifted from individual student mastery and understanding of concepts to covering the entire curriculum before time for the ST. This is another source of value conflict for the teachers over mastery versus coverage of materials that both teachers connected to NCLB. Both teachers discussed the focus on assessment, specifically standardized assessment under NCLB requirements.

Annie- "Before (NCLB) …the purpose was giving children a solid foundation in education. But now, … it narrows our focus down to really honing in on the skills that are being tested."

Rebecca- "It wasn't quite as stressful accountability-wise until NCLB …. we've so geared it to the standardized test that that is where we lean."

Both teachers described competition among states and among school systems as determining forces behind current policy. They perceived the intention behind NCLB legislation as good, but characterized the methodology dictated by policy for accomplishing the goal as wrong. Both related another value conflict over the utilization of test scores as determiners of proficiency. The teachers believed that student growth should be a bigger consideration than ST scores.

Empowerment Ideas

The theme *empowerment ideas* included discussion of ideas that the teachers believed would enable them to help students achieve educational goals and ideas that would

alleviate the negative feelings that the current situation causes them to feel. Both teachers believed a value-added formula considering student growth would be a more appropriate measure of success both for students and for teachers. They discussed the need for flexibility in getting students with varied backgrounds and ability levels to the same standard level of achievement.

> *Annie*- "It doesn't leave a lot of flexibility for children who have learning disabilities or emotional issues."

Change in Student-Experience

Change in Student-Experience represents the effects perceived by the teachers on the students in the post NCLB classroom. They discussed students shutting down during test-taking time. They described students stopping in the middle of solving problems or marking answers without attempting to solve problems or read passages. Such shutting down could be indicative of cognitive interference (such as noted by Sarason in 1984) or as Hancock (2001) noted, it could be indicative of lost motivation as was shown to occur in highly evaluative classroom situations. Annie noted that students choose random answers, or students begin working out a problem which they have exhibited the ability to work in a class activity and simply stop before they finish it and choose a multiple-choice answer.

Annie and Rebecca discussed the high degree of nervousness and tension that students exhibit around test-taking times, as was also shown by Sarason (1984) to be indicative of cognitive interference. Students were noted by the teachers as being fidgety, edgy, and showing signs of nervousness such as having shaky hands. It was noted that parents report their children being nervous around test-taking time, as well as the students reporting their nervousness to the teachers. Both teachers expressed a concern that the students would pick up on the stress being experienced by the teacher and that this would have the adverse affect of increasing student stress.

Both teachers sited the lack of developmental readiness in elementary aged students for fulfilling the testing requirements as a concern. Rebecca associated the edginess of the students with their lack of developmental readiness to handle high stress situations. Each teacher was concerned that the inability to incorporate hands-on and enhancement activities due to time constraints was more of an issue because of the developmental level of elementary students. The teachers believed that the students need this type of activity. However, pressing ahead to cover curriculum and spending time on learning test-taking strategies and skills have replaced the use of hands-on activities to the degree that the teachers would like to incorporate them. Annie stated that she believed that the differing developmental levels of students are associated with negative affect for some students. As Annie put it, "We are supposed to meet everybody's individual needs, but yet we are having to go at a pace in order to cover everything that is required that is often times faster than some children can process…" Rebecca's comment was similar, "I feel like the more hands on they do, the better they learn, although you don't have time for all that anymore."

Rebecca stated that she believed the students were not at a level of developmental readiness to be able to perform well in a testing situation under strict conditions for lengthy periods of time. Rebecca blamed this lengthy time during which the students must behave according to strict testing conditions (i.e., not talking and not moving from their desks) with contributing to what she said was a lack of "stamina". She noted that as the time goes on, student attention "fizzles" or "wanes", and fatigue is evidenced in fidgeting and sighs in the classroom.

Discussion

From this study, it became evident that there was a common sense of stress and frustration for these two elementary teachers that they perceived resulted from standardized

testing requirements and the changes these requirements have made in teaching methodology. For the teachers participating in this study, that stress was a pervading issue. Both of these teachers described suffering symptoms of anxiety and losing confidence in themselves as teachers, as was predicted by the scholars (Grimmett, MacKinnon, Erickson, & Reicken, 1990; Jones, Jones, & Hargrove, 2003; Schon, 1983). The teachers believed that they were doing everything they could do to help the students be successful on the ST, but they believed that their efforts were not good enough since they were unable to have all of their students achieve a proficient score on the ST.

According to Bandura (1995), motivation and action are results of beliefs rather than objective evidence. "Perceived self-efficacy refers to beliefs in one's capabilities to organize and execute the courses of action required to manage prospective situations" (p. 2). "Perceived self-efficacy to exercise control over stressors plays a central role in anxiety arousal" (Bandura, 1991, as cited in Bandura, 1995, p. 8). Therefore, since the teachers believe themselves unable to achieve the desired outcome in their classrooms of having all students achieve the same proficiency minimums at the same time, by implication teacher anxiety would be expected to increase. Consequently, student test-anxiety would be expected to increase as indicated by the findings of Cizek and Burg (2006) and Hembree (1988).

The teachers involved in the study described testing preoccupation. They believed that the standardized testing requirements and timelines that must be met have forced them to switch priority from a mastery of concepts by individuals to coverage of the material by the group as predicted by the scholars (Barksdale-Ladd & Thomas, 1996; Dorgan, 2004; Fagan, 1989; Schon, 1983). The ST results place accountability for coverage of everything that will be tested on both students and teachers. One teacher made the statement, "It's a race." Both teachers related that they are caught involuntarily in a competition among states

and even among nations to "…be the best first…" as one teacher put it. This is a source of great value conflict for the teachers. It is evident that the teachers believe that the focus on standardized testing and standardized requirements for the students to pass have resulted in sacrificing individualization in teaching rather than promoting the success of individual students. These beliefs appear contrary to the spirit of NCLB. It is also evident that the teachers perceive being caught under layers of top down pressure that does not stop with them, but rather ends with the students being at the highest center of pressure (see Figure 2).
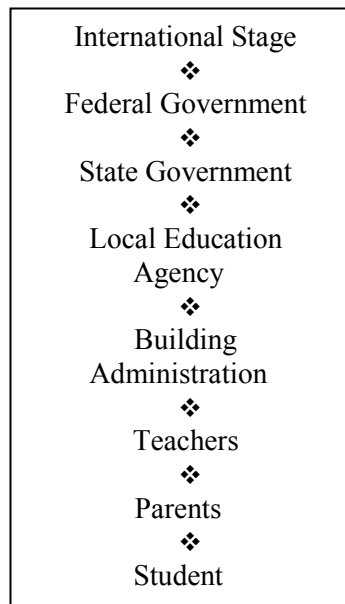
It is also evident that the teachers have an overriding preoccupation with test scores as predicted by Jones, Jones, and Hargrove (2003). Ayers (1992) noted that it is necessary to empower teachers if successful students are the expected result of teaching efforts. Fagan (1989) referred to the disempowerment of both teachers and students that occurs when success is defined by standardized testing of curriculum.

Standardized testing has caused these teachers to alter teaching methods. The frequent use of hands-on methodology, as was once a common practice in the elementary grades, is now limited and replaced with the teaching of test-taking strategies and skills. The combination of the alteration of teaching methodology along with the necessity to maintain a rapid pace to cover the entire curriculum has created what the teachers agreed is a test-focused classroom. They also attributed much lost instructional time to the time spent teaching and practicing taking tests, in addition to the actual ST administration. As a part of the test preparation, test vocabulary and strategy vocabulary have been added to the curriculum vocabulary to supplement teaching the curriculum with necessary skills and words for success in standardized testing.

The teachers discussed symptoms shown by the students that are evidence of test anxiety. But, the majority of the teachers' energies spent to alleviate the test anxiety seem

10

to be focused on the teaching of test-taking strategies and test-taking skills, rather than mastery of the curriculum. The life skills training recommended by scholars and teachers alike (Elliot, 1981; Fagan, 1989; Jehlin, 2006) seems to be unrecognizably submerged somewhere in the curriculum, which presumably serves the purpose of preparing the students with life skills and for higher education. However, the methodology through which students are deemed by the teachers to learn the best and best be able to practice these life skills (hands-on activities) has been sacrificed for teaching test-taking skills and strategies and time constraints of standardization.

Figure 2. Pressure levels.

International Stage
❖
Federal Government
❖
State Government
❖
Local Education Agency
❖
Building Administration
❖
Teachers
❖
Parents
❖
Student

Still, there was a theme common in both interviews that would shed some light on how the teachers describe the task becoming more possible: *empowerment ideas.* Both teachers expressed ideas that they believe would help them in working with their students to achieve success. Both teachers described a value-added growth formula as being a source of hope for the future. Along with this, both teachers expressed the idea that flexibility was missing, and yet necessary in helping students achieve success. The requirement for all students to achieve proficiency to the same minimum level within the same time frame,

regardless of student backgrounds and ability levels is disempowering to teachers because, as noted by scholars, it does not allow them to make decisions based on professional knowledge (Barksdale-Ladd, 1994; Thomas, Barksdale-Ladd, & Jones, 1991). Providing teachers with this flexibility to help all students achieve mastery without the expectation that all the students could succeed under the same time schedule could alleviate much of the pressure and stress felt by the teachers, and consequently the students.

Conclusion

The teachers in this study describe the stresses and pressures under the current standardized testing requirements of NCLB as great and extensive in their effects on classroom experience. It is evident that empowering teachers can improve the success of individual students, schools (as indicated by Ayers, 1992), and ultimately the success of the NCLB legislation in leaving no child behind.

In this study the participants related similar experiences in the post NCLB elementary classroom. Their beliefs about the change in classroom experience, the change in teaching vocabulary, and the change in elementary student experience are based on their experiences pre and post NCLB. Understanding their perceptions and reactions to these requirements can facilitate understanding of the elementary experience and lead teachers to more empowerment in post NCLB classrooms, as noted by Kincheloe (1991) and Kincheloe and Pinar (1991). Further study can determine if other teachers in grades 3 through 5 share similar experiences and perspectives and show how other teachers perceive elementary students coping with test anxiety related to the standardized testing.

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The Growth of Reflective Practice: Teachers' Portfolios as Windows and Mirrors

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Abstract: Identifying accurate measures for evaluating learning outcomes has become an increasingly important issue for teacher education programs. This paper presents the findings of a program level portfolio research study conducted by a team of faculty members in an advanced master's degree program whose learning outcomes are aligned with the core propositions of the National Board for Professional Teaching Standards. The two goals of the study were to deepen our collective understanding about a) what program portfolios from an advanced master's degree program for practicing teachers might reveal about the teachers' knowledge growth during the program, and b) how portfolio data might be used to inform program update and change based on the evidence from teachers' entries. The article discusses the possibilities of portfolios as a programmatic performance assessment tool and describes how the program used performance data to inform update and change at the course and program level as a result of the study.

Introduction

In response to the complex challenges of today's diverse classrooms and schools, educators need professional development opportunities throughout their careers that support the growth of knowledge about teaching practice as well as inspire creativity and deepen critical reflective practice. Today's call for highly qualified teachers, as stated in the *National Commission on Teaching and America's Future* (1996) and in the *No Child Left Behind Act* (NCLB), has become a driving force to extend professional development beyond initial licensure coursework. The National Commission stated that the most important element in achieving quality student learning is the quality of the teacher and, most recently, NCLB actually mandates teacher quality so that by the end of the 2005-06 school year, "every child in America is taught by a teacher who knows his or her subject" (U.S. Department of Education, 2004). For teachers to achieve this high level of quality, they need to engage in professional development that builds on the skills they have developed as classroom practitioners and deepens their professional knowledge. Teacher education programs should provide learning opportunities for teachers that are carefully scaffolded to support innovative thinking about teaching and learning not only to improve their practice but also to enhance student learning in their Preschool -12th-grade (P-12) classrooms. The purpose of this paper is to present the findings of a program level research project conducted by a team of faculty members with the goal of determining what program portfolios from an advanced master's degree program for practicing teachers might reveal about the teachers' knowledge growth during the program. Faculty also wanted to determine if and how the portfolio data might be used to inform program update and change based on the evidence from teachers' entries.

In order to provide strong and relevant learning experiences for the teachers enrolled in their programs, it is a responsibility of teacher preparation programs to engage in regular update and change. Teaching requires both a high level of competency and a deep level of understanding of our increasingly diverse society, child development, pedagogy, technology, and the subjects taught. The National Board for Professional Teaching Standards (NBPTS) has been proactive in its work with teachers in providing a framework for articulating goals for advanced programs to help them promote the professional development of experienced teachers. In providing this framework, the NBPTS has defined professional teaching excellence

according to knowledge, skills, dispositions and beliefs that connect with the five following broad propositions: teachers are committed to students and their learning, teachers know the subjects they teach and how to teach those subjects to students, teachers are responsible for managing and monitoring student learning, teachers think systematically about their practice and learn from experience, and teachers are members of learning communities (http://www.nbpts.org).

Conceptual Framework

Over the last 20 years, an increasing number of teacher education programs have included portfolios among their program requirements, and some researchers believe that the portfolio has taken a leading role in the reform in teacher education programs (Barton & Collins, 1993; Diez, 2001). If carefully implemented and evaluated, teaching portfolios can provide evidence of a teacher's discipline-specific expertise, assessment strategies and instructional techniques used in the P-12 classroom, and information about student learning (Winsor & Ellefson, 1995; Carroll, Potthoff, & Huber, 1996). Portfolios may also serve as a forum for documentation of directed reflection to form the basis for professional growth and development (Barton & Collins, 1993; Fox, 1999). Research on the use of portfolios has focused on the most efficient and effective ways to prepare portfolios, the stages candidates go through as they develop their portfolios, the different ways portfolios can be used, and the impact of portfolio development of candidates and the growth of their reflective practice.

Within the national context of providing all classrooms with highly qualified teachers, accrediting agencies such as the National Council for the Accreditation of Teacher Education (NCATE), as well as many state-level accrediting offices, are requiring that teacher education programs provide evidence of the degree to which their program candidates meet published standards. Teacher education programs must answer to the public and legislative demands for accountability; they must work toward the professionalization of teaching by developing credible and

defensible performance assessment that will demonstrate to the public and to accrediting agencies that a program's candidates have mastered national, state, and institutional standards.
Achieving effective assessment practices that can provide concrete evidence of candidates' knowledge has thus become an increasingly significant issue in education (Cochran-Smith, 2001).

As programs have moved toward developing more authentic measures of assessment in their courses and programs, they have initiated performance-based assessments to replace some of the more traditional paper and pencil tests used heretofore to evaluate candidate knowledge. Many teacher education programs have instituted summative portfolios in order to provide candidates with the opportunity to demonstrate their knowledge (Fox, 1999; Zeichner & Wray, 2001). Given the high stakes involved in program accreditation and the call for performance-based assessments to provide evidence of program efficacy, there is surprisingly little empirical research that has emerged to examine and evaluate the contents of these portfolios or the results of their use as a summative performance-based assessment tool.

Program Description

In response to the need for advanced professional development for teachers, the Advanced Studies in Teaching and Learning (ASTL) Program at George Mason University was created to provide professional development to educators that emphasizes critical reflective practice (Brookfield, 1995; Schön, 1983, 1987), collaboration, continuous improvement, and P-12 student achievement. The program outcomes have been aligned with the five core propositions of the National Board for Professional Teaching Standards (NBPTS). The program includes three additional learning outcomes that are related to diversity, technology integration, and teachers as change agents. In meeting the program goals, the ASTL program draws on teachers'

14

knowledge and experience, as well as on theoretical and empirical research, to construct professional learning communities of educators who explore new ways of thinking about teaching and learning with the goal of improving their practice and enhancing student learning. All ASTL program participants complete a program portfolio as evidence of their growth and development and as performance-based evidence of the degree to which they meet program learning outcomes (Campbell, Melenyzer, Nettles, & Wyman, 2000; Fox & Ritchie, 2003; Lyons, 1998).

The ASTL Portfolio

The purpose of the ASTL Professional Development Portfolio is twofold. First, it encourages program participants to develop their teaching practice to the highest level. This is accomplished through evidence of targeted reflection, presentation of pedagogical and content-based knowledge, action research skills as they inform teaching practice, and a synthesis of professional knowledge and skills (Barton & Collins, 1993; Hammadou, 1998). Secondly, it provides performance-based evidence of the degree to which program goals have been met (Campbell et al., 2000). As both a formative and summative document, the ASTL Professional Development Portfolio articulates the principles of the National Board for Professional Teaching Standards and the three additional ASTL Standards, other content–specific standards, and the mission and goals of the Graduate School of Education at George Mason University.
As a point of reference, the ASTL Program uses the following working definition for its program portfolio:

> A performance-based document consisting of a collection of carefully selected materials, examples, and reflections, assembled over time and presented to program faculty, that provide an evidence-based record of a teacher's knowledge base, skills, professional growth, teaching practice, and leadership skills. (Fox, 2004)

The Portfolio, compiled along the continuum of the year-long Education Core, includes both course products and a series of reflection points written at specified times throughout the year. Reflection Points provide program participants the opportunity to synthesize and reflect upon their own growing learning and teaching practices as they move through the carefully scaffolded program. A Portfolio Presentation at the conclusion of the Core provides a targeted opportunity for program candidates to synthesize their learning and consider its impact on their teaching practice. It also provides program faculty an essential opportunity to hear candidates discuss their Core learning and how they are applying the P-12 setting. The reflections, portfolio entries, and final portfolio presentations help teachers make important connections between and among their program coursework, personal development, and daily encounters with student learning in the context of school-based experiences. The contents of the Professional Development Portfolio and the selected Reflection Points provide program participants with 1) a forum for the presentation of their knowledge and practice as articulated by the NBPTS and 2) an opportunity to synthesize and share how they are linking theory and practice in the P-12 setting.   (See Appendix A.)

Method

Purpose of the Study

This study focuses on ASTL program candidates' learning as evident in the ASTL Program Portfolio. It examines the depth of their knowledge base, engagement in reflective practice, and the impact of their learning on their classrooms as seen in the professional portfolios of program candidates in the year-long ASTL Program, known as the Education Core. Specifically, the following research questions have emerged:

1. What does the program portfolio reveal about program completers' perceptions of what they learned in an advanced master's degree program that aligns learning outcomes with the Core Propositions of the National Board for Professional Teaching Standards?

2. What does the program portfolio reveal about teachers' perceptions of the ways they use this knowledge and apply it to their professional practice?

Participants

Participants in the study included two cohorts of teachers (N=40) who completed ASTL portfolios in the Spring of 2003 (Cohort 1: N=17; Cohort 2: N=23). The teachers range in experience from 3 to 17 years, with a mean of 6 years. Cohort 1 is comprised of 14 female and 3 male teachers and there are 19 female and 4 males in Cohort 2. The ethnic composition of each cohort is as follows: Cohort 1 is comprised of 1 Hispanic, 1 Native American, and 15 Caucasians; Cohort 2 has 3 African Americans, 1 Hispanic, and 19 Caucasians.

Researcher Perspectives and Context

The researchers are university and school-based practitioners who have experienced teaching at the P-12 and university levels. Two of the researchers are currently program administrators and faculty members teaching in the program; two are P-12 educators serving as adjunct program faculty. Of these two, one is a National Board Certified Teacher who brings into the program, and this study, insider knowledge about the National Board process. This combination of experience has provided an important set of perspectives for the analysis of the data. All members of the research team actively conduct teacher research as part of their growth and development as teachers, university faculty, and researchers. The university-based research faculty members strongly believe that their active engagement in action research is an essential part of their research life as university faculty since they teach action research in their graduate level classes (Zeni, 2001).

As a viable group of faculty researchers, they also believe that the efficacy of conducting this programmatic study is manifested in multiple areas of accountability: to the teachers themselves enrolled in the program, to the P-12 students in their classrooms who are the recipients of a potentially more "highly qualified" education, to one another as program faculty and fellow researchers, and to the profession as members of a learning community seeking meaningful ways to achieve ongoing professional development and inform programmatic update and change. Through the implementation of programmatic portfolios, the team has sought to delve deeply into both the process of portfolio completion and the results of the portfolio product (Fox, 1999).

Data Collection and Analysis

Four principle sources of data inform this study: 1) required reflections from course products included in the ASTL Portfolio; 2) researchers' memos; and 3) transcribed audio tapes of end-of-program oral portfolio presentations.

The data were analyzed qualitatively across cohorts using a combination of both hand coding methods and the NVivo™ qualitative software analysis program (Bazeley & Richards, 2000; Gibbs, 2002). The data were collected over the course of the year as course product reflections were completed. Specified course products were incorporated into the Portfolio at the end of each course, and these included a required reflection on the process and outcomes of the product. At the conclusion of the program, candidates reviewed their portfolio contents and wrote a final synthesizing reflection in preparation for the portfolio presentations, a program exit requirement.

Using hand coding and allowing for themes to emerge, the portfolio course product reflections were analyzed for all candidates. Analysis was ongoing throughout the year, as themes emerged from the data (Coffey & Atkinson, 1996; Maxwell, 1996). These themes were used to inform the selection of node categories later used in the NVivo™ analysis. In addition to the portfolio course product reflections, audiotapes of the final presentations for each cohort were transcribed and coded for emergent themes (Strauss & Corbin, 1990). Researchers also listened extensively to the taped presentations seeking

to capture nuances or subtleties of comment on the part of the program candidates. This enabled researchers to gain deeper insight into the analysis that might not readily be evident solely from reading the transcriptions.

A combination of hand coding and NVivo ™ analysis served to establish nine principal themes. These themes became the nine free nodes entered into NVivo™ to be used for analysis. The nine themes/nodes are as follows: critical reflection, inquiry, differentiation, student-centered classrooms, multiple perspectives, future teaching, technology, collaboration, and agent of change.

Findings

The themes that emerged from the portfolios provided a window into teachers' perceptions about the ways they are applying Core learning experiences in their own professional practice as well as with their P-12 students. Course products and reflections throughout the portfolio provided knowledge about the growth of candidates' critical reflective practice, inquiry into teaching and learning, student-centered practices, differentiation, and accounting for multiple perspectives. In addition, the reflections provided insights into the candidates' perspectives on their future teaching, use of technology, collaboration with peers, and role as agents of change.

Critical Reflective Practice

One theme prevalent throughout the portfolios was the candidates' focus on critical reflective practice. Analysis revealed two distinct genres of reflection: active reflection on classroom practice and the role of reflection in the candidates' growth and development. Candidates indicated they grasped the value of reflection. One candidate wrote, "One of the most valuable things I have learned is the importance of anecdotal records and reflective journal writing. By looking at my work this way, I can make sense of what my students and I are doing. I can go back and study this and see themes and then make changes."

Another candidate saw the benefit of reflection as a way to improve instruction and enhance student learning:

> Teachers need to reflect as soon as possible so that they do not lose what they could learn from the things that happen in their classrooms. So much is lost or filtered by waiting. I will need to become more disciplined and keep reflection books nearby at all times. You never know when you will have something happen in your class that leads to a breakthrough in your teaching and the students' learning.

Not only did candidates apply reflection to their classrooms, but they also directly recognized the importance and potential power of reflective practice. Reflection can be a vehicle for looking at things differently, as this candidate wrote: "I often consider the deeper meaning of things, but when I write them down, I can examine them more. I tend to look at things at face value unless I can really study them. Reflection helps me to look at situations from different perspectives." One candidate explained, "Organized reflection has allowed me to see myself as a learner again. Learning is reflection and reflection is the key to learning. It is a cycle that I am now a part of; my students can join me in this endeavor now that I am aware of it and how important it is."

Inquiry Into Teaching and Learning

It was also evident that candidates viewed inquiry into their practice as a window into teaching and student learning. Candidates recognized the need to examine and ask questions about their teaching by paying careful attention to what their students' work could tell them about their teaching practices and their students' learning. They realized the importance of the type of systematic thinking that requires teachers to take a studied look at what happened, why the events happened, and what the implications may mean for future teaching. As part of this process of analyzing student work reflectively, candidates examined a variety of instructional processes and

products, including student work samples, student journals, summative evaluations, class discussions, and question and answer sessions. They also took into account their observations of students during instructional activities.

As they examined their students' work, candidates noted the importance of looking at student responses to make changes to instructional practices. One candidate explained, "Observing students and writing this all down has really given me insight into my lessons. I am able to consider what needs to be changed or rearranged." Using the insights gained from systematically thinking about instruction, some candidates revised assignments for their students to align more closely with P-12 students' skills or needs. Others noted that student understandings were not evident in discussions, journal responses, or oral interviews and that these discoveries led to re-teaching a concept or skill.

As candidates delved further into their teaching practices, they reflected on their use of assessment to plan instruction designed to best meet the strengths and needs of their students. For example, two of the candidates directly mentioned the value of designing a learning unit using the backward design process that first identifies learning outcomes before planning actual learning experiences. One stated, "Overall, I must admit that by using the backward design process and choosing what I wanted students to know before choosing the assignments that would help students learn, this was the best prepared I have been to teach a unit." Candidates also discovered that using rubrics for guiding instruction was surprisingly helpful for students as they navigated the assignments. One candidate stated, "I felt the rubric effective in this project for guidance, reflection, and evaluation from the student perspective. I saw the students refer to it throughout the creation process and use it accurately to assess their work in the end."

Differentiation of Instruction
A need to revise planned instruction was evident as the candidates discussed how

they became more aware of how crucial it is to differentiate instruction. They recognized that it was essential to set individual goals for students and provide opportunities for students to respond according to learning styles or multiple intelligences preferences. In looking at her teaching, one candidate shared, "I need to keep my focus on the influences of learning styles and adapt my teaching to the students and their needs." Another said that the course project "has demonstrated to me how effective an MI [Multiple Intelligence] inventory can be in planning differentiated instruction early in the school year before you have had the chance to get to know the children well enough to presume what you think their primary intelligences and learning styles are." The candidates also realized the importance of encouraging students to take risks and giving students more choices in how they will meet learning objectives.

As candidates examined their students' work, they found they paid closer attention to the developmental levels of their students, the cognitive connections the students were making, and the higher-level thinking skills that students were demonstrating. One teacher explained, "I think we are all striving to incorporate more personalization as we strive to meet the individual needs of each and every student." They also discussed the importance of scaffolding instruction and identifying misconceptions early in the learning process. One candidate explained that by reflecting on her videotaped lesson, she "could see more clearly students' understandings, observations, and misconceptions." In addition, they noted the necessity of clarifying instructions for linguistically diverse students and selecting teaching strategies that respond to the diverse strengths and needs of their students.

Student-Centered Classroom
Also evident was an emphasis on student-centered classrooms where a classroom climate that incorporated student choice, authentic learning experiences, and students' control over their own learning (empowerment) was established and maintained. One candidate noted that by

looking at the individual student, she is able to "remember that the group is comprised of many individuals." Drawing upon their understandings of individuals with varying interests and abilities, candidates indicated that they felt it was essential to provide choices in how students could express their learning. An elementary candidate explained how she implemented choice in a way that still met the instructional goals: "I also wanted to give the students a choice of activities to ensure enjoyment and learning. All of the center choices were created around a particular learning goal and by allowing for student selection, the children had a say in their learning and hopefully an increased enjoyment."

In a similar manner, some talked about the need to provide authentic learning activities that have direct connections to real-world situations. One candidate noted that her mathematics students "felt they were better able to see connections between the work we do in class and the actual solutions to real-world problems." An "aha" moment was captured when one teacher wrote:

> Students were able to choose projects that motivated them and the ways, product and modality that they wanted to complete in the project. While I think this is excellent and surely leads to internalization of knowledge, it was hard work at first…. Real success is possible, and especially when the students want to learn…. Relevant learning occurs when students have active voices in their own learning.

Multiple Perspectives

Portfolio contents also revealed that candidates valued multiple perspectives and encouraged the voices of their students to be heard. They discussed how course experiences and projects helped them look at their students and their teaching differently, as well as how these experiences contributed to their creating a warm and supportive atmosphere that is safe and welcoming. Providing a safe and inviting classroom environment in order for students to be able to honestly express their thoughts was

important to this elementary school candidate: "It is quite important, especially in reading class, to allow my children the opportunity to discuss their feelings and thoughts about particular books, which is why this type of environment is so critical."

A focus on understanding and working with culturally and linguistically diverse students was also evident throughout the portfolio process. One candidate asserted, "I think that in our classes, everyone benefits from diversity. Working with S. through a cultural lens has allowed me to see my teaching with a fresh lens." Another candidate shared:

> During discussion one day, I realized that I viewed African American children as different children from other minority races. I did not consider their culture to affect their learning in my classroom like I did other cultures. I viewed their ancestors as being part of our culture . . . This sounds ignorant for me, although I consider myself well educated, non-discriminating. This was a really important moment for me.

One student seemed to sum it up when she said, "If I am not able to read signs from my students, I will miss my chance to flex into the role they need me to be, to understand them for who they are. I have to consider many perspectives and then see how I can use them to their best advantage."

Future Teaching

As candidates were challenged to consistently think deeply about their teaching and their students' learning, they posed questions in their reflections and made statements in their presentations they felt would guide them in their future teaching. Although the majority of the candidates made statements that reflected feelings of validation for what they taught, all candidates indicated some improvements could be made in the design or delivery of their lessons. Some candidates stated they would re-teach a skill or concept in preparation for the unit.

Candidates also indicated they would make changes in the preparation of materials or procedures and would modify aspects of the implementation instruction. Specifically, they wanted to find materials or re-write existing materials to be more on the comprehension level of their students. They also wished to include more follow-up activities and incorporate more technology into their lessons. Some candidates contemplated introducing concepts or activities at a different time within a unit or teaching the unit at a different time of the year. They also discussed the need for more efficient time management and thought about breaking activities into smaller units or spending less time on explicit instruction and more time on discovery or exploration activities.

In this line of thinking, candidates discussed providing more collaborative opportunities, less teacher-directed instruction, and more differentiated instruction based on student needs. Several mentioned pairing students in order to provide buddy assistance or providing support in smaller group settings. They also considered conferencing more with individual students and altering feedback strategies to meet the needs of certain students. In addition, they discussed revisiting themes or enduring understandings more often during an instructional unit and making better connections between the concepts presented in the lesson with real-life situations.

In terms of assessment, several candidates indicated a desire to revise rubrics or performance checklists to make them less complicated and more reader friendly. Several indicated they would involve students in the revision of the rubrics. As candidates considered ways to improve their rubrics, they discussed adding images to make the categories clearer to understand and adding a comment section for more specific feedback. They also thought about breaking categories into smaller, more precise sections. For example, one candidate expressed a need to address sub-categories of composition and style on a writing rubric. Some candidates mentioned the need for including fewer

traditional assessments and more authentic assessment opportunities, such as oral presentations, skits, and class discussions.

Technology, Collaboration, and Agent of Change

Three final ASTL programmatic learning outcomes, identified as the themes *technology*, *collaboration*, and *agent of change*, were mentioned fewer times than other themes in the portfolios themselves, but received greater attention in the final presentations. Although technology was integrated throughout the Core coursework, it was not a specifically requested reflection point for the portfolio entries until toward the conclusion of the coursework. Some candidates mentioned that they had gained a deeper knowledge in their own use of technology, but had had less opportunity to date to make changes in its implementation in their P-12 classrooms. One teacher shared:

I've learned so much about how technology can provide another dimension to learning for our students. I need more time to think about how I'll really integrate it into learning units next year. This year, I've concentrated more on how I am using it. I really learned a lot from my group on Blackboard, so I think I'd like to have my own students use that next year.

The theme *collaboration* included any statement candidates made that indicates the connections they felt with their peers and teachers, including references to "critical friends" and "learning communities." This theme emerged most often during the portfolio presentations. Candidates stated that a strong learning community was established with colleagues in the program and that they wanted to continue to collaborate and exchange ideas with this close group of "critical friends." They wanted to think about "how I can help move our school toward a more collegial culture . . . [something] to consider as we begin to plan for next year at the school level." Others mentioned that since collaboration had been such an important dimension to their learning

they wanted their own students to work this way: "I want my students to have a strong learning community that I am part of, too. I don't think you're ever too young to learn from your peers, and to foster any child's learning, communication is crucial."

Agents of change included any statement candidates made that shows they feel empowered, have a voice, and have the confidence and the wherewithal to effect changes within the classroom and/or the field. Candidates shared they were excited about their potential as agents of change. Some felt that they were already effecting change, while for others this was a new concept that needed additional time for processing and consideration. A teacher who felt quite empowered said, "I handed my principal the article and said that it offers a lot of food for thought and an interesting framework to consider as we begin to plan for next year at our school level. I want to be part of some change." Other candidates viewed their action research projects as empowering: "I began to imagine how action research might affect the higher order of things – the powers that be . . .the politicians that fund our school district." Another shared, "I've come to view action research as something empowering, to myself, to my students and to other teachers. I would like to see our whole school involved in action research projects together and share our work at the end of the year."

Discussion and Implications

The themes that emerged from the analysis of the portfolio reflections and presentations provided program faculty a window into the results of program course work; they closely reflected the program goals. It was evident that portfolios contain data that can provide programs with insights into whether candidates are truly achieving the goals and outcomes of the program in a way that relying on grades or isolated course products cannot. It was clear from the portfolio reflection point entries and presentations that candidates grasped the importance of reflective practice and incorporated it as part of their ongoing classroom work and teacher research. It was also evident that candidates took an inquiry approach to teaching and learning that enabled them to differentiate instruction, implement student-centered practices, and encourage the multiple perspectives of their students. Likewise, candidates were able to think about their future teaching and discuss their use of technology, the role of collaboration in teaching and learning, and their empowerment as agents of change.

Portfolios as Windows and Mirrors

Because portfolios and portfolio presentations are a time-consuming element of the program for both participants and faculty, the researchers were keenly interested to see what evidence was contained in them that would complement or deepen information already available to program faculty (e.g., course grades and course products) about what the candidates had learned in the program. Analysis of the data showed that portfolios are a valuable source of information about what the teachers had actually learned. Portfolios are meaningful to the ASTL Program because it provides important insight into how well program participants connect to the program's eight learning outcomes and how they incorporate this new knowledge in their classrooms as well as their thoughts about the process. By considering carefully the portfolio entries and reflection points, faculty are able to gain greater insight into how well program participants are grasping important concepts and applying them to their teaching setting.

Nearly all program candidates are serious students and achieve high grades for coursework, so to compare their grades provides only a superficial view of what a candidate might have learned. However, the portfolios allowed access to understanding a deeper dimension of their work that extends beyond basic information that might be evident from a traditional test. Course projects require application of knowledge while working with P-12 learners and require the candidate to make connections to theory and research. Reflections at the end of course products provided a personal value dimension to the

assignment, allowing for both formative and summative evaluation of the learning experience. Faculty and candidates were both able to consider the course projects from a higher level of examination and application, seeking synthesis and application of knowledge. It was clear to all stakeholders that candidates saw the value of what they learned and were able to apply the Core knowledge to the P-12 setting. Therefore, the program portfolios were able to serve as a window into what candidates learned and did as a result of their engagement in the ASTL Program.

As candidates reflected on this learning, the portfolios became mirrors that helped them see their own teaching and learning more clearly. As they examined their own critical reflective practice, candidates said that they thought more systematically and more critically about their teaching as a result of the ASTL Program. Many of them began to actively incorporate journal keeping and reflective writing in their own classes as a way to better understand what and how their P-12 students were learning. To program candidates, the reflections became mirrors that provided insight into their practice and helped them to see the ways in which they were growing and changing along the continuum of their Core experience. To program faculty, their analysis of the reflections enabled them to examine their own teaching practice and use the findings to make programmatic decisions.

Implications for Program Change

From the ASTL Portfolios, including the summative presentation component, Program faculty have been able to identify several lessons learned and have thus established suggestions for programmatic policy, update, and change. Some of these ideas potentially may have been brought to the forefront through faculty discussion, but the evidence provided in the portfolios and the presentations created the forum needed for active consideration and the data to support suggestions for change. Future ASTL Portfolios will serve to validate these changes or to inform additional updates or course alterations.

Many program revisions were curriculum related changes. For example, after seeing the patterns of reflective writing in the portfolios, Program faculty who were teaching the two opening courses decided to recommend a change in the order of the courses to promote more systematic and scaffolded experiences for written reflections. The change in the order of these two courses, coupled with more detailed attention into how to better facilitate the growth of critical reflective practice for everyone, was initiated immediately for the next starting cohort. The faculty teaching these courses collaborated on several new ways to better facilitate this growth, partly by using technology more actively through *Blackboard 5*™ online discussion strands. As a result, course products from the current cohort suggest a richer, deeper level of reflection earlier in the Core than had been evident at the same point in the program for the prior three years.

Other changes were more logistical in nature, but could ultimately have an effect on candidates' teaching and learning. The action research and case study course products for the cohort lacked a depth of analysis and synthesis that faculty were expecting. The teachers' reflections and discussion during the portfolio presentations corroborated on this finding. Both faculty and students felt that more time was needed to complete course products; they indicated that additional time for peer review might provide the scaffolding needed for deeper and richer research analysis in their case studies and action research projects. As a result, program changes in scheduling were put into effect, and additional course changes allowing more time for teachers to process information and implement interventions in the action research projects prior to analysis were added. Data gathered from the program portfolios from the next academic year will allow the researchers to examine the results of the changes indicated here.

Implications for Future Research

Because of the insights gained through this initial study of program portfolios, it is

essential that research continue in order to gain greater insights into what portfolios might reveal about candidates' attainment of learning outcomes and program effectiveness. As this line of research continues, attention to the growth and changes in candidates' critical reflection is important. While analyzing the ASTL Portfolios, the researchers noted there was a distinct element of growth, change, and improvement in the reflections written by program candidates over the course of their Core experience. From the first course, when reflection was a new skill for many, to the final reflection point and portfolio presentation, the researchers remarked on a distinct refinement of thought and a growing ability on the part of the teachers in the program to articulate their puzzlements and delve into various reasons for them. Further investigation is needed to identify the shifts that occur in candidates' reflective practice and how and when these changes occur. The researchers would also like to know if all program participants grow in their reflective practice, or if some do not meet the anticipated expectations and if not, why. They would like to explore what can be discovered about candidates' attainment of learning outcomes and the impact on their professional practice and P-12 classroom practice by noticing the subtle and perhaps not so subtle shifts in their reflections about their inquiries into teaching and learning.

Conclusions

In this study, the ASTL Portfolios from two cohorts of teachers provided a comprehensive and deep view of program teachers' knowledge of program learning outcomes. It was evident that candidates applied the knowledge gained from their program learning experiences to their professional practice and in their P-12 classrooms. Teachers clearly conveyed the value of critical reflection and discussed how they used reflection as a tool for inquiry into their teaching and their students' learning. By systematically thinking about teaching and learning in their own classrooms, they discovered they paid closer attention to the differentiation of instruction, implementation of student-centered practices, and the multiple perspectives of their students. The portfolio reflections and exit presentations to faculty and peers also provided teachers with targeted opportunities to reflect on the impact this year-long learning experience had on their classroom practice. In addition, teachers discussed the value and challenges of using technology for their own growth and professional development, as well as with their students. They valued collaborating with peers and spoke about taking on the role of being change agents in their schools.

Through candidate reflections, course products, and presentations, the ASTL program portfolios provided researchers with a window into the candidates' learning and a mirror to reflect upon needed changes and program updates. Course by course assignments might provide individual instructors with insights into the learning and growth of candidates, and GPA provides a snapshot of academic achievement. However portfolio evidences allow all stakeholders to view the growth and nature of learning over the course of an entire program. It is not until all of the pieces come together in one place that candidates and program faculty and administrators can realize the full impact and the specific needs of the program. As a result of this study that examined program portfolios to document what candidates learned during the program, the data suggest that program portfolios have the unique potential to reveal insights into what candidates learned and the actions they took in their classrooms. Program portfolios have the potential to provide important insight into learning in a way that can not be captured by merely recording course product grades or collecting course evaluations. Portfolios can serve as a viable means for teacher educators to fully realize the impact of their programs and identify needed program revisions.

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ASTL Professional Development Portfolio:
Reflecting knowledge, skills, & dispositions
related to the program outcomes
Contents of the Portfolio
The contents of the Portfolio provide evidence of Program Outcomes (NBPTS +College of Education and Human Development Principles) and National and State Standards.

George Mason University - College of Education and Human Development
ASTL Program Portfolio
Articulation with NBPTS Core Propositions, GMU Outcomes, and Content Area Standards
(©Fox & Isenberg/2003, updated 2004)

Program Learning Outcomes: NBPTS + GMU Principles

1. **Student learning**

2. **Content knowledge & effective pedagogy**

3. **Monitoring student learning**

4. **Systematic inquiry of practice**

5. **Learning community**

6. **Diversity**

7. **Change agent**

8. **Technology**

⟷

I.   Professional Documentation

II.   *ASTL Core (12 credits)*

A. **Teacher as Knowing & Understanding Learning & Learners: EDUC 613 & 612. Reflection Point 1.**
(Principles 1, 3, & 5)
B. **Teacher as Designer of Curriculum & Assessment:**
EDUC 614. Reflection Point 2
(Principles 2 & 3
C. **Teacher as) Researcher with Cultural Perspective:**
EDUC 612 & 606. Reflection Point 3.
(Principles 1, 4, 5, & 6)
D. **Teacher as Change Agent: EDUC 615.**
Reflection Point 4.
(Principle 7)
E. **Reflection Point 5: Integration of Technology**
(Principle 8)
F. **Synthesis Reflection: Connections and**
G. **Reflections on the Core Courses and their Relationships to the   NBPTS & GSE Program Principles**

III.   *ASTL Emphasis Area (18 credits)*
Content of this area to be determined by each Emphasis Area's Requirements – This section reflects alignment with National Standards and the state Standards of Learning (SOLs)

**IV.   *Portfolio Presentation:*
*Synthesizing Knowledge and Looking Ahead***

The Growth of Reflective Practice: Planting the Seeds

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Abstract : This paper presents the genesis and initial growth of reflective practice as revealed in candidates' products from the initial course taught at George Mason University in Virginia, USA . The participants (known as candidates) were forty-eight practicing teachers in the Advanced Studies in Teaching and Learning (ASTL) program in 2003-2004. When producing the first course product in the ASTL program, candidates explore their own previous experiences as teachers, as learners, and as beginning researchers.   The findings show that at the beginning of the program, the candidates reflected deeply about their past experiences as learners and teachers, but did not show strong and convincing evidence of understanding the implications of those experiences for future teacher practice. Over the course of the semester, the candidates began to propose potential actions and investigations related to puzzlements about practice, but most did not yet see the connection between their questions about their teaching practice and their experiences as learner and teacher and how those experiences subtly shape their practice.

Introduction

Teachers must be able to think systematically about their practice and learn from experience. They must be able to critically examine their practice, seek the advice of others, and draw on educational research to deepen their knowledge, sharpen their judgment, and adapt their teaching to new findings and ideas (National Commission on Teaching and America's Future, 1996).

The fourth National Board for Professional Teaching Standards (NBPTS) proposition, *Teachers think systematically about their practice and learn from experience,* reflects that National Commission on Teaching and America's Future statement and is one of the main outcomes that candidates in the Advanced Studies in Teaching and Learning (ASTL), a graduate-level advanced master's degree program at George Mason University, are expected to demonstrate. It is during the introductory two-credit EDUC 612 *Inquiry into Practice* course that candidates are first introduced to what it means to be a reflective teacher practitioner. Therefore, this study focuses on the beginning experiences these candidates had in the ASTL Program as they learned to be critical reflective practitioners. Candidates' work products and reflective journals, statements they made in periodic reflective statements regarding program outcomes, and what they had to say at the end-of- program portfolio presentations were reviewed.

Framework of the Study

When defining the process of critical reflection, the instructors emphasize the importance of active involvement in looking critically at one's practice and use, as an opening point of departure, the six phases that Carol Rodgers synthesized from John Dewey's work mirroring the scientific method (2002, p. 851). Candidates engage in class experiences that have them to write about 1) an educational experience (describe what happened, who was involved); 2) spontaneous interpretation of that experience (analyze it); 3) name the question(s) that arise out of the experience; 4) generate possible explanations for the question(s) posed; 5) present a full-blown hypothesis (i.e. state why the experience may have happened); and 6) convey how they might investigate the selected hypothesis in the future should a similar occurrence happen again. This type of exercise encourages the candidates to not only describe experiences they have encountered in their classroom settings, but to analyze, interpret and apply those experiences to future possible actions as Rodgers states:

> Often those who write about reflection will stop before this final phase, forgetting that for Dewey, reflection must include action. Dewey's notion

of responsibility, one of the four attitudes he felt were integral to reflection, implies that reflection that does not lead to action falls short of being responsible. Reflection is not a casual affair (p. 855).

When class discussions evolve around questions such as *Does engaging in the reflective process settle things, once a hypothesis has been tested?*, instructors stress the notion that reflective practitioners engage in a recursive process of critical reflection. According to Rodgers, "Once one has tested one's theories in action, more questions, more problems, more ideas arise. In this sense, the process is cyclical; reflection comes full circle, the testing becomes the next experience, and experiment and experience become, in fact, synonymous" (pp. 855-856).

To begin the journey of becoming a critically reflective practitioner, instructors emphasize the importance of keeping a reflective journal in order to make responses that reflect the four phases that Rodgers has found to be effective with reflective professional development groups. They are "presence to experience, description of experience, analysis of experiences, and intelligent action/experimentation" (p. 856). The phase of intelligent action/experimentation is usually expressed in the critical journal responses candidates make in their journals that indicate implications for future action. The candidates use these journal responses as they create and write the final course product which is a multi-genre paper, autobiographical project inspired by the work of Tom Romano (2000, 2004).

Autobiographical in nature, this paper enables candidates to connect research to their own learning and teaching pathways. The multi-genre assignment also provides insight into the dispositions and attitudes of the candidates at the beginning of the program. The multi-genre paper reflects Tom Romano's notions that a good writer has a distinctive voice and must do more than just *tell*, he must *show*, in order to convey passion, voice and

vision (Romano, 2000). When Romano has his students research a topic, he has them learn to write with passion and through different perspectives in order to uncover feelings and emotions related to the topic. Likewise, the EDUC 612 multi-genre assignment serves as an opportunity for candidates to express their feelings and emotions about what it means to them to be a learner, a teacher and a beginning teacher-researcher. They synthesize their emerging understandings regarding reflective practice with their own experiences. Candidates convey who they are as learners, as teachers, as beginning, or emergent, teacher-researchers by writing five or more genres that stir up their inner voices and passions. Narratives, poems, dramatic scenes, dialogs, music, drawings, graphics, cartoons and photos are the most common examples found in the multi-genre papers.

Justification for using the multi-genre paper as a baseline measure is grounded in reflective practice research. In her article, *Teacher Reflection in a Hall of Mirrors: Historical Influences and Political Reverberations* (2003), Fendler states, "Sometimes autobiographical narratives can provide writers with great insight about how perceptions are shaped by experience. Reflection is practiced as a way to reject outside influences and to validate an inner voice as 'authentic'" (p. 22). Brookfield (1995) also states that writing an autobiography can help sort out perspectives. He adds that it is a means by which practitioners can be alerted to the people who have had influences on them, thus helping them speak authentically about their own beliefs and values. "To some extent, we are all prisoners trapped within the perceptual frameworks that determine how we view our experiences. A self-confirming cycle often develops, in which our uncritically accepted assumptions shape actions that then serve to confirm the truth of those assumptions" (Brookfield, p. 28).

When writing their multi-genre papers for the course *Inquiry into Practice*, candidates begin with descriptions of experiences that

have occurred in their lives as learners and as teachers (stating what happened, who was involved) and then they interpret and analyze those experiences. In doing so, they are led to a third stage, where the candidates reflect upon the meanings behind those experiences and project their thoughts to what they have learned about themselves and what it may mean in their teaching. Research actions that the candidates propose could lead to a future action research initiative.

Purpose and Context of the Study

This study focuses on the beginning experiences candidates have with learning to be critical reflective practitioners and examines the growth of critical reflective practice as documented in the program portfolios prepared and presented by candidates in the ASTL program. Data were collected from two cohorts of candidates enrolled in EDUC 612, *Inquiry into Practice,* during the 2003 summer session. The multi-genre papers, one of the main course products in the Core sequence, are used as baseline indicators of thoughts and reflections of the candidates at the beginning of the program, thus allowing the ASTL faculty to trace continuing growth in this area through analysis of experiences and products in subsequent courses. Next, two other data sources were examined: critical journal responses which are based on reactions to class readings and exercises from EDUC 612 and Reflection Point One statements that are placed in the program portfolio. A fourth data source was audiotapes of candidates' ASTL final Portfolio presentations.

The Reflection Point One statements were written in response to a required prompt that asked them to reflect on their learning and that of their P-12 students. The reflections and the products they include should provide evidence of their knowledge and skill in understanding learning and learners and their personal impact on student learning. Their reflections should address one or more of the following principles and should show how their course products provide evidence of their knowledge: 1) commitment to student

learning, 2) managing and monitoring student learning, and 3) members of learning communities.

The end-of-program portfolio presentations were based on the ASTL candidates' choice of an ASTL principle in which they experienced their most significant growth and which had an impact on their students' learning. They were also asked to choose a principle in which they felt they had grown the least or had had the least impact on them and/or their students' learning. The eight principles the candidates considered were the program learning outcomes: 1) Student Learning (Teachers are committed to students and their learning), 2) Content Knowledge & Effective Pedagogy (Teachers know the subjects they teach and how to teach those subjects to students), 3) Assessment (Teachers are responsible for managing and monitoring student learning), 4) Systematic Inquiry of Practice (Teachers think systematically about their practice and learn from experience), 5) Learning Community (Teachers are members of learning communities), 6) Diversity (Teachers attend to the needs of culturally, linguistically, and cognitively diverse learners), 7) Change Agent (Teachers are change agents, teacher leaders, and partners with colleagues), and 8) Technology (Teachers use technology effectively to facilitate student learning and their own professional development).

Statement of the Questions
Guiding our research were the following questions:
1. What is the nature of statements being made by the candidates that address: Who am I as a learner? What do I stand for? What are my beliefs as a teacher? What are my beliefs as an emerging teacher-researcher?
2. In which ways do comparisons of statements made by the candidates at the outset and end of the ASTL program indicate that they have grown as reflective practitioners?
3. What do candidates state they have learned from experiences they have

had as learners and teachers that may lead to their engaging in future inquiries as teacher-researchers?

Methodology

Participants

Participants belonged to two cohorts of candidates enrolled in the program, one offered at an off-campus site (twenty-two females and one male, N = 23) and the other on-campus cohort (twenty-one females and seven males, N=28). All of the candidates had between three to twenty plus years of teaching experience in preschool through grade twelve settings.

Data Collection and Analysis

The following documents in electronic format were gathered for analysis: multi-genre papers, electronic journal responses, Reflection Point One statements, and the culminating portfolio presentation transcripts. In total, eighty-eight documents were analyzed for emergent themes.

Qualitative research methods were used, particularly coding and categorizing (Glesne, 1999; Maxwell, 1996). The documents were then sorted using NVivo 2 data analysis software, a qualitative research method tool that assists researchers as they code and categorize data (Gibbs, 2002).

Three initial categories derived from the research questions were used in the first round of analysis: Beliefs, Dispositions and Future Actions. A fourth category, Attitudes, emerged during the initial round of NVivo coding. Data were examined within and across the two cohorts and, as the researchers did so, coding was reviewed in order to establish consensus and agreement among the researchers in order to ensure consistency with interpretations (Gibbs, 2002).

The definitions used for the categories are:
- *Beliefs*- statements, principles or doctrines a candidate accepts as true.

- *Dispositions*- the values, commitments, and professional ethics that influence candidate behaviors toward students, families, colleagues, and all members of the learning community.
- *Future actions*- the plans for the future that may involve a change within the candidates' practice.
- *Attitudes*- the opinions or general feelings about something. These could be statements relating to learning, teaching or as emerging teacher-researchers.

After the documents were coded, four reports were generated entitled *Beliefs*, *Disposition*s, *Future Actions* and *Attitudes*. Statements from the beliefs and attitudes reports were categorized in order to address the first research question related to how candidates see themselves as learners and what they stand for in terms of their beliefs as teachers, and as emerging teacher-researchers.

The disposition report and the future actions report were then synthesized and sorted into five disposition categories according to statements made by candidates. These categories relate to the university's stated expectations for its candidates related to commitment to: 1) the profession, 2) honoring professional ethical standards, 3) key elements of a professional practice, 4) being a member of a learning community, and 5) democratic values and social justice.

Lastly, the portfolio presentation transcriptions were also synthesized and sorted into the five dispositional outcome categories. Five reports were generated, one for each dispositional outcome. The second and third research questions were addressed by analyzing those five dispositional outcome reports.

Findings

Question One: What is the nature of statements being made by the candidates that address: Who am I as a learner? What do I stand for? What are my beliefs as a teacher? What are my beliefs as an emerging teacher-researcher?

The first research question focused on how candidates *see themselves* as *learners* and what they stand for in terms of their *beliefs as teachers* and *beliefs as emerging teacher-researchers*. Since the multi-genre paper required the program candidates to focus on themselves as learners, as teachers, and as emerging teacher-researchers, statements from all three of those areas of their lives were evident in all the multi-genre papers. In most of the multi-genre papers, candidates made very specific statements about the ways they learn, such as giving examples of their particular learning styles or favored multiple intelligences. For example, one candidate wrote:

> Helping my students develop a high regard for themselves as learners is a top priority in my classroom. To this end, I strive to develop lessons and use strategies that will help my students find success. My own experiences as a learner have taught me that it is how you perceive yourself as a learner that is most important. You must feel like you can succeed in order to persevere through challenging experiences to be successful.

Another candidate shared, "Understanding myself as a learner has been essential in helping me understand others as learners." Several candidates mentioned that they "discovered" their *teacher* beliefs when they wrote their multi-genre papers. The four most common themes were the importance of focusing on how one teaches, being willing to change and adapt to new ideas, instilling a passion for learning, and creating a positive learning environment. One candidate stated, "When I sat down to try to remember the major events of my own education, it revealed a great deal to me regarding why I am the person I am today."

The reflective nature of the journal was evident throughout many of the entries such as this one:

> Educators often say they do not have time to reflect or think about what it is they are doing and why. This paper allowed me to seriously think about how my educational

philosophies took shape. Not only did I have time to reflect upon people who helped shape who I am today, but also think about my own experiences and beliefs about myself that have helped shape me. This experience was a positive one for me.

When candidates made statements relative to being emerging teacher-researchers, they mentioned keeping a reflective journal in order to record what they see happening in their classrooms and perhaps these incidents they report will lead to future investigations. This was typical of such statements, "I want to spend this year observing and reflecting in my classroom to look for trends worth researching."

The most common reason the candidates gave for engaging in reflection is to change one's practice for the better. Five candidates made specific statements that describe the value of reflection, saying that they found it "helpful" to them during their coursework. "I realize that the key to changing one's practice as a teacher is reflection. How can one improve if they don't reflect on what one is doing?" The following statement captures the ideas shared by many of the candidates who teach core subject areas:

> When we reflect on our teaching, we are able to get to the core of our own beliefs that lead us to act the way we do in the classroom. There are so many times throughout the school day when I think I could have done something or expressed myself in a clearer manner. If I was able to really take the time to look critically into these areas of need, I believe that I could take more serious steps toward improvement.

Because time is such a challenge for candidates and many of them state how they struggle with how they will fit in yet another thing to do during their teaching day, this statement represented several who found the multi-genre paper a very important learning experience and underscored the importance of

providing time and scaffolding in the program for meaningful and deep reflection:

> It is so often educators say they do not have the time to reflect or think about what it is they are doing or why. This paper [multi-genre paper] allowed me to seriously think about how my educational philosophies took shape. Not only did I have time to reflect upon the people who helped shape who I am today, but [I] also [had time to] think about my own experiences and beliefs about myself that have helped shape me.

One candidate did state that she found it valuable learning to keep a reflective journal in the course and when she returns to teaching, she would continue to keep a reflective journal because she sees the value of revisiting thoughts and taking actions to solve problems. Another candidate admitted that she engages in informal reflective practices, but in the future, she wants to do so in a more formal way:

> While I constantly reflect and analyze how I teach and react to students, I do not consistently take notes or formally reflect upon my practice. I have made this a goal this year. I resolve to observe and take notes on my reflections.

A candidate who works with gifted students shared that she engages her students in reflective practice, "By the use of this continual reflective practice, my students have been able to witness firsthand how important the concept of lifelong learning is and how it affects others." Another shared, "Through the collection of my observational notes, I can reflect on the patterns of behavior and on the value of my lessons. By reflecting I am able to question how I can better meet the needs of my students. I try not to get frustrated with their not learning and now [I] can step back to question how I can be the one to make changes to help in the learning process."

The majority of the candidates had little or no experience with teacher research; however, a few had participated in teacher research projects with their schools. One candidate reflected on that experience:

> I watched her (the researcher) grow and improve throughout the year. The research project also taught me how to analyze and evaluate my students' work. I am going to take the knowledge that I learned and use it to chart the growth of my students in the upcoming year, gain a better knowledge of students' abilities. Hopefully, it will also help me grow as a researcher and as a teacher.

Dispositional Outcomes

In addition, the portfolio allowed us to capture and examine the candidates' dispositions as stated at this beginning point in the program. As we coded the dispositions and future actions, we noticed overlaps in relation to the five specific dispositional outcomes articulated by the Graduate School of Education. Statements made by the candidates that had been coded as "dispositions" also reflected intended "future actions." There were also interesting parallels and differences between the beginning-of-program statements in the two reports and the end-of-program statements made during the portfolio presentations. Table I shows that statements reflecting the dispositional outcomes were much more evident in the end-of-program portfolio presentations than in the beginning-of-program course products (multi-genre paper, critical journal responses, and reflection point one).

Table 1. Dispositional Outcomes

Disposition Outcome (Total)	Disposition Report	Future Actions Report	Portfolio Presentation
Commitment to the profession (70)	12	12	46
Commitment to honoring professional ethical standards (46)	7	10	28
Commitment to key elements of professional practice (286)	50	53	183
Commitment to being a member of a learning community (130)	15	6	109
Commitment to democratic values and social justice (100)	19	22	59

Both at the beginning and end of the program, statements indicative of commitment to honoring professional ethical standards were noted least often (total=46), while statements indicative of commitment to key elements of professional practice were noted most often (total=286). This difference may have been due to the explicit modeling and discussion of key elements of professional practice in all the ASTL courses. These key elements include the belief that all individuals have the potential for growth and learning, the importance of critical thinking, respect for diverse talents, abilities, and perspectives, and active supportive interactions. In contrast, aspects of professional ethical standards such as fairness and respect for colleagues and students were implicitly, rather than explicitly, included in these courses.

Question Two: *In what ways do comparisons of statements made by the candidates at the outset and the end of the ASTL program indicate that they have grown as reflective practitioners?*

Candidate statements did not reflect every element of each of the five dispositional outcomes (refer to the Appendix) that the ASTL program hopes all candidates will demonstrate. However, all five dispositional outcomes were evident in both beginning-of-program statements and end-of-program statements. In relation to *commitment to the profession*, most candidates made beginning-of-program statements that indicated a desire to promote exemplary practice. For example, one candidate said, "As a result of my research I hope to promote the concept of inclusion to my colleagues and to the community." Another candidate stated, "Frequently, after an observation, I find myself in a position of explaining my philosophy behind an activity. Having the support of a recognized theory lends some credibility to my explanations."

In relation to *commitment to honoring professional ethical standards*, beginning-of-program candidate statements showed evidence of respect for colleagues and students. For example, one candidate said, "I think I appreciate the emotion the sensing-feeling students bring to class."

In relation to *commitment to key elements of professional practice*, the candidates made statements at the beginning of their program that showed evidence of a belief that all individuals have the potential for growth and learning, as well as the importance of establishing safe and supportive learning environments, systematic planning, critical thinking, research-based practice, respect for diverse talents/abilities/perspectives, and authentic and relevant learning. This dispositional belief was evident more so than any other belief. The number of this type of belief statement (103) far outnumbered any of the other belief statements related to the other four dispositional belief statements. This finding is not surprising, given that candidates were actively seeking to connect their past and current practice to their new learning. Candidates especially noted the importance of research-based practice. For example, "Through teacher research I have focused my

attention on student learning and achievement. I learned so much by simply watching my students. It seems so simple yet we rarely slow down to do it." Another stated, "One discovery I made while studying the concept of teacher research is that I already do it, although in an unstructured manner. I am now learning how to become a structured teacher-researcher so that I can positively affect the lives of my students as well as my own and maybe influence the professional practices of some of my colleagues."

The fourth dispositional belief, *commitment to being a member of a learning community,* had very few beginning-of-program statements (21) compared to end-of-program statements (109). As candidates progressed through the ASTL program in a cohort, they grew to appreciate the benefits of their learning community, especially in relation to reflective practice, collaboration, and continuous, lifelong learning. Some examples include:
1. The classroom is its own community of learners.
2. It is my belief that my role as a teacher is to be reflective, looking for both positive and negative aspects of my instruction. Through this reflection a sense of knowing should occur.
3. The interactions I have had in this course have made me realize the value in sharing with colleagues.

The fifth dispositional outcome, *commitment to democratic values and social justice*, was also evident in the candidates' statements related to understanding systemic issues that prevent full participation and advocating for practices that promote equity and access. For example, one candidate wrote, "During my years as a special needs and general education teacher, cooperative grouping aided in the success of inclusion experiences." Others talked about wanting and needing to "be cognizant of my students' language proficiency" or needing to be attuned to the fact that "Each student in my class has a different way of learning."

As noted in the candidates' statements, the statements did reflect the dispositional outcomes. By the end of the ASTL program, the dispositional outcomes were even more evident. During their portfolio presentations, the candidates noted the impact of the multi-genre paper on their thinking and practice; they also referred to their own growth through ASTL coursework. Because the transcriptions came from small group discussions that were audio-taped and transcribed, the specific candidates and their teaching levels were not identified. Some statements included: "Writing the multi-genre paper . . . I really learned a lot about why I am the way I am. . ." Other candidates reached beyond their own personal learning statement and applied the multi-genre writing experience to their classroom practice, "When I did the multi-genre paper and I realized the things that affected me as a learner and I realized that when I was teaching, I was teaching somewhat with a narrow focus, from the way I learned and what I was comfortable with." Another teacher said, "I am starting to look at what I can do differently to help the student. Rather than focus on what the child needs to do differently, I am looking at what I can do differently within the classroom."

End of program reflections affirmed that candidates had begun to think about the application of their knowledge beyond course requirements. "It wasn't until kind of the end of this program that the whole teacher research process light bulb went on. But, I definitely will always be a teacher researcher now," stated one, while another shared, "I've just become very convinced through the [ASTL] core that systematic inquiry is essential and it really does help students a lot." Engaging in the practice of professional reading to continue to inform their practice was also mentioned: "My professional reading has also grown because of the ASTL program . . . I'm really looking and thirsting for more professional meaning, for more depth."

Question Three: *What do candidates state they have learned from experiences they have had as learners and teachers that may*

lead to their engaging in future inquiries as teacher-researchers?

Teacher beginning-of-program statements provided evidence that their experiences in the first course influenced their intentions for future actions. These future action statements reflected all five of the GSE desired dispositional outcomes, especially *commitment to key elements of professional practice* (53). Statements related to *commitment to being a member of a learning community* were the least evident (6). Again, this is not surprising, since the candidates have already experienced professional practice, and, for many, membership in the ASTL cohort was their first exposure to a learning community. Following are some representative statements made by candidates at the beginning of the program, either in their multi-genre papers or in critical journal responses and Reflection Point One:

- I would now like to help my colleagues to realize that they too are practicing ability grouping and not flexible grouping, which is detrimental to the learning of their children.
- One powerful aspect that I will recognize is that student learning needs to be connected to how they learn and their interests. My goal for this coming school year is to connect the content to my students' lives.

By the end of the program, candidates were much more focused and clearer about how the ASTL program had influenced their intended future actions. In some cases, they had already begun taking these actions, "I am very excited that my staff, which I did not think would be into this at all. Twelve of them want to be teacher-researchers." Candidates felt empowered by their new knowledge, "This year, I've had the opportunity to take on a leadership role . . . This is the first time in five years that my opinion really matters." They also noted that their students feel empowered, "by focusing on what the students are doing and empowering them and putting them in

much more of a control of what they are doing as learners". Recognizing that they are continuing learners, candidates stated, "I will definitely keep reflecting," and "I'm willing to continue to learn and grow in my profession," and "I also have to realize that I am a constant learner. That is just going to be an on-going process." Candidates also felt that they could be a voice for others as they work to effect change: "I would like to practice cultural relevance. I would like to be able to change little things and be a voice for those who cannot speak for themselves."

Summary

The documents provided evidence of statements related to teacher beliefs, expected dispositional outcomes, and intended future actions. Themes related to teacher beliefs were noted in four main areas: the importance of focusing on how one teaches, being willing to change and adapt to new ideas, instilling a passion for learning, and creating a positive learning environment. Many of the candidates made specific statements acknowledging the value of reflection and indicated that they will continue this practice in their own educational settings.

By the end of the program, candidates were able to articulate how the program influenced their future actions. These statements included establishing professional learning communities, taking on leadership roles within their educational settings, engaging in critical reflection, and recognizing the importance of being a life-long learner.

Conclusions

The findings from this study show that from their beginning ASTL experiences, the candidates learned to relate their experiences as learners and teachers in such a way that they could begin to analyze these experiences. In doing so, the candidates deepened their understandings and abilities related to reflective practice and saw the implications of critical reflection for improving teaching and learning in their practice. As they proposed potential actions and investigations related to puzzlements about their teaching practice,

some candidates were able to see the connection between their questions about teaching practice and their own experiences as learner and teacher. The statements they made related to beliefs, attitudes, dispositions, and future actions and provide evidence that the seeds of reflective practice were planted in the opening coursework and learning experiences.

Reflections

Findings from the multi-genre paper and reflections during the course indicate that most of the candidates appear to have never engaged in self-study or reflective practice prior to entering the program. Therefore, it is not surprising that at the beginning of the ASTL program, candidates are just beginning to understand the impact that their own experiences have had on their current teaching practices. They are just beginning to articulate knowledge of a connection between their previous experiences and their teaching and that keeping a reflection journal is most important in looking critically at one's own practice. The multi-genre paper also provides them with the seeds of "insight about how perceptions are shaped by experiences" (Fendler, 2003, p. 22) and helps them begin to sort out their own perspectives and beliefs (Brookfield, 1995). These understandings are essential for candidates to become reflective practitioners and make positive changes that will impact their future teaching and students' learning.

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APPENDIX
Professional Dispositional Criteria

The Virginia Department of Education and the National Council for Accreditation of Teacher Education promote standards of professional competence and dispositions. Dispositions are values, commitments, and professional ethics that influence behaviors toward students, families, colleagues, and all members of the learning community. The Graduate School of Education expects candidates, faculty, and staff to exhibit professional dispositions through a:

Commitment to the profession
• Commitment to the profession
• Promoting exemplary practice
• Excellence in teaching and learning
• Advancing the profession
• Engagement in partnerships

Commitment to honoring professional ethical standards
• Fairness
• Honesty
• Integrity
• Trustworthiness
• Confidentiality
• Respect for colleagues and students

Commitment to key elements of professional practice
• Belief that all individuals have the potential for growth and learning
• Persistence in helping individuals succeed
• High standards
• Safe and supportive learning environments
• Systematic planning
• Intrinsic motivation
• Reciprocal, active learning
• Continuous, integrated assessment
• Critical thinking
• Thoughtful, responsive listening
• Active, supportive interactions

• Technology-supported learning
• Research-based practice
• Respect for diverse talents, abilities, and perspectives
• Authentic and relevant learning

Commitment to being a member of a learning community
• Professional dialogue
• Self-improvement
• Collective improvement
• Reflective practice
• Responsibility
• Flexibility
• Collaboration
• Continuous, lifelong learning

Commitment to democratic values and social justice
• Understanding systemic issues that prevent full participation
• Awareness of practices that sustain unequal treatment or unequal voice
• Advocate for practices that promote equity and access
• Respects the opinion and dignity of others
• Sensitive to community and cultural norms
• Appreciates and integrates multiple perspectives

Trials & Tribulations Encountered During the Development & Teaching of a Dual-Delivery Research Methods Course

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Abstract: *This paper focuses on developmental, pedagogical, and sociological issues related to a doctoral level research methodology course. The course is delivered in two formats, resident (face-to-face) and distance (web-based on Blackboard). Pedagogical, sociological, course development, course delivery, issues, and challenges for both formats are discussed. An annotated bibliography and a copy of the scoring rubric for the main assignment are also included.*

Doctorate of Education students in most programs across the country have a certain reticence and fear when it comes to enrollment in their required research methods course. At Liberty University (LU) this particular course, Quantitative & Qualitative Research Methods, has an added complicating dimension affecting both the faculty and students. Since this course is delivered in two formats, resident (face-to-face) and distance (web-based on Blackboard), the instructor must be able to teach the course in both modalities. As for the students, because they are allowed a choice, they must decide which modality is most appropriate for their particular needs. The major focus of this paper is on the developmental, pedagogical, and sociological issues related to the dual format nature of this course.

Statement of Problem

How can the development of a doctoral level research methods course be accomplished while meeting the diverse needs of two different delivery systems (residence and distance)?

Research Questions

In addition to the statement of the problem, the following research questions were posed:
1) What were the steps necessary for developing an on-line Blackboard-based doctoral level research methods course?
2) What were some of the specific problems encountered when using Blackboard?
3) How can the experience gained from teaching of a face-to-face research methods course be used to develop a distance research methods course?

Review of Literature

While the problem stated above was not completely addressed by a review of literature, a great deal was gleaned from an examination of related issues. Consequently, the following items were included in the review of literature: (1) doctoral preparation programs in education, (2) distance delivery versus classroom delivery, (3) teaching aspects of distance web-based instruction, (4) social aspects of distance and web-based instruction, and (4) evaluation techniques for distance education courses.

Doctoral Preparation Programs in Education

The call for improving doctoral programs in education is not new; however, the *No Child Left Behind* (NCLB) act, along with other federal legislation, has placed a renewed focus on the research content of such programs. Eisenhart & DeHaan (2005), describe six guiding principles, which they believe should be part of the content of an educational doctoral program for a research professional. These are:
1. to pose significant questions that can be investigated empirically;
2. to link research to relevant theory;
3. to use methods that permit direct investigation of the question;

4. to provide an explicit and coherent chain of reasoning;
5. to replicate and generalize across studies; and
6. to make research public to encourage professional scrutiny and critique.

Continuing, Eisenhart and DeHaan assert that:
> . . . the general processes of inquiry in interpretive and experimental sciences are virtually identical. In both cases, inquiry is a process of relying on previous work to specify new empirical investigations that lead to warranted conclusions. In both cases, warranted conclusions are arrived at by conducting empirical investigations, making links to previous research, using methods that are appropriate to the questions asked, articulating a chain of reasoning, and exposing the inquiry process and the reasoning …. For us, then, a fundamental component of training programs that prepare scientifically based education researchers is socialization into these norms of scientific inquiry   (p. 5).

In addition, Eisenhart and DeHaan propose that educational researchers need training in five broad areas: (1) diverse epistemological perspectives, (2) diverse methodological strategies, (3) the varied contexts of educational practices, (4) the principles of scientific inquiry, and (5) interdisciplinary research orientation (p. 7).

Furthermore, they noted that "it is unlikely that a single graduate program could cover well all five broad areas" (p 9).   They suggest that colleges or universities should choose one or two emphases among the five. Finally in a section titled, "Outline for a Doctoral Program in Scientifically Based Education Research," they suggest that a core course, a research experience, a teaching experience, and interdisciplinary collaborations be the basic components of the program (p. 10).

Distance versus Classroom Delivery

In their article entitled, *The Web Versus the Classroom: Instructor Experiences in Discussion-based and Mathematics-based Disciplines,* Smith, Ferguson, & Caris, elucidated some of the major questions and issues related to distance versus classroom instructional modes:

> In the recent surge into Web-based distance education, universities are often pressuring faculty to teach courses over the Web. Many faculty, relative novices to this modality, wonder what challenges await them. They wonder, perhaps with trepidation, to what extent their skills transfer to this new medium. Therefore an important question is: What are the differences in the instructor experience between teaching over the Web versus face-to face courses, in terms of teaching strategy, social roles of faculty and students and emergent issues? Other faculty, with more distance teaching experience, may not have shared their insights nor read the literature on distance education. Their knowledge remains fragmented. These faculty may question whether their experiences with teaching online are specific to their content area or representative of the larger experience of teaching over the Web (2003, p. 29-30).

Teaching Aspects of Distance Web-based Instruction

In addition, Smith, et al. (2003) found that "it usually requires a considerable amount of time to design and develop an online course" (p. 31). They also suggested that the instructor organize the course into modules of fixed time duration, which are self-paced with specific due dates and set penalties for late work.

In addition, there must be an adequate number of instructional activities in which

there is ample instructor feedback, along with numerous student-to-instructor interactions. These interactions result in a much heavier faculty workload. This increased workload is found to require as much as two hours per day (Conne-Syrcos, & Syrcos, 2000).

Social Aspects of Distance and Web-based Instruction

Regarding social aspects of web-based instruction and the preparation of educational researchers there are some thorny problems. One such problem relates to a call for an emersion into the socialization processes related to the principles of scientific inquiry, specifically for research programs in education (Eisenhart & DeHaan). On the other hand, researchers state, "that distance education reduces education to a kind of industrial process, lacking the human dimension of group interaction, and even alienating learners from teachers" (Smith, et al., p. 32). Furthermore, the distance pedagogical model is compared to the mass-production assembly line that is isolated and lonely. This is far removed from the need for the educational researcher to experience firsthand the culture of research. Eisenhart & DeHaan further illuminate the situation:

> In addition, graduate programs in education research must find ways to socialize students into the culture of science without the advantage of full-time focus or commitment. They must instill the culture of science without the benefit of the resources for research apprenticeships that characterize training in the physical and biological sciences. They must do so with fewer overall resources and with a more diverse student population. And they must accomplish all of this in ways that enable graduating education researchers to participate in investigations that cut across the broad range of fields and methods that bear on education related questions. Succeeding at all of this is no small task (2005, p. 8).

On a more conceptual/sociological level, there are at least three types of interactions that take place in a distance educational setting. These are learner-content interaction, learner-instructor interaction, and learner-learner interaction. Such an arrangement leads to an instructor shift from being a content provider to one of being a facilitator. This may be in conflict with certain cultural views of learning (Smith, et al. p. 32).

In addition to the review of literature, there are a number of university and program specific items that are important considerations in attempting to solve the problems presented in this paper.

Nature of the Liberty University Doctorate Program

The Doctorate of Education program at LU is an Ed. D. in Educational Leadership. It is designed to prepare competent and effective leaders who will model high standards, while assuming a leadership role in a particular chosen field of education. The majority of students come into the program already in some type of leadership role, typically consisting of superintendents, principals, curriculum directors, instructors, teachers, and college or university administrators. These leadership roles are quite diverse in nature as the students may come from a secular leadership role or Christian leadership role.

The program consists of a combination of residential coursework and distance coursework, much of which is in a Blackboard format. To satisfy the residence requirement the student must complete a minimum of 12 hours in residence out of a total of 60.

General Nature of the Course and the Big Picture. The major purpose of the LU Quantitative & Qualitative Research Methods course relates to preparing the student for writing a research proposal for a dissertation. This is emphasized throughout both course formats and referred to as the "Big Picture." The tasks and assignments are related to the later task of writing the research proposal for a

committee who oversees the writing of the doctoral dissertation.

The resultant dissertation is expected to exhibit scholarship, reflect mastery of technique, and make a distinctive contribution to the field in which the candidate has majored. The student has a program concentration and a cognate. These are administration, curriculum, instruction, and instruction and curriculum. They are also in compliance with the Transnational Association of Christian Colleges and Schools (TRACS) accreditation standard which states that the doctoral program must have a list of prescribed courses in a cognate.

Since LU is NCATE, TRACS and SACS accredited, there are specific accreditation standards for each course that must be met. For example, the TRACS standards specify that "the distance course must be similar to the content of the residence course" and "the off-campus work must clearly be shown by the institution to be the equivalent of on-campus work in such areas as time-on-task, reading, research, writing, and interaction with both faculty and students" (Transnational Association of Christian Colleges and Schools, 2004, p. 40). It is with the above understanding and background that we began the task of course development.

Specific Nature of the Course. The textbook and supplemental materials provide a content base, which addresses basic skills, content, and principles to be mastered in the process of writing a research proposal. Among these are:

1) the writing of a statement of the problem that can be used in a proposal and investigated empirically,
2) the development of a suitable hypothesis,
3) the writing of a review of literature, which adequately addresses the problem statement and links research to relevant theory,
4) the writing of a research methodology, which is adequate to answer the posed problem, including subjects, instruments, and procedures,
5) the writing of an analysis of data section that discusses the data organization and the statistical procedures to be used,
6) the writing of a significance of the study containing implications and application, and.
7) the development of a time schedule and budget.

Blackboard Design and Use at LU. Distance courses at LU are designed and conducted in Blackboard in an eight-week format; therefore the research methods course had to be succinct while maintaining the course content integrity. To present the Blackboard format on the first page of the research methods course in a more user friendly manner the button menu was rearranged. The format consisted of the following four buttons: (1) About your course, (2) Announcements, (3) Course content, and (4) Communications, which appear at the top left of the first page. Most of the course components for the research methods course are found under the "Course Content" button. Upon opening the Course Content, the student finds eight course module folder icons, which identify each section of study for the course. These are to be completed one per week. Assignments and quizzes are included as parts of individual modules. Blackboard allows for assignments to be submitted directly back to the instructor by clicking on an "assignment link" found within the module folder. This "assignment link" is directly linked to the grade book.

Steps in the Process of Course Development

The final course of action was the design of a methodology for developing and implementing the Blackboard-based course. This process consisted of the following steps, which are described in the sections below:

1. determining of the time frame for the Blackboard course,

2. selecting of a textbook and other appropriate course materials,
3. planning for a field test of the Blackboard course,
4. teaching of the face-to-face course to refine the Blackboard course, and
5. developing assessment and evaluation items.

The first major concern was the issue of the course time frame. The residential (face-to-face) time frame was already set and was a total of eight weeks. This is an intensive on-campus component in which the students are in class four hours a day for ten days over a two-week period. Additional class work, assignments, and projects are completed in the rest of the eight-week period. There is a pre-intensive period and a post-intensive period for a total of eight weeks of actual course time. In contrast, the LU distance courses are on a different time frame. They consist of a pre-course reading period of four weeks, and eight weeks of Blackboard instruction. During the pre-course period, students obtain their books and other materials, read the syllabus, and start reading; however, instructor contact is limited.

The second order of business was the selection of appropriate course materials. This entailed selecting an appropriate textbook that would be flexible enough to fit both delivery systems. At first this seemed to be a rather easy task; however, after gathering several potential textbooks (listed as part of the bibliography) several issues and concerns began to surface. The previous framework for both formats of this course was a sixteen-week time frame.

Course Textbook Selection. **Potential textbooks were screened on the following variables:**

1) *Exercises* – It was desired that the textbook have adequate sample exercises. Exercises needed to be clearly written and to adequately cover the key concepts found in the textbook while moving students toward understanding the "Big Picture" for the course. It was also important that the

exercises could be mastered in a distance format where there was little opportunity to get specific exercise feedback. Thus clarity and relevance of the exercises became a primary concern for the distance format course.

2) *Need for answers* – There was a need for answers to be provided within the textbook. This was a major consideration for two reasons: it was decided that the instructor did not have time to develop the multitude of exercises necessary for such a course and the students would need some sort of feedback on exercises. Not all textbooks provided answers to the exercises, thus causing elimination from further consideration.

3) *Length of text* – The length of the text was another key factor due to the eight-week format of the distance course. At first this seemed to be problematic as most textbooks used for such a course are based on a standard university semester long (or in some cases two semester) time frame. However, viewing texts in terms of fit for an eight week timeframe assisted in the process of making a choice of texts.

4) *Supplemental materials* – This became an important consideration as the limitations due to other variables came into focus. One particular aspect that came to light was the lack of textbooks addressing research methods from a Christian perspective.

5) *Diversity of student population* – The diversity of students found in the LU doctoral program was a necessary consideration when selecting a text.

Upon review of a number of potential texts, it was apparent that Ary, Jacobs, and Razavieh (2002) was a strong candidate based on the following:

1) *Exercises* – The Ary text provided adequate sample exercises which were clearly written and which adequately covered the key concepts in the book. Many of the exercises focused on the preparation of a proposal.
2) *Need for answers* – The Ary text provided answers at the end of each chapter.
3) *Length of text* – The Ary text was of adequate length and could be adapted to the eight week modular format. However, the text was not as detailed on certain topics as we would have liked.
4) *Supplemental materials* – The Ary text was lacking in the depth that most educational researchers would consider appropriate for a doctoral level course. However, this issue was addressed by using a supplemental text called *Annual Editions: Research Methods.* This volume is a compilation of carefully selected current research-based articles. This selection is important for a number of reasons (see annotated bibliography for further details). Another aspect of supplemental materials dealt with the need for materials that would support the Christian perspective. This was partially addressed by use of the website: http://vision.edu/Research/Default.asp. Although limited in scope, this website provides some examples of research conducted from a Christian perspective.
5) *Diversity of student population* – The Ary text is written at a conceptual level that seems to allow for a diverse population that will be completing the course at LU. However, the text does not address research that could be conducted from a Christian perspective.

Planning for a field test of the Blackboard course. The 2005 residential class of the Research Methods Course was used as field test for submitting information into Blackboard for the distance class. By having resident students refer to Blackboard on a daily basis, both in and out of class, the instructor and his colleague received feedback on content clarity. This procedure, while proving to be efficient, also proved to be challenging. Based on this experience, we are in agreement with Smith et al. (2003) regarding the extensive amount of time required to fully develop a distance format class. While much of the course content was already in a previous Blackboard module, a minimum of one hundred hours was spent in redesigning course content to the eight-week format. The instructor and his colleague worked extensively during the two week residential class and continued to work on the course development during the following month.

Teaching of the face-to face course to refine the Blackboard course. The teaching and development experience became frustrating at times due to several issues. One continual problem was making sure crucial elements of interaction, as discussed by Conne-Syrcos, & Syrcos (2003), were included in course design. An attempt at building student interaction into the reading assignments, the module PowerPoint presentations, and the assignments was made. For the face-to-face class, additional student-instructor interactions were added as part of the field test. These included e-mail, online availability of the instructor, and the instructor contribution to content discussion through the Discussion Board module. Student–to-student interaction was accomplished through Blackboard discussion board modules where students were required to read all of the entries and contribute extensively to a minimum of four threaded discussions.

Yet another issue was time to edit the Blackboard options and verify that they had been properly set for student availability. This was particularly important for module quizzes

and the final exam. Updating and correcting became a daily process. The decision to do on-the-spot editing and updating saved hours of work for both the instructor and colleague.

In addition, course redesign from the residential to the distance format was a trade-off of problems for both the instructor and the students. One prominent problem was that of providing a support system for the instructor that allowed adequate time and compensation for the redesigning. A related concern was that student needs were different in the distance format, where the instructor's role is more of a facilitator. The instructor also was drawn into spending class lecture time dealing with Blackboard technical issues. This included dealing with outages, sign on problems, missing links, and other related technological issues.

Finally, even the best-laid plans are sometimes impacted by unanticipated technological glitches. In the development of the research methods course, the final exam did not initially function properly within Blackboard. This seemingly minor problem took two hours to evaluate, solve, and provide assurance that the exam would work properly.

Assessment and Evaluation

Overview. The development and final implementation of any course must include some form of evaluation of the student. For NCATE accredited schools (such as the LU School of Education), there is a required assessment called the Benchmark Assignment with a grading rubric. Thus the assessment of the student for the research methods course at LU consists of three major components: (1) Benchmark assessments of the written proposal, (2) Assessment for concept and content knowledge, and (3) Assessment of writing in the discussion boards. The description and importance to the development process is provided below.

Student Assessment. The student assessments tools and setup were similar for both the resident and distance course. Each module contained a 15-20 question multiple-

choice format Blackboard-based quiz. Quizzes were carefully constructed and used as a teaching tool in the following manner. Students were instructed that the questions for the module quizzes focus on key module concepts presented in the module exercises related to the textbook assigned readings and exercises. Quizzes were scored by Blackboard and the students were given the correct answers via Blackboard. In addition, the quizzes were made available for future study for the final exam. The final exam consisted of a random selection of questions from the eight module quizzes. Each quiz item also contained an explanation as to why a particular stem was the correct response.

Second, students were evaluated on their writing and analytical skills. This occurred in two separate assignments a total of five times (threaded discussions and the dissertation proposal). In addition, evaluation of the writing skills for the dissertation proposal was evaluated. This was accomplished in a specific manner during the grading of the dissertation proposal. The dissertation proposal was considered to be the "Big Picture" element of the course and was assessed as the Benchmark Assignment. The methodology for assessing the Benchmark Assignment was found in the grading rubric (See Appendix B).

Since grading of student writing is considered an essential component of distance education, it seems logical that every avenue for improvement of this assessment mode be explored. The book Automatic Essay Scoring: A Cross-Disciplinary Perspective by Mark Shermis and Jill Burstein is a review of the strengths and weaknesses of several AES systems (Wang, 2005, p. 105).

The student assessment during the developmental and implementation phases of both the residential and distance courses was a major consumer of instructor time. Specifically, a major evaluation/assessment (developmental phase) time related issue that surfaced was the amount of time required to put the quizzes and the final exam into

Blackboard format and to get them into working order. Blackboard issues related to test taking was a frustration for both the students and the instructor.

In particular, during the developmental phase it was discovered that there are no shortcuts to entering quiz and test questions. They must be manually entered one at a time. Blackboard currently does not have capabilities of accepting uploads from work documents and/or scans in the testing module.

Discussion/Conclusions

Our time working with the developmental process for dual delivery of a research methods course proved to be successful. The step-by-step process supplied a reasonable framework that may prove to be useful for other educators facing similar course development issues.

Our experience also shed light on some specific awareness issues for college educators and university administrators. Among these is the inordinate amount of time needed to develop a single distance course. From our perspective it is imperative that college administrators not only become cognizant of this, but also develop policies and plans which take this issue into account, especially if quality of content and design is a priority.

Since the content of the two formats is to be similar due to accreditation regulations, college administrators need to provide adequate resources, training, and time for college faculty and related personnel to deal with these issues. The development of a distance course while teaching in a resident format proved to be both fruitful and useful in meeting some of these challenges. However, adequate funding for graduate assistants and Blackboard experts also needs to be considered as priority.

Our experience also sharpened our thinking and skills related to teaching in a distance format. Attempting to find ways to induce the students into the research culture in a distance format was challenging. This issue can be addressed on a limited basis in a discussion board format; however, further work and advancement are needed in this arena.

Preparing students to write a research proposal (the Big Picture) is a content-rich process that is often presented in methodology textbooks as a cookbook type of task. This portion of the dual format courses lends itself well to both the face-to-face and distance format where a textbook is used. However, we found that there are several related issues that should be addressed. Among these are the lack of immediate feedback that is present in the face-to face resident program but can be lacking in the distance format, the need to provide adequate feedback on written work, and the inordinate amount of time required by the professor provide this feedback .

Regarding immediate feedback, Smith et al. (2003), state that it is important for the instructor to deal with the lack of immediate student feedback in the distance format. In the resident course this may be accomplished through numerous techniques such as many miniature assignments, student questions, and/or instructional activities with peer interaction in the resident course.

We found the threaded discussion to be adequate at least for addressing the immediate feedback issue in the distance format. This tool lends itself well to use in the research course regarding the development of the statement of the problem. Students are able post their particular problem statement and their peers and the professor have an opportunity to react to the posting.

Although the threaded discussion format does not provide immediate feedback it has some positives that are not present in the residential format. First, it allows the professor time to react to the problem statement. This time can be spent wisely and the professor can construct a well thought out reply. This is not always the case in an in-

class impromptu residential setting. Second, the threaded discussion gives a permanent record that can be reviewed and used for study and analysis. Again, this is not the case in the residential setting. Verbal exchanges can be completely forgotten or, at the best, memory-dependent with incomplete recall issues.

One potential solution to some aspects of the time problem may be addressed by use of the Automatic Essay Scoring (AES) system. Further research should be conducted regarding the use of such an assessment tool in relationship to grading the final student written work and discussion boards of the distance course. We suggest that software developers give consideration to developing programs that will assist the educator in the evaluation of discussion boards and other related internet media. Such tools could provide powerful and useful assistance in the development of skilled educational writers.

In conclusion, the overall experience of developing a research methods course in two different formats was found to be fruitful, challenging, and enlightening. One of the most important lessons learned was that such a task is very time consuming, requiring much hard work. We recommend for those who are thinking about tackling such an endeavor to count the cost first, making sure there is adequate time and resources to complete the task in a timely, high quality, and professional manner. After all, students deserve our best efforts.

From our perspective, we encourage all who would embark on the endeavor of distance course development to remember that finishing is better than starting and thus one should be well aware of the time requirements. It is our hope that we have provided some helpful assistance for those who choose to venture into the realm of distance education course development.

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Appendix A
Annotated Bibliography

This annotated bibliography is focused on the usefulness of the citations for the purposes of the "Quantitative and Qualitative Research" course as described in the article. The course described in the article must fit into an 8-week time frame; thus, the length and number of chapters for the textbook were important considerations. Therefore chapter and page numbers (total content pages) are included at the end of each annotation.

1) Agresti, A. & Finlay, B. (1997). *Statistical methods for social science (3rd ed.).* Upper Saddle River, NJ: Prentice Hall.
This is an excellent supplemental text, which broadens the perspective from the educational to the social sciences realm. It is SAS based rather than SPSS. It includes more statistics than methods and thus does not fit well for a more methods-based course.

2) Creswell, J. W. (2005). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research (2nd ed).* Upper Saddle River, NJ: Pearson Education.

3) Denscombe, M. (2003). *The good research guide: For small scale social research projects (2nd ed.).*   Open University Press.
This is an excellent supplement in the social science realm with sections on strategies for social research, methods on social research and analysis. Limited scope to the social research makes it inappropriate for the main text for an educational research methods course. 301 pages/15 chapters.

4) Fraenkel, J. R. & Wallen, N. E. (2006). *How to design and evaluate research in education (6th ed.).* McGraw Hill Higher Education.
This is a well-done textbook with exercises at the end of each chapter and good summaries. Main drawback is the length and number of chapters. Lacked answers to exercises. Coverage of relevant topics was more than adequate. 620 pages/24 chapters.

5) Gall, M. D., Borg, W. R., & Gall, J. P. (1996). *Educational research: An introduction (6th ed.).* NY: Longman.
This is a well-done textbook with exercises at the end of each chapter; however, it lacks chapter summaries. The main drawback is the length and number of chapters. This was the text used at LU in the course when it was in the 16-week format. This text is used in many graduate schools across the country. Coverage of relevant topics was more than adequate. 723 pages/17 chapters.

6) Gay, L. R. & Airasian, P. (2003). *Educational research: competencies for analysis and applications (7th ed.).* Upper Saddle River, NJ: Pearson Education.
The main strength of this text appears to be the explanation of approaches to research with a good explanation of the difference between qualitative and quantitative research.   The organization and flow are also strengths. Weaknesses are found in the student tasks, which often went beyond the material in the chapter and did not match the chapter content. Cost of text with SPSS student version is about $112. Total pages 540.

7) Hunter, J. E. & Schmidt, F. L. (2004). *Methods of meta-analysis: Correcting error and bias in research findings (2nd).* Thousand Oaks: Sage Publications.
This is an important supplemental book for a beginning doctoral research methods course and it contains an important and relevant discussion on problems with statistical significance tests and the importance of the use of confidence intervals in addition to significance tests for peer reviewed published articles. 582 pages/14 chapters.

8) Jalongo, M. R., Grelach, G. J., & Yan, W. (Eds.). (2001-2002). *Annual editions: Research methods.* Guildford, Ct: McGraw-Hill/Dushkin.
This compilation of recent articles on research methods is a valuable text as a supplement to any research methods course. It contains thirty-two carefully selected articles placed into relevant research topics related to methodology. It also contains an important and useful selection of World Wide Web Sites that are an excellent supplement and add value to a research course. These thirty-three websites are divided into the following categories: 1) General Sources, 2) Research, Nature, Purposes, and Basic Concepts, 3) The Researcher /Practitioner: Standards and Ethics of Practice, 4) Research Beginnings: Theoretical Bases and Question Formulation, 5) Research Means: Collecting and Interpreting Data, 6) Research Ways: Categories of and Approaches to Research, 7) Research Ends: Reporting Research, 8) Research Aims: Improving Professional Practice (p. 4-5). These web sites provide the students with an invaluable source of information for the purpose of writing the methodology section of a research proposal.
It also keeps the students abreast of a number of research methods topics, provides the student greater depth on certain topics that are not adequately covered in the Ary textbook, provides the students with a view of methods that is beyond that of the more generic textbook view, prrovides the student with a much broader perspective through multiple authors, and provides the students with a conceptual view of research methodology that gives a traditional view of research methodology courses as taught across the country.

9) Leedy, O. D. & Ormond, J. E. (2005). *Practical research: Planning and Design (8th ed.).* Upper Saddle River, NJ: Pearson Education.

10) Milinki, A. K. (1999). *Cases in qualitative research: Research reports for discussion and evaluation.* Los Angeles: Pyrczak Publishing.

11) Wiseman, D. C. (1999). *Research strategies for education*. Belmont CA: Wadsworth Publishing Company.
This is an interesting text with ample exercises and chapter summaries. One drawback is the copyright date and the fact that there is not a second edition. 506 pages/14 chapters.

Exceptional Graduation Rates for Underrepresented Populations at Virginia Public Universities: Are We There Yet?

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Abstract : As the country's racial and ethnic minority representation increases, colleges and universities must seek ways to diversify their programs to better prepare all students to live and work in a diverse democracy. This article taken from a larger study by the author seeks to consider the relationship between the graduation rates at Virginia public universities and the percentage of students from underrepresented populations (i.e., African-American, Hispanic, Asian, and Native American). Evidence is presented regarding three Virginia institutions, University of Virginia, the College of William and Mary, and Virginia Tech as having higher than average (i.e., 70% - 98%) graduation rates for underrepresented populations. The implication is that these universities provide programs to further underrepresented students' academic success.

Introduction

One of the most pressing issues facing American universities is the number of students who fail to graduate. Nearly twenty percent (20%) of four-year institutions graduates fewer than one-third of its first-time, full-time degree-seeking first-year students within six years (Carey, 2004). Graduation statistics show that approximately 26% of the students who enroll as freshmen do not re-enroll as sophomores (The Chronicle of Higher Education, 2005); furthermore, approximately only 52% of students who entered college actually completed their programs after five years (American College Test [ACT], 2002).

Colleges have spent vast amounts of money setting up programs and services for a variety of groups who will attend their institutions and may be in need of extra services to develop the necessary skills to graduate (Seidman, 2005). In spite of all the programs and services to help retain students, according to the U.S. Department of Commerce, Bureau of the Census Digest of Educational Statistics (2004), only 50% of those who enter higher education actually earn a bachelor's degree. Despite the personal, social, and economic value of a college education, Tinto (1994) notes "more students leave their college or university prior to degree completion than stay" (p.1). Caison (2004) states that as a result of this, state legislatures are concerned that the resources they supply to universities are not used efficiently.

Given the growing importance placed on educational assessment and outcomes by legislators and university administrators alike, it is understandable why policy makers would be concerned about students who fail to complete or who take a long time to complete a bachelor's degree. Some scholars argue whether or not policy makers should be concerned about the individual choices that students make with regard to enrollment decisions (DesJardins, Kin, & Rzonca, 2002). Debrock, Hendricks, and Koenker (2001) argue that students who fail to graduate do so at the consequence of a national economic choice: "each student must determine if the value of completing the degree makes persistence rational in that net returns to persisting are greater than the net returns of dropping out" (p. 520).

This article is extracted from a larger study (Creighton, 2006) which analyzed the student and institutional factors that might be used to predict graduation rates at 63 University Council for Educational Administration (UCEA) public universities. For this article only the following question is considered: Is there a relationship between graduation rates at Virginia public universities and the percentage of students from underrepresented populations (i.e., African-American, Hispanic, Asian, and Native American)?

Significance

As the country's racial/ethnic minority representation increases, colleges and universities must seek ways to diversify their programs to better prepare all students to live and work in a diverse democracy. Flowers (2004) and Lesure-Lester and King (2004) focus on several factors regarding African-American and Hispanic student retention: (a) personal factors, (b) environmental factors, (c) involvement factors, and (d) socio-economic factors.

Most of the previous research conducted on Asian Pacific American (APA) students focused on Chinese, Japanese, and Korean because of their significant number and longer history in the United States (McEwen, Kodama, Alvarez, Lee & Liang, 2002). While Filipino Americans comprise a large percentage of the APA population, they are often left out of the picture; however, these students face similar educational obstacles.

Native American students comprise one percent of the total student population in the United States (Shield, 2004), yet they have the highest dropout rate of any racial or ethnic group exceeding 65% nationally (Shield, 2004). This rate is almost twice that of white students. Of those Native American students who do enroll in college, between 75% and 93% leave before graduation (Pewehardy, 2001).

To investigate any significance between graduation rates at Virginia public universities and the percentage of students from underrepresented populations enrolled, Virginia universities were compared with all universities in the nation having graduation rates of 70% and higher (see Table 1). In the investigation of the relationship between the percentage of minority students enrolled and Virginia university graduation rates, three Virginia universities were shown to have significantly high graduation rates for students from underrepresented populations, ranging from 70% to 98%. This is reflective of the programs in place at these universities that take the needs of these student populations into consideration. Of significant note are the high graduation rates of Virginia Universities in the African American and Hispanic ethnic groups.

Table 1: *Public University Graduation Rates by Race/Ethnicity*

African-American	Hispanic	Asian	Native American
University of Virginia - 87.3%	**College of William and Mary - 98%**	University of Florida - 81.3%	**University of Virginia - 93.4%**
College of William and Mary - 74.6%	**University of Virginia - 94.2%**	Texas A & M University - 79.3%	University of Michigan - 87.4%
University of North Carolina at Chapel Hill - 70.7%	University of North Carolina at Chapel Hill - 77.8%	**Virginia Tech 78.9%**	**College of William and Mary - 86.9%**
University of Florida - 70.7%	Miami University (Ohio) - 77.2%	Miami University (Ohio) - 72.7%	University of Illinois Champaign 85.8%
University of Connecticut - 70.2%	University of Michigan - 76.2%	Auburn University - 72.2%	University of Florida - 82.7%
	Virginia Tech 70.2%	University of Maryland - 70.1%	**Virginia Tech 74.7%**

To determine if all Virginia institutions' graduation rates for these populations were any different than the national average, they were compared with the U.S. Department of Education, National Center for Education Statistics IPEDS, Spring 2004 Data File. Table 2 shows that comparison.

Table 2 : *Graduation Rates of Virginia Institutions and U.S. Average*

Carnegie Class	African-American	Hispanic	Asian	Native American
RU/VH * Activity U.S. Average	51.9	60.0	74.2	46.9
Virginia	46.8	52.5	60.1	45.1
RU/H ** Activity U.S. Average	35.9	39.6	55.3	35.3
Virginia	46.6	50.9	61.2	45.9
Master's L ** U.S. Average	33.7	33.5	43.5	31.3
Virginia	46.0	34.5	38.0	29.1

Very High Research Activity (RU/VH), **High Research Activity (RU/H), and ***Master's Colleges and Universities Larger Programs (Master's L).
Note. U.S. Department of Education, National Center for Education Statistics: Integrated Postsecondary Education Data System (IPEDS). Spring 2004

Implications

As evidenced by the findings identified, the underrepresented populations do not graduate from college at the same rate as the majority population (U. S. Department of Education, National center for Education Statistics, 2004). However, there are 12 public institutions that experienced graduation rates for these underrepresented populations ranging between 70% and 98%. Other researchers (Agboo, 2001; Flowers, 2004; Hernandez, 2000; Hurtado, 2000; Nora, 2001) name numerous factors: (a) environmental factors (i.e., racial climate, presence of an ethnic community, and working and living off campus); (b) involvement factors (i.e., faculty-student interaction, mentorship, participation in student organizations); and (c) social-cultural factors (i.e., immigrant status, ethnic identity development, community orientation) as implications for the low graduation rates of these underrepresented populations. Furthermore, many of the students may not speak English as their primary language and struggle with language issues resulting in the need for remediation courses. As earlier research indicates (Kerr, 2001), many minority students experience academic difficulties because of their language barrier. The college environment may be alienating for these students and placing them at risk of dropping out. The implication here is that the three Virginia institutions having higher than average (i.e., 70% - 98%) graduation rates for underrepresented populations may have programs in place to further their academic success. Perhaps they show a high regard for diversity and foster a college climate of genuine concern regarding the possible effects that anticipatory stress could have on the interaction of minority students. In addition, it is possible that the faculty and student affairs professionals are acutely aware of the varied effects that ethnic group membership have on the social encounters of these students and exert collaborative effort to actively address issues related to the social experiences of racial-ethnic group members.

These findings also have implications for the counseling of minority students. The counseling programs at the 12 public institutions cited as having high graduation rates for these students may have programs in place that help foster students' self-efficacy. These schools may also have professional counselors or graduate student advisers available to assess and evaluate students' academic and personal needs. Taking physical, economic, social, and cultural environments into consideration, counseling staff members may work to involve students in academic and extracurricular activities that integrate them into the campus community and promote personal well being and success. These programs help and encourage students to maintain respective cultural values and simultaneously employ strategies to eliminate negative messages possibly perpetuated by the dominant society.

Graduation rates reveal more about what happens to students at the point of departure and much less is revealed about what happens to them along the way. More specifically, little is known about a student's relationship with faculty. Recent research (Nettles &

Millett, 2006) indicate that a mentoring relationship with a faculty member positively affects progress toward a degree. In their book *Three Magic Letters: Getting to Ph.D.*, Nettles and Millett report that their survey of 9,000 students from 21 doctoral-degree granting universities indicated 70% of successful doctoral students have a mentor. More importantly, a distinction is made between a mentor and an advisor. An advisor is a person who is typically assigned to a department to meet with the students, give them advice regarding courses to take, and listen to their academic concerns. On the other hand, a mentor is someone the student seeks to emulate and someone who facilitates a student's personal, social, attitudinal, and academic adjustment to the university (Nettles & Millett, 2006; Santos & Reigadas, 2004). A strong recommendation is made here for university administrators and policy makers to extend the use of mentoring to undergraduate students. At the University of Virginia, a structured and intensive peer advisor program exists for incoming minority students (Olson, 2006). Throughout the first year, the program sponsors on-campus activities including meals, weekly study sessions and celebrations of milestones such as completing the first semester. It includes personal touches like birthday cards and handwritten notes of congratulations for good grades. After the first semester, students can choose to be mentored by a faculty member. The role of advisor is important, but universities must consider the powerful effect of authentic mentoring, especially in light of the dismal graduation rates at some universities.

Summary

The retention of college students of underrepresented populations is complex and encompasses not only such issues as academic preparation but also commitment, belonging, and perseverance. Institutions of higher learning must be aware of the positive and negative commonalities shared by these students and consider the degree to which these factors can predict their graduation rates. As reported here, there are indeed Virginia institutions that maintain exemplary programs to address the needs of students from underrepresented populations. A strong recommendation is made for administrators and policy makers at all universities to utilize substantive mentoring processes with students from underrepresented populations at their institutions. Obviously, there are not enough faculty members to assign as mentors to each and every student, but not to investigate alternative uses of mentors is educationally and ethically irresponsible.

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