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Contents

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

Rebecca K. Fox, Julie K. Kidd, Diane D. Painter and Gail V. Ritchie

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

Steve Deckard and Abreena Tompkins

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' 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.

*Program Learning Outcomes:
NBPTS + GMU Principles*

- | | | | | | | |
|--|---|---|--------------------------------------|--|--|--|
| <ol style="list-style-type: none"> 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 |  | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center; padding: 5px;">I. Professional Documentation</td> </tr> <tr> <td style="padding: 5px;"> <p><i>II. ASTL Core (12 credits)</i></p> <p>A. Teacher as Knowing & Understanding Learning & Learners: EDUC 613 & 612. Reflection Point 1.
(Principles 1, 3, & 5)</p> <p>B. Teacher as Designer of Curriculum & Assessment:
EDUC 614. Reflection Point 2
(Principles 2 & 3)</p> <p>C. Teacher as) Researcher with Cultural Perspective:
EDUC 612 & 606. Reflection Point 3.
(Principles 1, 4, 5, & 6)</p> <p>D. Teacher as Change Agent: EDUC 615.
Reflection Point 4.
(Principle 7)</p> <p>E. Reflection Point 5: Integration of Technology
(Principle 8)</p> <p>F. Synthesis Reflection: Connections and</p> <p>G. Reflections on the Core Courses and their Relationships to the NBPTS & GSE Program Principles</p> </td> </tr> <tr> <td style="padding: 5px;"> <p><i>III. ASTL Emphasis Area (18 credits)</i>
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*IV. Portfolio Presentation:
Synthesizing Knowledge and Looking Ahead*

*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)

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

Steve Deckard, Liberty University
and
Abreena Tompkins, Surry Community College

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.

- 3) 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.

- 4) 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.

- 5) 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.

6) 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.

7) Jalongo, M. R., Grelach, G. J., & Yan, W. (Eds.). (2001-2002). *Annual editions: Research methods*. Guilford, 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, provides 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.

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

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

10) 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.

Appendix B

Grading Rubric for Benchmark Assignment

The grading rubric listed below will be used to assess the Benchmark assignment. The student is encouraged to look carefully at the rubric in an effort to ascertain the important components of the assessment. The “Benchmark Assignment” is the Writing of a Research Proposal. The most likely type of proposal is “quantitative” and should be developed from the readings and understanding of the course material.

For the Quantitative study the following items are required and rated. All six elements with the subtopics must be present. Each bold item will be rated on the following scale:

a. Excellent b. Average c. Below Average d. Not Acceptable

Note the following:

Each of the six element categories are valued at 20 points. The point scale is found in the syllabus.

- Two or more “not acceptable” ratings require a rewrite. This will require a student extension on the class.
- Two or more “below average” ratings indicate that the student would have a difficult time getting this particular proposal to pass successfully through a committee.
- The review of literature is rated on the second rubric.
- The entire paper is rated on the second rubric in terms of grammar and APA style.

A literature review is conducted by reviewing current journal articles, books, and Internet sources related to a particular topic. The Doctoral level review of literature (for a proposal) should contain all of the elements of *Bloom's Taxonomy*. There should be ample evidence of synthesis, analysis, and evaluation along with a clear demonstration of understanding of the process involved in the preparation and production of the literature review. Also the entire proposal must demonstrate the understanding that it is more than the standard undergraduate or graduate research paper.

APA Format

Samples related to the APA format are found in the *course documents* section of Blackboard. There are many examples given there. A few things to note would be:

1. The list of references at the end of the document is titled “References.”
2. In a reference list underlining is not used.
3. The words in the titles of a journal article or a book are not capitalized (except for the first word, proper nouns, and the first word following a colon).
4. In-text citations are necessary and the APA format followed. An in text citation must have a corresponding reference in the reference list. Thus do not give a reference in the reference list at the end of the paper unless it contains a corresponding in-text citation.
5. APA format is required in all SOE graduate courses.

An essential checklist for graduate level writing projects

Ask yourself the following questions:

- Did you use topical headings? These should come from your notes or outline developed before you begin writing. An outline is essential. I do not need to see it, however you need to do it.
- Does all that is written under each topical heading pertain to the topic?
- Does each sentence in each paragraph relate to the topic sentence of the paragraph?
- Do all sentences connect smoothly? Disjointed sentences are bad news.
- Did you check grammar and spelling? Misspelled words lower your grade.
- Did you proofread your paper?
- Did you have someone else read your paper before submission?
- Do all of the reference list and the in text citations match?
- Did you follow the APA style for title page, table of contents and abstract?
- Did you write with clarity? Short sentences that connect to one another are best.
- Did you avoid jargon?
- Did you use Bloom's Taxonomy and develop the higher levels of thinking within the paper?
- Did you adequately answer your question (or problem) that you set out to answer or solve?
- Did you turn your topic into a question of some sort to use as a guide?
- Does all that you wrote relate to the topic (question)? Digressions and filler are bad news.
- Did you check your sentences? There should not be any run-on or awkward sentences. Graduate students are expected to write with clarity and correct grammar.
- Did you check for correct paragraphing?

Evidence of useage of Blooms's higher levels in the review of literature	<i>Synthesis</i>	<i>Analysis</i>	<i>Evaluation</i>	<i>Grading indicator used to indicate an issue in the paper</i>	<i>Element # in rubric 1B</i>
	Synthesis of the major concepts related to topic is evident	Analysis of the topic under consideration is evident	Evaluation of the topic is evident		1B
	Synthesis of the major concept is not evident	Analysis of the topic under consideration is not evident	Evaluation of the topic is not evident		1B
APA format references	References are labeled correctly	References are not labeled correctly			6
Reference format	All references show use of correct capitalization	All references do not show correct usage of capitalization			6
Reference form	All references show APA form	All references do not show APA form			6
In text citations	All in text citations use APA style	All in text citations do not use APA style			All
In text citations and references correspond	For every in text citation there is a reference	For every in text citation there is not a reference			All
Grammar usage	No problems	1-2 problems	3 or more	GU	All
Topical headings	Present	Absent		NTH	All
Topical headings used as guides for writing	Present	Absent		THNUG	All
Spelling	No words misspelled	1-2 misspelled	3 or more	S	All
Paragraphing	Proper paragraphing used	Proper paragraphing not used		PPNU	All
Jargon	No jargon present	Jargon present		J	All
Filler	No filler	Filler used		F	All
Sentence structure and sentence connection	No sentence structure problems	1-2 sentence structure problems	3 or more sentence structure problems	SS	All