1-1-2007

A Case Study of the Effectiveness of the University of Pittsburgh at Bradford's Teacher Education Program

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A CASE STUDY OF THE EFFECTIVENESS OF THE UNIVERSITY OF PITTSBURGH AT BRADFORD'S TEACHER EDUCATION PROGRAM

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Dissertation submitted to the Faculty of the
Marshall University Graduate College
in partial fulfillment of the
requirements for the degree of

Doctor of Education
in
Curriculum and Instruction

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Huntington, West Virginia, 2007

Keywords: Effective teacher education programs, teacher education program review

ABSTRACT

A Case Study of the Effectiveness of the University of Pittsburgh at Bradford's Teacher Education Program

The purpose of this study was to determine how well the University of Pittsburgh at Bradford's education program prepared teacher candidates in 14 domains identified through literature as essential components in an effective teacher education program. The results of this mixed-methods study will be used for future curriculum development and program alignment as well as supplement current forms of program evaluation.

Qualitative information was collected through interviews of key participants in the development and growth of the education program at Pitt-Bradford. In addition, an intensive study was completed on artifacts and documents such as newspaper clippings, books published on local historic events, and the University magazine, *Portraits*. Quantitative data collection was obtained through survey responses based on 14 domains identified as essential components of effective teacher education programs. The research questions asked program completers to rate the level of importance and their level of preparedness on each of the 14 domains.

Results indicated that Pitt-Bradford program completers agreed with the literature on the importance of the 14 domains necessary for an effective teacher education program. The study also indicated that Pitt-Bradford's teacher education program only moderately prepares teacher education candidates. The ancillary data analysis did, however, indicate that program completers from 2003 or later rated their degree of preparedness at higher levels. This difference indicates that recent program changes have been effective in improving overall quality of the program.

DEDICATION

There are many people who provided encouragement, assistance, and the occasional much needed shove which ultimately led to the completion of this dissertation. Without the support of my family, friends, and colleagues I would never have been able to bring this lifetime dream to fruition.

First, I would like to thank my family. I want to express my appreciation for your understanding through all those years when I had to miss family events or failed to take the time I should to call or visit. Thank you for your tolerance. I am truly blessed with a wonderful family.

Second, I would like to thank two special friends. To Mary, a virtual stranger at the time, you took me under your wing and served as the propulsion which saw me through this endeavor. On numerous occasions when I know you had other things you wanted or needed to do, you always made time to help. To Bernie, one of my first friends at Pitt-Bradford, you stopped to check on me the first day on campus, and you have been there for me ever since. Thank you for all the time, and pep talks, you invested to assist in completion of this project. Mary and Bernie, you are both much more than colleagues, you are true friends indeed!

And last, to my best friend and confidante, Andy. Sometimes you were walking beside me and sometimes behind me pushing. You always seemed to know when to let me work and when to make me lay it down and take a break. Your patience, intuition, and persistence kept me trudging forward when all I really wanted to do was walk away. Thank you for not allowing me to do that!

ACKNOWLEDGEMENTS

I want to acknowledge Dr. Rudy Pauley, Chair, for his unlimited patience and unending belief in me. His faith in my ability provided the impetus through times when I had lost all faith in myself. I also wish to acknowledge the work of my other committee members, Dr. Teresa Eagle, Dr. Lisa Heaton, and Dr. Jody Burgert. Dr. Eagle was my first contact at Marshall. She helped get me started in the Doctorate program and has been with me until the end. Her guidance, suggestions, and unwavering support will never be forgotten. Dr. Heaton has been in inspiration to me. Her calm demeanor and steadfast patience was a blessing when life seemed nothing but chaos. Dr. Burgert provided my first opportunity to teach in higher education. She allowed me to become part of the Pitt-Bradford family even though at the time I was inexperienced and unproven. Thank you for that opportunity. Finally, I want to acknowledge my many friends and colleagues at Pitt-Bradford, but especially Mrs. Marietta Frank, Mr. James Baldwin, and Mrs. Betsy Matz who gave freely of their time and energy to help gather data, locate resources, or provide other assistance in myriad ways.

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CHAPTER ONE: A RATIONALE FOR THE STUDY

Introduction

Those who educate children well are more to be honored than they who produce them; for these only gave them life, those the art of living well.

Aristotle

A teacher's ability to touch the future is metaphorically woven through the very fabric of his or her being. Teachers bear upon their shoulders a responsibility to prepare the next generation of this nation's citizens. Through modeling and direct instruction, teachers provide children the cognitive, social, emotional, and behavioral tools which enable them to become competent, caring, and contributing members of society. The lives that a teacher touches over the course of his or her career are many and the influence a teacher can have on his or her students is profound. Based on this knowledge and understanding of the important function of educators, the preparation of teachers is of utmost importance to our society as a whole (Ambe, 2006; Bruning, 2006; Darling-Hammond, & Baratz-Snowden, 2005; Murphy, Delli, & Edwards, 2004; National Council for Accreditation of Teacher Education, n.d.; Wise & Leibrand, 2000).

Colleges and universities have the ongoing challenge of assuring their programs of study provide the necessary components to generate well prepared teacher candidates. The creation and implementation of national and state level teaching standards provide a framework upon which teacher education departments can build their curriculum. However, it is the responsibility of higher education entities to interpret the standards and employ them in the creation and delivery of their programs. Within this process of analyzing and applying the standards, there is an opportunity for great variance in

interpretation. Therefore, the onus falls on individual education departments to further identify, through empirical research, characteristics of effective education programs and subsequently build their curriculum on the foundation of these best practices (Cochran-Smith, 2006; Comer & Maholmes, 1999; Dean, Lauer, & Urquhart, 2005; Scannell, n.d.).

Significance of Training Good Teachers

Efforts to increase teachers' proficiency and efficacy is a critical component in making necessary changes to the American education system (; Bruning, 2006; Darling-Hammond & Baratz-Snowden, 2005). In addition, there has been an enormous amount of public attention recently focused on teacher quality and preparation (Cochran-Smith, 2006). The general conclusion is that for there to be a change in K-12 students, there must be a change in those who teach those students. Therefore, a variety of reforms have been enacted to create more rigorous preparation programs for teacher candidates.

Preparation of outstanding teachers is an ongoing challenge for teacher education programs, accrediting bodies and policymakers. The preparation of excellent teachers is an integral part of an evolution targeting and responding to academic and other needs of American K-12 students (Cochran-Smith, 2006; Comer & Maholmes, 1999; Dean, Lauer, & Urquhar, 2005; Scannell, n.d.).

History of Education Program Development

When public school education first came into being in the form of normal schools in the 1800s, there were very few qualifications necessary to be dubbed "teacher." In fact, according to Sclan and Darling-Hammond (1992) teachers only knew slightly more than the students they were teaching. At that time, however, the education that was

provided to students was considered adequate because society was not in need of highly qualified workers; the teaching of basic skills was sufficient.

The belief that teachers were meeting the needs of students through the processes they were employing continued through the early 1900s. Schools were organized around factory models with the primary purpose being to process students through a set of education experiences. During the beginning of the 20th century, little investment was made in teacher preparation under the pretext that teachers were "…semi-skilled workers who needed only to follow the curriculum guides" (Darling-Hammond, Griffin, & Wise, 1992, p. 15). It eventually became apparent that these outdated notions about teaching no longer served the needs of a changing society. It also became apparent that higher levels of expectations were needed to produce qualified teachers. Thus, undergraduate schools of education began to develop and implement required certification programs for their teachers. Despite the concerns expressed by society, policymakers' focus on teacher education was on the decline during the mid 20th century as pressure was exerted to fill vacant positions and because those teachers that were being produced appeared to be adequate for current needs (Wise & Leibrand, 2000).

In 1983, *A Nation at Risk* was published and the ramifications of that report set into motion an age of reform that had far reaching influence on education policy. Thus the standards movement was born. Since the publication of *A Nation at Risk*, there have been over 300 reports on the need for teacher education reform (DiObilda, Bolay, Foster, & Addison, 2001).

As a result of *A Nation at Risk* and a call for accountability in higher education from both the public and teacher practitioners, beginning in the 1980s a restructuring of

teacher education programs resulted in the production of teachers who were able to do more than just employ certain techniques (Pettus & Smith, 2001). Teacher training programs began to implement changes resulting in the creation of teacher candidates who could utilize various pedagogical strategies, solve problems, and address a plethora of needs from a diverse student body (Darling-Hammond & Baratz-Snowden, 2005).

Despite attempts to improve education, student test scores on national and international tests continued to decline (Wise & Leibrand, 2000). The new agenda for policymakers was an earnest focus on how to improve student achievement. Policymakers looked for evidence that teaching does make a difference and the proof lay in student achievement scores. With a direct correlation between teacher training and student achievement now evident, policymakers passed legislation and regulations that addressed teacher accountability. The Higher Education Acts of 1998 introduced new accountability measures in teacher preparation (Wise & Leibrand, 2000).

Until the last two decades, defining a "good" teacher education program was not a simple task. There were few guidelines on what content should be included and how candidate learning and performance could be evaluated. Raising voices of concern over perceived unprepared or poorly prepared teachers has, in turn, resulted in governmental bodies and policymakers passing legislation such as *Goals 2000* and the *No Child Left Behind Act*. The agendas of these educational policies established specific goals, standards, and requirements for candidates in teacher education programs (Darling-Hammond & Baratz-Snowden, 2005).

The National Council for Accreditation of Teacher Education (NCATE) was founded in 1954 as the brainchild of five primary groups: the American Association of

Colleges for Teacher Education (AACTE), the National Association of State Directors of Teacher Education and Certification (NASDTEC), the National Education Association (NEA), the Council of Chief State School Officers (CCSSO), and the National School Boards Association (NSBA). These groups were a sample of experts in the field of education and they acknowledged the necessity for an independent and standardized quality assurance device in teacher education. NCATE is one of two organizations which accredits schools, colleges and departments of education that provide professional training for teachers (National Council for Accreditation of Teacher Education, n.d.).

The Association for Childhood Education International (ACEI) became an affiliate of NCATE in 1990. Within NCATE, ACEI is responsible for the review process for institutions seeking national accreditation in elementary education. ACEI represents teachers, teacher educators, policymakers and school specialists. The overarching goal of ACEI is to set national standards that help assure quality and credibility in elementary teacher preparation programs (Association for Childhood Education International, n.d.).

In a timeline encompassing the dates from 1996 to 2001, ACEI and NCATE developed and implemented performance-based standards for elementary program accreditation review and approval. ACEI served as the guiding agency which piloted performance standards for elementary teacher preparation programs. The concept was that performance information describing elementary teacher candidate knowledge and ability to teach would become the basis for decisions on the quality of elementary teacher preparation programs (Association for Childhood Education International Website, n.d.). To accomplish its mission, NCATE endeavored to link teacher preparation standards with state education program standards as well as standardized certification testing.

Once standards were established, the duties of teacher education programs became clearer. First, it is the responsibility of schools of education to furnish their teacher candidates with tools that will enable them to perform their teaching duties. For graduates to be successful, they must be equipped with expertise in providing skillful instruction, the ability to provide relevant and engaging curriculum, the knowledge base of different types and purposes of assessment, and proficiency in traversing the various paths of professionalism.

Second, teacher education programs need to assure that candidates are supplied with continuous opportunities to become better teachers and more knowledgeable of best practices. Programs should assist teacher candidates in understanding proper pedagogical techniques such as how to engage K-12 students in learning over extended periods of time. Problem solving skills and inquiry learning should be part of the curriculum in an effort to provide teacher candidates with tools to develop these same skills within their students.

Furthermore, teacher education programs must more fully address issues of professionalism. Darling-Hammond, Griffin, and Wise (1992) defined professional behavior as "…being considerate of others, adhering to rules of confidentiality, being punctual, and demonstrating other such conventions of commonly accepted civility" (p. 37). Finally, teacher candidates must be provided with early and sustained experiences which allow them to see the problems and issues that arise in teaching which can have a negative effect upon instruction. Good teacher education programs will provide students with tools to effectively deal with these issues and overcome the obstacles.

The beginning of the 21st century was greeted by the standards movement, which by then was well under way. The standards movement led to the next big question in education reform: how to determine whether education departments were meeting these newly established standards. As DiObilda, et al. (2001) pointed out, teacher educators are concerned with both accountability and evaluation of teacher education programs.

> Program evaluation that is premeditated and systematic offers the greatest opportunity for determining the worth of the program's products and its working components. A systematic program of evaluation can be both formative and summative. It can help determine how well a program prepares teachers while examining those constituent elements of the program perceived as contributing to the development of teachers. (p. 52)

DiObilda et al. (2001) also suggested that for many programs, there is already a type of evaluation system in place oftentimes overseen by state level departments of education. These types of evaluations can be problematic, however. Just as standards were often a disjointed jumble of expectations, different departments of education have varying interpretations of what constitutes an effective teacher education program; therefore, education program evaluations could be equally dysfunctional.

According to Darling-Hammond (1999a), rather than concentrating on what is actually learned, a state department of education spends more time evaluating the learning environment in which teacher candidates are immersed. Darling-Hammond (1999a) also argued that state department approval programs are often disconnected from current best practices in education and that budgetary constraints prevent them from performing the level of program evaluation that would assure high quality programs. "In

state departments with few resources, reviews of programs are infrequent and perfunctory, revealing little about the quality of experience provided by the institution. For example, teacher education programs in some states have been approved for more than fifteen years without any active external review" (Darling-Hammond, 1999a, p. 239).

Statement of the Problem

The success of America's students lies in the hands of their teachers. The success of teachers lies in the hands of the schools of education that train them. The duty of all schools of education is to provide a program from which teacher candidates graduate fully prepared with the instructional knowledge, pedagogical techniques, and guidelines for professionalism necessary to be successful and effective teachers.

In its quest for quality in an era of accountability, it was essential that the University of Pittsburgh at Bradford's education program undergo an evaluation to determine its effectiveness in preparing teacher education candidates. The responsibility for meeting federal standards for elementary and secondary students should not occur only in the K-12 classrooms, but also in the classrooms where teachers are trained. There is a demand for reform that necessitates accountability at all levels.

Thus, it was vital that the Pitt-Bradford education program perform a program evaluation to determine if it is providing teacher candidates with the knowledge, skills and dispositions necessary to be highly qualified teachers. This evaluation was used to supplement and enhance the current two methods of evaluation: the Pennsylvania Department of Education review and the Title II annual report. A thorough investigation of the perceived level of preparedness and degree of importance of the instruction,

curriculum and professional skills taught through the Pitt-Bradford coursework was used to guide improvements in teacher candidate preparation based on gathering of feedback from program completers.

Research Questions

It was the goal of this case study to measure how well the University of Pittsburgh at Bradford's (Pitt-Bradford's) education program content addresses the elements of a quality education program. Qualitative data will be collected through interviews of key participants in the development and growth of the education program at Pitt-Bradford. In addition, an intensive study was completed on artifacts and documents such as newspaper clippings, books published on local historic events, and the University magazine, *Portraits*.

Quantitative data was gathered through completers' reports on perceived value of the content of Pitt-Bradford's education program in the areas of curriculum, instruction, and professionalism. In addition, completers rated how well prepared they were for real-world teaching by the content of the Pitt-Bradford teacher education program. Completers are identified as anyone who graduated with an undergraduate degree or finished the course of study in preparation for teacher certification.

To explore this research goal, the following questions were investigated:

1) How do Pitt-Bradford teacher education completers rate the importance of instruction?
2) How do Pitt-Bradford teacher education completers rate their level of preparedness in the area of instruction?

3) How do Pitt-Bradford teacher education completers rate the importance of curriculum?

4) How do Pitt-Bradford teacher education completers rate their level of preparedness in the area of curriculum?

5) How do Pitt-Bradford teacher education completers rate the importance of professionalism?

6) How do Pitt-Bradford teacher education completers rate their level of preparedness in the area of professionalism?

Operational Definitions

Importance of curriculum – The respondent's score on the *Armstrong Survey for Teacher Program Effectiveness* rating the perceived degree of importance in the areas of design, content, pedagogy, and field based experiences.

Preparedness in curriculum – The respondent's score on the *Armstrong Survey for Teacher Program Effectiveness* rating the level of preparedness in the areas of design, content, pedagogy, and field based experiences.

Importance of instruction – The respondent's score on the *Armstrong Survey for Teacher Program Effectiveness* rating the perceived degree of importance in the areas of classroom management, motivation and engagement, diverse learners, child growth and development, technology, and assessment.

Preparedness in instruction – The respondent's score on the *Armstrong Survey for Teacher Program Effectiveness* rating the level of preparedness in the areas of classroom management, motivation and engagement, diverse learners, child growth and development, technology, and assessment.

Importance of professionalism - The respondent's score on the *Armstrong Survey for Teacher Program Effectiveness* rating the perceived degree of importance in the areas of collaboration, continuing professional development, and resources.

Preparedness in professionalism - The respondent's score on the *Armstrong Survey for Teacher Program Effectiveness* rating the level of preparedness in the areas of collaboration, continuing professional development, and resources.

Significance of the Study

According to Dean, Lauer, and Urgquhart (2005), for teacher education programs to strive for improvement, they must continuously monitor and evaluate their effectiveness. The purpose of this case study was to perform a comprehensive investigation of the effectiveness of the University of Pittsburgh at Bradford's (Pitt-Bradford's) teacher education program. The history of the Pitt-Bradford teacher education program was explored through interviews of individuals involved with program development and implementation as well as an intensive study of artifacts and documents such as newspaper clippings, books published on local historic events, and the University of Pittsburgh magazine, *Portraits*. In addition, the study obtained specific feedback from completers of the Pitt-Bradford program on their perceptions of the importance of instruction, curriculum, and professionalism in a teacher preparation curriculum as well as their beliefs about their preparation in these areas.

Analysis of the information gathered in this study established instrumentation and a method for self-examination of teacher education programs using teacher education completers' reports. The study informed the Pitt-Bradford teacher education program administrators of the candidates' perceived strengths and weaknesses of program content.

This investigative method was used as the foundation for future Pitt-Bradford program curriculum alignment. In addition, the survey results were used as part of the performance evidence for state recertification of the program by the pending Pennsylvania Department of Education review.

This case study contributed to the body of teacher education program research in the following three ways. First, the study measured and reported perceptions of what constitutes an effective elementary and secondary education teacher preparation program serving to add to the information available in the educational research and practitioner arena. Second, the study created an empirical foundation that is a strong basis for future exploration and expansion. And third, the study identified areas of strength and weakness in the Pitt-Bradford's teacher education program offerings. This information contributed to a process of curriculum alignment and investigation of national accreditation that will be shared with peer schools (small, rural, state institutions, Pennsylvania schools, etc.) as well as practitioner conferences for audiences also exploring curriculum alignment and national accreditation (e.g. ACEI).

Limitations of the Study

All participants are products of the same program, at a small, rural, university with a large percentage of non-traditional students. Therefore, the results were not generalizable to all teacher education programs. Additionally, the reports were, for the most part, from teachers who were currently working in small, rural public schools; therefore, their perception of program preparedness may not be all encompassing (Bogdan & Biklen, 2003).

The study instrumentation was new and researcher designed. Its validity and reliability was presented within the scope of this research investigation. However, the instrument was self-report and by its nature holds the potential risk of subjects reporting to the researcher what they believe the researcher wants to hear.

Another limitation is that Saint Bonaventure University and the University of Pittsburgh at Oakland were responsible for the elementary and secondary education programs prior to 2003. Therefore, completers who finished the program before 2003 answered questions about program components created and provided by other institutions.

The final limitation was the population size. Due to the nature of the program and the years the program has been in operation, this study necessarily maximized participation of all potential subjects. As in other investigations of this nature, an attempt was made to collect data from every member of the population (Gay, 1996). It was anticipated that the number of those responding will provide an adequate statistical measure, accurately reflecting respondent opinions and also justifying the study instrument.

CHAPTER TWO: A REVIEW OF THE LITERATURE

Introduction

"I touch the future, I teach"

Christa McAuliffe

Children are dependent upon those who teach them; teachers are dependent upon those who train them. Thus, colleges and universities offering teacher education programs have the ongoing challenge of assuring their programs provide the necessary components to create well prepared teachers. Darling-Hammond, Griffin and Wise (1992) pointed out that teacher preparation programs need to incorporate more intensive and extensive exposure to knowledge about teaching, learning, and the social milieu of education, along with more opportunities to learn to apply that knowledge under supervision and guided practice.

It is imperative that schools of education constantly monitor the expectations and responsibilities placed on classroom teachers, then subsequently examine their teacher education programs to assure the curriculum provided is designed to address those needs. Higher education educators must keep abreast of changing school climates and expectations placed on teachers. This will enable educators to alter education programs resulting in the development of teacher candidates equipped with the knowledge and ability to adapt to these climates and become effective teachers. Teacher education program content must have three fully developed emphases: a) instruction including classroom management, motivation and engagement, diverse learners, child growth and development, technology, and assessment, b) curriculum including design, content, pedagogy, and field based experiences, and c) professionalism including collaboration

and continuing professional growth (Calderhead & Robson, 1991; Comer & Maholmes, 1999; Darling-Hammond, 1999a; Darling-Hammond et al., 2005; Darling-Hammond & Baratz-Snowden, 2005; Darling-Hammond, Griffin & Wise, 1992; Darling-Hammond, Hudson, & Kirby, 1989; Darling-Hammond, Wise, & Kline, 1999; Fajet, Bello, Leftwich, Mesler, & Shaver, 2005; Jacobs, 2001; Karweit & Slavin, 1981; Minor, Onquegbuzie, Witcher, & James, 2002; Murphy, Delli, & Edwards, 2004; Ryan & Cooper, 2007; Shulman, 2000; Wise, 1990; Wise & Leibrand, 2000).

In an effort to standardize education programs, organizations such as the National Council for Accreditation of Teacher Education (NCATE) and the National Commission on Teaching and America's Future were created. These entities work toward providing interpretations and input into teacher education program development as well as assuring program continuity and quality through the creation of standards which teacher education programs must employ in order to be nationally accredited. The role of these types of organizations can be summed up by the following goal set by the National Commission on Teaching and America's Future Together, "…every child should have the right to be taught by a caring, competent, and qualified teacher, …and every teacher should enjoy the right to high-quality preparation" (Darling-Hammond, 1999a, p. 223).

These national teaching standards have provided a framework upon which teacher education departments can build their programs. However, interpretation and implementation of these standards, as well as quality control and candidate performance monitoring, falls to the individual teacher education program. In many instances teacher education schools turn to their own state departments of education to assist in the translation, program development, and candidate performance assessment processes.

While the national teacher education program standards continue to undergo changes in the expectations and program report requirements, each teacher education program is similarly tasked to implement, assess, and continually revise its program in order to ensure optimal program content and teacher preparedness. It is the responsibility of every school of education to ensure that it is preparing good teachers.

It is the goal of this case study to perform a comprehensive investigation of the effectiveness of the University of Pittsburgh at Bradford's (Pitt-Bradford) teacher education program. The history of the development, implementation, and growth of the teacher education program will be explored through an intensive study of artifacts and documents such as newspaper clippings, books published on local historic events, and the University magazine, *Portraits*. In addition, the study will obtain specific feedback from completers on their perceptions of degree of importance and level of preparedness provided by the Pitt-Bradford education program content in the areas of instruction, curriculum, and professionalism.

Overview of Challenges

There has been much criticism of schools of education in the past few decades as being ineffective in preparing teachers for the workplace and static even when there is an obvious need for change. According to the National Commission on Teaching and America's Future (1996) the recurrent complaints voiced about teacher education programs are categorized into five distinct problem areas: a) inadequate time, b) fragmentation, c) uninspired teaching methods, d) superficial curriculum, and e) traditional views of schooling.

The National Board for Professional Teaching Standards (NBPTS), through the work of committees of expert teachers in each field, has identified the common core of teaching knowledge. This collaborative effort has resulted in the identification of universal elements that are a type of measuring stick which is used in determining best classroom practices. Other organizations such as the National Commission on Teaching and America's Future, the Interstate New Teacher Assessment and Support Consortium (INTASC), and the National Council for Accreditation of Teacher Education (NCATE) have also provided evidence of characteristics of successful teacher education programs. Different organizations approach the identification of what teacher educators should know and be able to do from dissimilar perspectives. However, the overarching goal of each entity is to train teachers to assess student understanding, determine individual learning styles and intelligences, identify strengths and areas of need, and then create learning opportunities that are attentive to the learner.

As a direct result of criticism of current practices and standards based movements, myriad schools of education are reviewing their curriculum and procedures, redesigning coursework, and increasing field placement opportunities as part of the reformation process. To do this, teacher education programs must undergo, in some cases, radical changes to create programs based on best practices.

What are best practices in teacher education programs? Wise and Leibrand (2000) maintained that effective teacher education programs are generally comprised of at least three key components: a) consideration of educational goals and purposes in general and within content areas, including review of national or state learning and teaching standards and practice with how to embody them in curriculum; b) learning

about instructional design, including guided practice in developing, implementing, and reflecting on and revising curriculum plans; and c) review and evaluation of curriculum plans and materials from the perspectives of instructional design, evaluation of the implementation of others' curriculum efforts, and study of research on curriculum and its implementation.

Although generalizations of program components such as those identified by Wise and Leibrand (2000) are useful in the framework of program development, an education department must also identify specific practices which lead to the cultivation of good teacher educators and build those specifics into the program of study. Darling-Hammond & Baratz-Snowden, 2005) described the qualities of a good teacher education program as follows:

> Teacher education programs should demonstrate how they ensure that their teacher candidates know their subjects well and how to teach them, understand how children learn and develop, understand their own language and culture and how to learn about others, know how to develop a curriculum and learning activities that connect what they know about their students to what the students need to learn, know how to teach specific subject matter in ways that are accessible to a diverse range of students, know how to develop and use assessments that measure learning standards and how to use the results to plan teaching that addresses student learning needs, know how to create and manage a respectful, purposeful classroom, are able to identify and plan for children's learning needs, are able to develop interventions, track changes, and revise their teaching strategies as necessary, are able to work with parents and their

colleagues to create a common set of expectations and collective supports for students' learning. (pp. 57-58)

These key components and promising pedagogies are supported by research on model teacher education programs which share numerous characteristics that unequivocally distinguish them from many others. According to Scannell (n.d.) the following six characteristics were common components in highly regarded teacher education programs: a) a concept of good teaching is apparent in courses and field experiences; b) theory is taught in the context of practice; c) extended field experience opportunities are provided; d) a well-defined, accepted standard of practice is used to guide coursework and clinical experiences; e) an emphasis is placed on school/university partnerships; and f) assessment is comprehensive and bonded to instruction.

Teacher Education Program Chronology

Despite the empirical evidence that teacher certification makes a difference in the academic achievement of students, for a time government officials and policymakers still held certain unfounded beliefs on the importance of teacher education. Some policymakers argued for a complete end to state licensing of teachers: deregulation of access to teaching (Wise & Leibrand, 2000). Darling-Hammond and Wise (1985) expressed concerns that "A vicious cycle may be created by policies that in the aggregate make teaching less attractive. They lower the quality of the teaching force, thereby increasing the perceived need for more regulation to improve education" (p. 330).

Toward the middle of the 20th century, however, the essence of the American public education system came under scrutiny with the low U.S. ranking on international achievement tests. The launching of Sputnik in 1957 stimulated a back-to-basics

movement that emphasized the importance of subjects such as math, science, foreign language and technology and which resulted in large portions of the federal budget being reallocated for the National Defense Education Act (Burrup, Brimley & Garfield, 1999).

In 1983 a report entitled *A Nation at Risk,* produced by the National Commission on Excellence in Education under then Secretary of Education Terrell Bell, outlined the decline of the American education system. Other examples of recent educational reform movements include *A Call to Action* in 1997 followed closely with *GOALS 2000* during the Clinton administration (Burrup, Brimley & Garfield, 1999).

In January 2002, President George W. Bush signed into law *No Child Left Behind* (NCLB). This Act initiated educational change that was designed to set high standards of learning for students as well as a system of accountability for teachers and administrators. NCLB has far reaching repercussions that affect all students, parents, teachers and administrators in every school across America (U.S. Department of Education, 2001).

Even though *A Nation at Risk, A Call to Action, and Goals* 2000 were all created at different times and under dissimilar circumstances the goals and objectives are essentially the same. *NCLB* continues with that tradition. The act embodies four fundamental principles which include: a) a stronger accountability for results, b) greater flexibility for states and districts in the use of federal funds, c) more choices for parents and students, and d) an emphasis on research based instructional methods (U.S. Department of Education, 2001). The underlying effects of *NCLB* on higher education are significant. Teacher preparation programs were closely examined and research based practices used to create effective teacher education programs as emphasis was placed on accountability and teacher preparation (Finkel, 2005).

The *NCLB Act* of 2001 identified standards for what are considered highly qualified classroom teachers. *NCLB* required local school districts to ensure that all teachers in core academic subjects hired after the first day of the 2002-03 school year were "highly qualified." For new teachers, that meant being certified by the state, holding at least a bachelor's degree, and demonstrating subject area competency (U.S. Department of Education, 2002). As a result of the report *A Nation at Risk* and policies such as *A Call to Action, Goals* 2000, and *NCLB*, the United States instituted mandates that required schools of education to produce highly qualified teacher candidates. With these mandates in mind, guidelines in the form of standards and research providing a framework upon which programs of study could be developed were created and implemented.

History of Standards Development

Three standards movements converged to create today's redesigned schools of education in accredited institutions. First, the content knowledge standards movement created guidelines for what was to be considered essential knowledge in the various teaching fields. Second, student standards were developed to delineate what content should be taught to what degree at each grade level. Third, criteria was defined for what teachers should know in order to help students reach the challenging goals set for them by the student standards (Wise & Leibrand, 2000). This alignment was tantamount in assuring that teacher candidates were being provided with the knowledge and skills to teach what K-12 students needed to learn.

Standards for Teacher Education Programs

Wise and Leibrand (2000) indicated that the spotlight on teacher quality standards resulted from the focus on student achievement based on national and international assessments including the National Assessment of Education Progress (NAEP) and the Third International Mathematics and Science Study (TIMSS). Poor results in student achievement brought the issue of teacher quality to the forefront. With numerous research reports unequivocally connecting student achievement to teacher preparation, it is evident that schools of education must assure that teacher candidates are provided with the necessary skills to become effective and highly qualified teachers. Darling-Hammond and Baratz-Snowden (2005) argued that to be accredited teacher education programs should possess the ability to confirm that the content of their courses and the pedagogies the programs utilize guarantee the production of effective beginning teachers. In addition, the education programs must prove that their teacher candidates have mastered the content and experiences identified as necessary in producing effective beginning teachers.

Beginning Organizations

Due to the lack of a single entity overlooking the creation and implementation of teacher education programs, state departments of education undertook the task of defining standards for teacher preparation and for entry into the profession. This situation resulted in each state setting its own licensing requirements which were frequently guided by standards poorly reflecting teaching knowledge and skills. Over time there were literally hundreds of sets of standards for teacher preparation programs (Griffin, 2002).

Darling-Hammond, Wise, and Klein (1999) described these programs as ranging from high to low as well as there being a lack of enforcement of the standards. Darling-Hammond, Wise, and Klein went on to suggest that although reviews of programs were supposed to occur, they were often sporadic and mechanical, revealing little about the actual quality of the education program.

Attempts for teacher education program accountability were fraught with problems. Due to the lack of continuity across the states, teachers received radically different kinds and qualities of preparation. There was an obvious need for further guidance to create continuity assuring equality and fairness in teacher education preparation (*NCATE at 50*, n.d.). National efforts to reform teacher education originated with three entities including the National Council for Accreditation of Teacher Education, the National Board for Professional Teaching Standards, and the Interstate New Teacher Assessment and Support Consortium (Interstate New Teacher Assessment and Support Consortium, 2005; National Board for Professional Teaching Standards, n.d.; *NCATE at 50*, n.d.)

National Council for Accreditation of Teacher Education. The first entity which greatly influenced teacher education program reform was the National Council for Accreditation of Teacher Education (NCATE). NCATE serves the role of an all-encompassing umbrella which essentially scanned the major components of the other entities and gleaned out what it deemed the best components, joining them into serving one purpose. That purpose is to strengthen standards for teacher education programs (*National Council for Accreditation of Teacher Education,* n.d.).

NCATE was originally created in 1954 as an independent accrediting body by five organizations representing the teaching profession: the Council of Chief State School Officers, the National Education Association, the National School Boards Association, the American Association of Colleges for Teacher Education, and the National Association of the State Directors of Teacher Education and Certification (*NCATE at 50,* n.d.). NCATE is a non-profit, non-governmental alliance of 33 national professional education and public organizations representing those who support quality teaching; it is the largest coalition of education and public organizations in the nation committed to quality teaching (*NCATE at 50,* n.d.).

NCATE's standards, revised in 1987, aimed to ensure that teacher education programs were grounded in knowledge about teaching and learning. A 1994 revision incorporated the model INTASC standards for what beginning teachers should know and be able to do.

NCATE is part of a continuum of teacher preparation and development that begins with pre-service preparation, and continues with stages of teacher licensure and advanced professional development including National Board certification (*NCATE at 50,* n.d.). NCATE goals include: a) to operate an efficient and effective accreditation system; b) to strengthen the quality of preparation programs for professional school personnel; c) to enhance the role of accreditation in a comprehensive quality assurance system for the education profession; and d) to improve the quality of educator preparation programs by encouraging more institutions to participate in the accreditation process (*National Council for Accreditation of Teacher Education,* n.d.)

During the first few decades of existence, NCATE focused more on the quality of the teacher education curriculum. That focus was a beginning, but as Wise and Leibrand (2000) pointed out, that step alone is not sufficient in determining the effectiveness of teacher education programs. The standards movement helped propel NCATE's redesign in 1987. NCATE recognized that accreditation and licensing authorities did not coordinate their activities.

The result was a disharmony of standards, meaning that there were no generally accepted standards for teacher preparation (*NCATE at 50*, n.d). At that time, accredited schools of education began to experience a period of reform. They were required to develop and articulate the knowledge base upon which their programs were built and teacher candidates were expected to comprehend and apply this knowledge for effective teaching strategies (Wise & Leibrand, 2000). In 1993, NCATE delineated a continuum of teacher preparation focusing on the important connections between pre-service preparation and licensure in efforts to create a more consistent system of quality assurance.

Until the late 1980s, NCATE did not collaborate with states in the review of teacher preparation programs and until the mid 1990s, NCATE had no perceptible existence in national or state policy initiatives. In 1995 NCATE began to incorporate model state licensing principles into its accreditation standards. This began the move to align accreditation and licensing standards. At this time, based on the understanding of the importance of continuity of standards, NCATE aligned teacher preparation standards with national standards for P-12 students. NCATE insisted that national standards for teacher preparation in the various subject matter areas be congruent with P-12 standards

(*NCATE at 50*, n.d.). "When teacher preparation standards and student standards are closely linked, system-wide reform moves forward, as teachers are more fully prepared to help students learn" (*NCATE at 50*, n.d., p. 7).

In 2001, as a direct response to policymaker concerns, and of the standards movement of the 1980s and 1990s, NCATE began to implement a performance-based system of accreditation. In NCATE's performance-based accreditation system, institutions must provide evidence of competent teacher candidate performance. Teacher candidates must know the subject matter they plan to teach and how to effectively teach it so that all students learn (*National Council for Accreditation of Teacher Education*, n.d.). This system enhances both accountability and improvement in educator preparation, as it requires persuasive evidence of candidate performance for institutions to become accredited (*NCATE at 50*, n.d.).

National Board for Professional Teaching Standards. A second organization, the National Board for Professional Teaching Standards (NBPTS) is an independent organization established in 1987 as the first professional body-comprised of a majority of classroom teachers. The NBPTS set standards for the advanced certification of fully accomplished veteran teachers. The mission of the National Board is to establish rigorous standards for what accomplished teachers should know and be able to do, and to develop and operate a national voluntary system to assess and certify teachers who meet these standards (National Board for Professional Teaching Standards, n.d.).

The National Board for Professional Teaching Standards (NBPTS) was an outcome of the standards movement. Wise and Leibrand (2000) asserted that as the emphasis on clinical practice flourished, millions of dollars poured into the development

of standards for advanced teaching practice in specific content areas. The NBPTS based its standards development within more than 30 certification fields defined by developmental levels of students (early childhood, middle childhood, early adolescence, and late adolescent-young adulthood) and by subject areas taught such as reading, math, social studies and science. The performance standards describe what teachers should know, be like, and be able to do rather than listing courses teachers should take in order to be awarded a license.

The NBPTS goes on to outline five "core propositions" including teachers' commitment to students and their learning, teachers' knowledge of the subject they teach and how to teach those subjects, teachers' responsibility for managing and monitoring student learning, teachers' systematic thinking about their practice, and teachers as members of the learning community (National Board for Professional Teaching Standards, n.d.).

Going a step farther, the NBPTS also developed performance assessments to judge whether teachers have met these standards of accomplished practice. The NBPTS is credited with instigating a discussion of and action on national standards for teachers. "In articulating standards that rest on the appropriate use of knowledge and techniques in a variety of ways on behalf of diverse student needs, the board has begun to capture the complex, contingent nature of teaching and to confront the challenge of assessing such knowledge and skills in an appropriate way" (Darling-Hammond, Wise, & Klein, 1999, p. 41).

The NBPTS argued that the basic requirements for effective teaching are explicit. The fundamentally essential components include a broad grounding in the liberal arts and

sciences, content area knowledge, pedagogical skills, curriculum development, understanding of how learning occurs, knowledge of students and human development, and skills in effectively teaching diverse students (National Board for Professional Teaching Standards, n.d.).

Interstate New Teacher Assessment and Support Consortium. The third organization which had tremendous impact on teacher education reform was the Interstate New Teacher Assessment and Support Consortium (INTASC). INTASC was started in 1987 from a consortium of states working together on National Board-compatible licensing standards and assessments. INTASC began its charge by creating standards for a universal foundation of teaching knowledge that should be obtained by all teacher candidates. This foundation of knowledge was then supplemented by specific standards for disciplinary areas and levels of schooling.

The INTASC standards call for an on-going set of examinations that evaluate subject matter knowledge and knowledge about teaching and learning at the end of pre-service education. In addition, there is an assessment of applied teaching skills when the candidate is practicing under supervision during an internship or induction year through a portfolio assessment much like that of the National Board (Interstate New Teacher Assessment and Support Consortium, 2005). In addition, INTASC has articulated performance-based standards for initial licensing of teachers that are intended to be compatible with those of the NBPTS. INTASC articulates what characteristics, skills and abilities entering teachers should possess in order to be responsible teachers and develop the levels of proficiency that result in effective teaching practices.

State Departments of Education. States have also taken a role in assuring that teacher education programs produce highly qualified teachers by increasing the requirements for initial acceptance into programs as well as criteria for obtaining certification. During the 1980s and 1990s, several states began developing model state licensing standards that other states could use to guide their own licensing processes. These licensing principles were developed under the guidance of INTASC who likewise worked under the auspices of the Council for Chief State School Officers (The National Council for Accreditation of Teacher Education, n.d.). INTASC worked in collaboration with teacher educators, teachers, state licensing officials and NCATE to develop a basis for performance-based standards for teacher licensing.

According to the Pennsylvania Department of Education, the requirements for a state-approved teacher education program have been raised significantly in recent years. State approved teacher education programs must pass an approval process based upon general and subject-specific guidelines, rather than a minimum number of credits, set by the Department of Education and implemented by the preparing institution, and based upon ten standards: mission, assessment, admissions, design, field experiences, student teaching, collaboration, advising and monitoring, exit criteria and faculty (*Pennsylvania Department of Education,* n.d.). In Pennsylvania, educators prepare for their responsibilities in the schools of the Commonwealth by the completion of (a) state-approved teacher education program including a student teaching or intern experience, (b) Praxis I and Praxis II assessments, and (c) application materials documenting that all certificate requirements have been met (Pennsylvania Department of Education, n.d.).

To develop their assessment procedures, standards boards had to collaborate with schools of education. Teacher education programs and curricula have become increasingly aligned with state and professional standards and benchmarks for teacher and student performance. Concurrently, professional accrediting bodies have raised standards and implemented assessment measures and procedures for assuring teacher candidate proficiency vis-à-vis these standards.

Quality Program Components

A review of the literature concerning quality teacher education programs indicates there is a core body of knowledge with which teacher candidates must be equipped to provide them with the instruments of effective teaching (Calderhead & Robson, 1991; Comer & Maholmes, 1999; Darling-Hammond, 1999a; Darling-Hammond et al., 2005; Darling-Hammond & Baratz-Snowden, 2005; Darling-Hammond, Griffin & Wise, 1992; Darling-Hammond, Hudson, & Kirby, 1989; Darling-Hammond, Wise, & Kline, 1999; Fajet et al., 2005; Jacobs, 2001; Karweit & Slavin, 1981; Minor et al., 2002; Murphy, Delli, & Edwards, 2004; Ryan & Cooper, 2007; Shulman, 2000; Wise, 1990; Wise & Leibrand, 2000).

The categories which appear in the literature as components of a well-rounded and comprehensive teacher education program include: instruction, curriculum, and professionalism. Within each of the three broad categories are more explicit areas of concentration.

Instruction

It is essential that teacher education programs help instill in candidates the need for and ability to see beyond one's own perspective (Darling-Hammond, 1999b). A

teacher must be empathetic with the learner and understand how to provide the best learning environment for that student. Skills of classroom management, motivation and engagement, diverse learners, child growth and development, technology and assessment all work jointly to create a teacher who can connect with and be empathetic toward students.

Developing teacher candidates' instructional capability can be viewed as one of the most important roles of universities in the preparation of teachers. Darling-Hammond, Wise, and Kline (1999) described skillful instructional techniques as follows:

> Teaching skills include the abilities to transform knowledge into actions needed for effective teaching- for example, abilities to evaluate student thinking and performance in order to plan appropriate learning opportunities; abilities to critique, modify, combine, and use instructional materials to accomplish teaching and learning goals; abilities to understand and use multiple learning and teaching strategies; abilities to explain concepts clearly and appropriately, given the developmental needs and social experiences of students; abilities to provide useful feedback to students in constructive and instructionally helpful ways. (p. 39)

The category of instruction includes all material directly related to how the act of teaching occurs and encompasses the following elements: classroom management, motivation and engagement, diverse learners, child growth and development, technology, and assessment.

Classroom Management. Providing instruction in classroom management skills which contribute to an academic atmosphere that assists in successful school experiences

for students is another critical component in teacher education programs. Classroom management is one of the key factors that will assist teachers in creating a learning environment that will lead to higher order thinking and learning. Barbetta, Norona, and Bicard (2006), maintain that a classroom that is in total chaos or lacks boundaries and order can prevent students from engaging in the learning process.

According to a study conducted by Karweit and Slavin (1981) a significant portion of each school day is lost to interruptions, disruptions, late starts and rough transitions. Beginning teachers must possess the skill of organizing a classroom which provides an orderly environment conducive to increasing academic engaged time and decreasing distractions. Ryan and Cooper (2007) attributed a large portion of lost academic engaged time to teachers who do not know how to manage their classes resulting in students who are not productively engaged in the learning process.

In a study conducted by Minor et al. (2002), pre-service teachers identified classroom and behavior management as one of seven categories of effective teaching. Although differences in preferences of behavior management styles appeared in the study, behavior management was second most important in a rating of characteristics of effective teachers.

Motivation. Another important skill that teacher education programs must strive to include in the curriculum is the importance of developing and maintaining motivation in students. "Research consistently shows that it is not the methodology employed but rather the teacher who creates an engaging and appropriate learning environment that translates into student learning" (Bruning, 2006, p. 1).

As part of their schooling, teacher candidates should be exposed to a variety of motivational theories. Just as students differ in many ways, the catalysts for motivation differ among students; therefore, it is imperative that teacher candidates be aware of the various approaches and tactics used to motivate their students (Martin, 2006).

Engagement. Bored or disengaged students are much more likely to participate in behaviors detrimental to a productive learning environment. Pre-service teachers need to understand the fundamentals of the nature of knowing, cognitive processing, metacognition and strategies to improve engagement of students.

Beginning teachers must be able to plan and provide a set of learning opportunities that offer access to crucial concepts and skills for all students. The first thing a teacher must do to design an effective classroom conducive to learning is create meaningful instruction that is engaging. Knowledge of different engagement strategies is an integral component to the content of any teacher education program. The best prepared teacher or most significant lesson is lost on students who are not naturally curious or have failed to be engaged through motivational approaches (Martin, 2006).

Collaboration among students is a proven way to engage students. Beginning teachers need to be aware of how interactions among students in the form of cooperative learning and group work can be pathways for shared learning. Ryan and Cooper (2007) discussed how cooperative learning can lead to many positive outcomes such as higher self-esteem, inter-group relations, acceptance of academically challenged students, attitudes toward school and the ability to work cooperatively with others.

Diverse Learners. The makeup of classrooms today is far different than the relatively homogenous mix of just a few decades ago (Milner, Flowers, Moore, Flowers,

Flowers, 2003). Cultural and cognitive differences are evidenced in many diverse forms including race, ethnicity, socio-economic status, diverse learning needs, and even gender. Many education foundations and theory courses address the issue of diverse learners and provide insight into teaching techniques that can help address issues that might arise in that context. Ryan and Cooper (2007) maintained that teachers view learning through a lens that is unique to their own cultural viewpoints. This can lead to difficulty in the teacher's ability to understand student experiences and perceptions that are different from their own.

According to Milner et al. (2003), many pre-service teachers have had insignificant interactions with children from diverse backgrounds, thus they are lacking in knowledge and understanding of diversity issues. Teacher education programs must train teacher candidates to acknowledge the cultural and social contexts with which students approach learning. With knowledge of those social contexts, if teacher candidates can customize the learning environments and tailor the learning experience then the likelihood of success for the student will increase.

Effective teachers understand the need to modify instruction to meet the unique needs of individual students. Among the most important skills a teacher candidate must acquire is the ability and willingness to continue to seek strategies for reaching students who are not successful on the first attempt at learning a concept. This often means additional work and effort going into the teaching process. "The argument in a nutshell is that if schools are to focus on learning, rather than merely offering courses, then teachers must be able to diagnose and address various learning needs rather than merely delivering instruction. They [teacher candidates] must have the knowledge and the capacity to

connect with learning, rather than simply covering the curriculum" (Darling-Hammond, Griffin & Wise, 1992, p. 9).

Teacher education programs must prepare teacher candidates with an understanding of factors that can shape people's experiences. Jacobs (2001) spoke about the importance of teacher preparation programs providing experiences that will help teacher candidates understand the importance of taking time to learn about children's cultural backgrounds and how to provide a meaningful learning experience for each of them. Education programs must help teachers learn how to view the world from various perspectives, especially those perspectives that are quite different from their own. The ability to view learners through various lenses will provide knowledge that will aide in the development of techniques that can reach diverse learners. Teacher candidates need to know how to listen carefully to students and look at their work through a multi-dimensional lens. Furthermore, candidates must learn how to structure situations in which students write and talk about their own experiences, to help assure understanding through methods with which they are familiar and comfortable (Ambe, 2006, Milner et al., 2003).

In addition, teacher candidates must be afforded opportunities to develop a knowledge base on ways to create student-centered learning. Ryan and Cooper (2007) described a student-centered classroom as one in which the teachers actively involve students in real situations, activate students' prior knowledge before presenting new information, use questions to provoke students' thoughts, and structure learning experiences in ways that students can connect them to prior knowledge or experiences.

It is imperative that beginning teachers consider how particular content and ideas may best be taught. To be able to do this, teacher candidates must acquire a knowledge of the structure of the content including how it is organized and what its central concepts are in addition to how to best represent these in a manner that can be understood by learners at different ages and stages. Ambe (2005) insisted that candidates should be able to develop a classroom climate that values diversity in learners. Only very knowledgeable and skillful teacher candidates are able to respond differentially and appropriately to students' needs and enable diverse learners to succeed.

Child Growth and Development. Beginning teachers must have a firm grasp of child growth and development. Comer and Maholmes (1999) revealed that teacher candidates must have knowledge of how children grow and develop and be able to put that knowledge to use in creating experiences that make learning possible. Knowledge of how children grow, behave, socialize and think is directly correlated with how children learn. This knowledge leads to the basis of another type of diversity, developmental diversity. Without basic knowledge of human growth and development, a teacher could possibly be teaching at developmentally inappropriate levels.

A teacher candidate must become well versed in the various areas of child development. Jacobs (2001) addressed the importance of primary teacher preparation programs being built upon Vygotsky's model of working with children through scaffolding and continued by stating that the scaffold begins in schools of education with a firm theoretical foundation providing a solid understanding of developmentally appropriate practices. Jacobs defined developmentally appropriate practices as the knowledge of principles of child development and appropriate expectations based on age

and current levels of functioning. Student teachers must be taught how to look at each child as an individual and recognize the relevance of developmentally appropriate teaching strategies to ensure that their teaching is more meaningful and relevant for all students.

It was once the common belief that learning could not occur until a child was developmentally prepared; therefore, a teacher would have to wait until a student was ready before it was productive to teach particular content. Current research, however, indicates that learning can actually influence developmental rate. In other words, no longer does a teacher have to wait for the student to be ready to learn. Instead, learning can help move a child along the developmental path (Woolfolk, 2004).

Jacobs (2001) also emphasized the importance of including theoretical foundations on how children learn and process information as well as the latest work on brain based research. Although various types of child development occur along linear pathways, children of similar ages can be scattered throughout the developmental stages. Therefore, it is not appropriate to teach all same age children in a like manner. Schools of education must instill in teacher candidates this understanding - no two children are on the proverbial same page each and every day.

Schools of education must include as part of the curriculum opportunities for candidates to develop an understanding of the process of cognition and the various pathways of learning including such topics as multiple intelligences and preferred learning styles. It is imperative that programs make efforts to ensure that all teacher candidates learn to teach students in meaningful ways resulting in high levels of performance. Beginning teachers who do not understand how to work with a diverse

group of children, are more likely to become overwhelmed with their teaching responsibilities and be less content in their chosen profession (Kent, 2005).

Pre-service teachers' knowledge of the subjects and how to make them accessible to students relies on an understanding of both the content and the learning process. Teacher education programs must provide candidates with knowledge on how to identify the learners' strengths, interests, and preconceptions. In studies on classroom teachers, Darling-Hammond (2001) discovered that teacher effectiveness in differentiating instruction is a strong determinant of improvement in student learning, outweighing even the effects of differences in class size and heterogeneity. To be able to instruct students of varying ability and skill, beginning teachers need a wide repertoire of teaching strategies that respond to different learning styles and approaches. When teacher candidates have a clear understanding of child development, they are better equipped to work with students in their zone of proximal development.

Technology. The role of technology in education is ever-expanding and becoming more integral to the teaching process. The teacher candidate's ability to use and incorporate technology within instructional strategies is an integral component of a good teacher education program. The question that most often arises is how technology should be taught to teacher candidates. Should it be a course in and of its own, or should it be integrated into core and methods courses? Wise and Leibrand (2000) claimed that many teacher education programs have found that the best way to teach how to utilize technology in the classroom is to incorporate its use into all the courses in the teacher education program including such practices as e-mail, electronic information searches and multimedia presentations.

Schools of education must prepare teachers who can efficiently integrate technology into instruction by modeling this integration. Teacher preparation instruction must guarantee that teachers not only know about the various types of technology that are available as tools in the teaching process, but also be taught the skills on how to use the technologies within the content. Ryan and Cooper (2007) defined the role of a technologically literate teacher as one who learns the role of facilitator, embeds technology into the curriculum, and uses technology to enhance small group instruction.

Jacobs (2001) emphasized the role of technology in permitting great communication as well as opening portals of access to information and resources that may be used to enhance instruction. The wide variety of technological materials available, with proper understanding of how and when it is best to utilize them, can add significantly to a teacher candidate's collection of tools to enhance instruction for all children.

Assessment. Teacher candidates need not only to be able to teach the content but also to assess learning in a practical and useful manner. Teacher education curriculum tends to emphasize the importance of diversifying instruction for students yet spends minimal time or attention on the necessity of expanding assessment strategies. Just as students possess preferred learning styles, they also vary in the ways they can best demonstrate what they have learned. Education programs must train teacher candidates in a variety of assessment approaches so that they can evaluate their options and choose which technique or approach is best under each circumstance (Otero, 2006). Furthermore, teacher candidates need to have modeled for them authentic practices found within the teaching profession (Goos & Moni, 2001).

Therefore, the ability to identify, create, and incorporate purposeful and varied assessments is another task that beginning teachers must learn (Bruning, 2006). Teacher candidates need to know how to construct, select, and use formal and informal assessment tools to show them what students know and can do. In addition to skills in utilizing different assessments, beginning teachers must be able to construct a variety of means for assessing students' knowledge. Teacher candidates should be knowledgeable about both the formative and summative forms of assessment. They must develop the skills of using various assessment strategies and tools such as observation, student conferences and interviews, written work, and discussions, as well as responses on tests and performance tasks. Finally, teacher candidates must develop skills on how to interpret and apply assessment results to improve upon content and/or their instructional techniques. Based on the assessment results, teacher candidates must learn how to give constructive feedback that guides further learning (Otero, 2006).

Jacobs (2001) maintained that the best way to help instruct teacher candidates on alternative assessment techniques is through modeling and application. Jacobs also suggested that teacher preparation programs require teacher candidates to complete a personal portfolio. This has been identified as the recommended type of authentic assessment for younger children. Therefore, through teacher candidates' experiences in creating their own portfolios, they can better understand the use of portfolio assessment with their students.

Curriculum

Although there is an emphasis on the importance of field based experiences for teacher candidates, numerous studies have found positive relationships between

education coursework and teacher performance in the classroom. Wise (1990) argued for the importance of teachers exploring different contexts of the profession, such as the history, philosophy, economics, and the financing of education. Darling-Hammond et al. (2005) suggested that beginning teachers' initial knowledge of curriculum should include an understanding of: (a) different views of curriculum; (b) how to develop and carry out curricular plans that are coherent and have a high probability of success; and (c) how to make sound curricular decisions and address curricular issues that arise. Curriculum includes the following components: design, content, pedagogy and field based experiences.

Design. The knowledge of how to design curriculum is integral to the process of learning how to teach. Prospective teachers must learn how to select, develop, evaluate, and organize content in a manner that is presented in such a way as to encourage learning. It is essential for teacher candidates to have opportunities to gain knowledge of how to evaluate and integrate particular curriculum materials into instruction in ways that fulfill the teacher's goals, address the content under study, and are developmentally appropriate for the students. Shulman (2000) discussed the importance of what he refers to as "wisdom of practice" in developing teachers. Wisdom of practice refers to several effective teaching characteristics including understanding of the necessity of constant curriculum revisions.

To be effective, beginning teachers must know how to adjust their curriculum and instruction so that their students will be engaged in meaningful work. What teachers understand about content and students shapes how wisely they select from texts and other materials and how effectively they present material in class. Pedagogical content

knowledge enables teachers to represent ideas so that they are accessible to others. " …if teachers need to be able to ensure successful learning for students who bring different levels of prior knowledge and learn in different ways, then teachers need to be diagnosticians and planners who know a great deal about the learning process and have a large repertoire of teaching methods at their disposal" (Darling-Hammond, 1999a, p. 222).

One tool used to help teacher candidates learn how to plan for instruction is the knowledge of how to create lesson plans. According to Wise and Leibrand (2000) teacher education programs that produced successful teachers taught the candidates the essentials of lesson planning and the fundamentals of instruction that a lesson should include as well as the more multifaceted skills of thematic planning.

Teacher candidates need to understand there are several kinds of knowledge about learning and they need to think about what it means to learn various materials for different purposes. They must develop skills on how to support differentiated learning with diverse teaching strategies. Beginning teachers also need to be able to balance the many curriculum goals with appropriate pedagogy so that they are advancing students' in-depth understanding of critical concepts. Equally important is helping students to make connections among ideas and developing social skills necessary to work cooperatively (Coke, 2005).

Another attribute that teachers must develop is the understanding that the education process is not an inert one. Teaching changes from day and day and even from hour to hour. Darling-Hammond et al. (2005) discussed the importance of teacher candidates understanding that curriculum is not static, but is continuously changing, and

how the decisions they, as teachers, make will ultimately affect the student and his or her learning outcomes.

Content. Coursework is an area of contention among teacher education program critics. There are many arguments that the coursework is heavy in theory and light on practical application (Darling-Hammond, Hudson, & Kirby, 1989), yet research on teacher education has shown a positive connection between teachers' preparation in their subject matter and their performance and impact in the classroom (Fajet et al., 2005). Graduation requirements placed on teacher education programs are often saturated in core general education courses in addition to having maximum hours allotted for degree completion. Attempts at providing more practical application courses are often thwarted by inflexible degree requirements.

Wise and Leibrand (2001) confirmed that teacher candidates must be expected to show mastery of the content knowledge in their fields and to demonstrate that they can teach effectively. Therefore, teacher educators, in foundations and methods courses should focus teacher candidates' attention toward the content of the curriculum as well as the students themselves. Minor et al. (2002) also attested to the importance of sufficient knowledge of the content eventually to be taught by teacher candidates.

Pre-service teachers must be prepared to answer student questions in the domain of subject areas. Teachers will be asked to defend why certain subjects or topics are taught and they will have to answer these questions in a manner to convince the learner of the relevance of the material. Students' questions about the relevance of a subject should not be a surprise because in many teacher education programs, one of the first questions student teachers ask in their content methods courses is often why students need to learn

that particular subject and consequently why a teacher should be concerned about teaching it (Darling-Hammond et al., 2005).

In light of the fact that content learned in methods courses is increasingly based on standards disseminated by various national organizations (for example, National Council of Teachers of Mathematics and National Council of Teachers of English) as well as state standards, teacher candidates must not only learn the subject matter they will teach but also how to organize curriculum to address students' needs, the schools' learning objectives, and state and national standards. The ability to teach subject matter well requires several knowledge bases including deep understanding of the content itself, the process for learning this content, and the nature of student thinking, reasoning, understanding, and performance within a subject area. Teacher candidates' knowledge base of the subject matter content must be strong enough to allow them to present it in a manner that assists students in the accommodation or assimilation of the material.

Pedagogy. The trials and tribulations of pursuing a teaching certificate do not end with the learning of core subjects and content knowledge. Even teachers with exceptional understanding of the content can encounter difficulty with how to convey that information to their students. The perception that teacher education programs inadequately teach pedagogical practices is a difficult one for colleges and universities to overcome for several reasons. One of the issues that teacher education programs must recognize is the pre-disposed belief system with which teacher candidates enter the program. Murphy, Delli, and Edwards (2004) claimed the following:

> Arguably, one of the primary goals of teacher education programs is to mold students into good teachers through the teaching of new or refined pedagogical

knowledge. One difficulty, however, is that many students come to teacher training programs with preconceived beliefs about the characteristics of good teachers. (p. 72)

Teacher candidates often enter the field with a false sense of security and an unfounded belief that they have a fundamental understanding of what it is to be a teacher. According to Ryan and Cooper (2007), this knowledge is grounded in the false belief that because the teacher candidate has had 12 or 13 years of experience in schools as a student, he or she is already quite familiar with the day to day workings of a school and has developed belief systems accordingly.

Murphy, Delli, and Edwards (2004), substantiated Ryan and Cooper's statements confirming these belief systems are generally acquired and created through the teacher candidate's own personal and school experiences. As with all misconceptions or preconceptions, it is difficult to unlearn old information and replace it with new. And, just as with school students, pre-service teachers are resistant to change their initial beliefs. Murphy, Delli, and Edwards indicated that if teacher educators were aware of the pre-service teacher's preset belief systems and designed decisions and instructional approaches accordingly, beliefs could become less ambiguous and open to change.

Murphy, Delli, and Edwards (2004) also reported that pre-service teachers "remembered vivid images of teaching from their past experiences as students" and that "...the influence of one's personal and school experiences has the power to affect the decisions pre-service teachers would make as teachers" (p. 71). They continue, stating that, in essence, students already have a mental image of what good teaching is and therefore are not open to other views on sound pedagogical practices. Berry (2005) also

referred to the heated debate currently centering on this topic. First, is there really a need for pedagogical training for teachers and second, if so, should it take place prior to starting the teaching practicum?

Teachers who are pedagogically well-prepared are better able to incorporate teaching strategies and respond to students' needs and unique learning styles which encourage higher order learning. Grossman (1989) argued that "…without formal systems for induction into teaching, learning is left largely to chance. Although much pedagogical knowledge has been characterized as common sense, knowledge is not hanging, ripe and fully formed, in the classroom, waiting to be plucked by inexperienced teachers" (p. 205).

Darling-Hammond, Wise, and Klein (1999) cited two studies of newly certified teachers that indicate the graduate's strongest recommendation for program improvement was for an intense quantity of subject-specific teaching methods including pedagogy and information on child motivation, development, and cognition. In other words, teacher candidates want and need to know more than what they are to teach. Pre-service teachers want to be given ideas on the best ways to teach the curriculum. Teaching of methodologies often occurs through vicarious means. Jacobs (2001) affirmed that the kinds of curriculum and instructional techniques that are modeled in teacher education courses have great influence on what teacher candidates do when they have their own classrooms.

Field Based Experiences. A study of graduates of teacher education programs indicated three major recommendations for program improvement: a) more observation time in a wider variety of schools with a wider variety of students and experienced

teachers, b) more time actually teaching, and c) closer supervision with more constructive feedback (Darling-Hammond, Hudson, & Kirby, 1989). A notable complaint from teacher education graduates is the existence of a large gap between theory taught and actual classroom practice and utility of coursework. Furthermore, the lack of connection between theory and practice seems to increase after teacher candidates have spent some time in the classroom. The component most often identified as characteristic of a good teacher education program is the need for early and numerous opportunities to practice teaching in field based experiences (Larson, 2005).

The National Commission on Teaching and America's Future (1996) indicated that many teacher education programs separate theory from application citing that in some places, "…teachers were taught to teach in lecture halls from texts and teachers who frequently had not themselves ever practiced what they were teaching" (p. 31). In addition, often students would complete their coursework before they began student teaching and there was seldom a connection made between what they were doing in their classrooms to what they had learned in their programs.

Jacobs (2001) argued that education programs should design their own curriculum after Vygotsky's scaffolding model by beginning with providing a firm, theoretical foundation and then offering opportunities for practicing teachers to put this theory to use in actual classrooms. It is imperative for effective teacher education programs to provide structured opportunities to practice particular strategies and use specific tools in the classroom setting.

Just like school students, teacher candidates learn by doing. They must be given opportunities to read and reflect, collaborate with other teacher candidates, and share

their ideas and experiences. Learning of this kind enables teachers to build the bridge from theory to practice. Model teacher education programs allow teachers to learn about teaching through practice by providing opportunities to participate in settings that create strong connections between theory and practice (Kent, 2005; Larson, 2005).

In effective programs, teacher educators use actual artifacts from the classroom, examples of student work, videotapes of classrooms in action, and case studies of teaching to help teacher candidates connect what they are learning in their courses to actual problems of practice in classrooms (Darling-Hammond & Baratz-Snowden, 2005). Through clinical practice, teacher candidates are given the opportunity to reveal what they actually know and demonstrate what they can do (Wise & Leibrand, 2000). An ongoing argument is made for the need for connection between theory and practice, and field experiences are the best way to ensure this occurs.

Scannell (n.d.) identified field experiences as a critical component in teacher education programs. Therefore, teacher education programs must provide frequent and positive opportunities for teacher candidates to practice teaching allowing them to build self-confidence and a sense of readiness which will ultimately result in a positive disposition about readiness. Jacobs (2001) suggested that opportunities to work with children in authentic surroundings begin in introductory education courses and continue throughout the program.

Professionalism

Proof of professionalism in the field of education comes in many forms. Ryan and Cooper (2007) described characteristics of effective teaching including the necessity of knowing what resources are available to help new teachers develop their instructional

strategies. These resources include such tools as videos, research materials, teaching journals, as well as human support in the form of co-workers, administrators and specialists.

Professionalism refers to the dispositions that a teacher must possess in order to be successful in the classroom. It encompasses the areas of collaboration, continuing professional development, and resources. Darling-Hammond, Wise, and Klein (1999) discussed teaching professionalism in the following way:

> Teaching dispositions are the orientations teachers develop to think and behave in professionally responsible ways- for example, to reflect on their teaching and its effectiveness and to strive for continual improvement; to respect and value the needs, experiences, and abilities of all learners and to strive to develop the talents of each to the greatest extent possible; to engage with learners in joint problem solving and exploration of ideas; to establish cooperative relationships with students, parents, and other teachers to keep abreast of professional ideas, and to engage in broader professional responsibilities. (p. 39)

Collaboration. Darling-Hammond (1999a) discussed how education reform not only addresses typical areas such as curriculum and instruction, diversity and assessment, but also how to work in a collegial manner with others. Teaching is not a career in which one can work in isolation. Interpersonal skills of communication and collaboration are integral components in the art of effective teaching. Teacher candidates must learn how to collaborate with other teachers, administrators, community support agencies, and families of students.

First, teacher candidates must acquire social skills in order to establish and maintain working relationships with their co-workers. Collaboration with fellow teachers and other educational professionals serves as an opportunity to share knowledge and suggestions as well as glean ideas from seasoned practitioners on best practices. Teacher education can provide opportunities for pre-service teachers to understand what it means and what it feels like to be members of a group that shares common beliefs, goals and practices.

Ryan and Cooper (2007) emphasized how some teachers can develop an attitude of competition in which they strive to have the best lesson plans or be the most popular teacher. This can result in tension and angst in the workplace which is not conducive to a productive working environment for educators or learning atmosphere for students. Teacher education candidates need to consider their co-workers as sources of information based on years of experience.

Collaboration with families is imperative to the success of students. Comer and Maholmes (1999) specified the importance of building skills in teacher candidates to help increase and improve parental involvement. Parents, by nature, are the most knowledgeable of the preferences and practices of their children, thus they have much useful information to offer and should be viewed as partners in the educational process. Therefore, in addition to the opportunity to experience group membership, teacher education programs must provide teacher candidates with suggestions and techniques on how to work effectively with parents of students.

Ryan and Cooper (2007) indicated that there is sometimes an air of superiority that teachers emanate toward students' parents. This attitude is in complete contradiction

to the spirit of cooperation and communication that is essential for a positive learning environment. Berry (2005) described the ability to communicate with parents among many qualities of good teachers as outlined by the public. Teacher candidates must learn how to work cooperatively with parents and consider themselves members of a team working to provide a rewarding educational experience for the child.

Continuing Professional Growth. In addition, beginning teachers must learn skills that will allow them to apply what they are learning, analyze what happens, and adjust their teaching methodology accordingly. Pre-service teachers need to engage in inquiry and reflection about learning, teaching, and curriculum (Bruning, 2006). Ryan and Cooper (2007) addressed the importance of being a reflective decision maker in planning, implementing, and evaluating decisions.

Teacher candidates hold firm beliefs about the teaching profession long before they enter the classroom and these persist throughout their teacher preparation and into their early years of teaching (Fajet et al., 2005). Therefore, the examination of pre-service teachers' perceptions about teaching is important for evaluation of teacher preparation programs. Such an evaluation can assist in aligning prospective teachers' previously held beliefs with the pedagogical practices that they will need to learn for their subsequent teaching careers.

Fajet et al. (2005) found that pre-service teachers' perceptions suggest that teacher education courses do little to alter the perceptions students develop during their 12 or 13 years of public school experiences. "It appears from the findings of this study that education majors underestimate the complexity of teaching. Our results demonstrated that they assign great importance to their personal characteristics and less importance to

pedagogical training" (Fajet et al., 2005, p. 724). Teacher educators need to be aware of the research on student perceptions which shows that core beliefs tend not to change over time. With this knowledge in hand, teacher educators can take appropriate steps to provide instruction and guidance to assist students in overcoming their preconceptions and perhaps even misconceptions of education.

Jacobs (2001) suggested that teacher preparation programs should strive to create good decision makers and to do that, teacher candidates must be given time to reflect on their experiences and how to put the knowledge they have acquired to use. Teacher candidates need to be taught how to analyze and reflect on their practice, to assess the effects of their teaching, and to refine and improve their instruction. Teacher education candidates must be taught how to set clear goals and develop a sense of purpose so they can make sensible, consistent decisions about what to teach, when, and how.

Self-confidence also influences teacher satisfaction and feelings about their work. According to Darling-Hammond, Wise, and Klein (1999), teachers who lack confidence in their teaching skills or possess doubt about their abilities to help students learn have higher rates of absenteeism and attrition. This attitude could certainly affect how effective a teacher candidate can be. Teacher candidates must be provided with an education that leaves them feeling prepared as teachers so they are able to enter the field self-confident about their abilities.

Resources. Another area of professional growth is knowledge of available resources. Teacher candidates need to develop the skills of identifying useful resources and how to put those resources to use in their own classrooms (Bruning, 2006). Teacher education programs must help teacher candidates identify the role of resource agencies

and instill in the candidates the understanding of how those agencies are an integral part of the educational arena. Darling-Hammond, Banks, Zumwalt, Gomez, Sherin, Griesorn et al. (2005) discussed the importance of the knowledge of resources:

> Knowledge of the types of curriculum material and resources available at particular grade levels and for particular subject areas-and the ability to evaluate the utility of these for various purposes-is particularly useful to beginning teachers. Prospective teachers should be aware of major resources in the field and those that are in use locally, and know how to find additional resources and critically assess what is available. (p. 189)

Results of Similar Studies

Even though research can delineate what constitutes a good teacher education program, graduates are the most qualified in determining if their programs prepared them for teaching. Researchers from across the nation have performed studies to identify concerns of new teachers and the education program components that best address those concerns (Dillon, 2004; Glenn, 2000; McVey, 2004,).

McVey Study

McVey's (2004) mixed methods study attended to the role of teacher education experiences in addressing the concerns of new teachers. Thirty-one apprentice teachers participated in a survey. An additional nine apprentice teachers participated in a survey and a focus discussion which was intended to identify their concerns.

Concerns of apprentice teachers were identified as whether students were reaching their potential, helping students to value learning, challenging unmotivated students, diagnosing students' learning problems, meeting the needs of different kinds of

students, recognizing students' social and emotional needs, and seeking alternative ways to teach subject matter (McVey, 2004). Results of survey questions were used to determine if the level of preparedness to handle concerns varied between private and public and elementary and middle teachers. Furthermore, results identified experiences that were perceived as helpful in preparing novice teachers to handle their concerns.

Results of the analysis revealed that student teaching, content pedagogy in the form of methods courses, field experiences and tutoring were the teacher education program components most frequently mentioned as being the most helpful in preparing teacher candidates.

Dillon Study

Dillon's (2004) study examined teacher education and induction programs in their preparation of teachers. This qualitative study consisted of interviewing 20 first and second year teachers. The purpose was to identify beginning teachers' perceptions of the quality of teacher preparation they received and how colleges and universities can improve their teacher preparation programs.

This survey indicated that novice teachers believed that improved programs of education should: a) increase field based opportunities, b) eliminate or limit philosophy classes, c) include more coursework on elements of classroom management especially in the areas of discipline and interaction with parents, d) increase reading instruction, e) provide more instruction on special education issues, and f) require professors to visit school sites more regularly so they have a better ability to link theory to practice (Dillon, 2004).

Glenn Study

Glenn's (2000) study investigated pre-service teacher education program effectiveness as perceived by second and third year practicing teachers. This qualitative descriptive study was comprised from interviews with 30 second and third year teachers and examined the areas of subject content, methods classes, learning level and styles and field experience.

Findings of this study indicated that education majors felt they were not well prepared in content background for teaching in elementary school. With the exception of language arts and literary genre, the majority felt they were well prepared in methods courses. Furthermore, the graduates were confident in their ability to identify their students' learning styles. Finally, field based experiences provided the most effective preparation for teaching (Glenn, 2000).

Summary

For a teacher education program to be deemed adequate for the purpose of training and graduating effective teacher candidates, several factors must be in place. A review of the literature has identified three emphases that teacher education programs must promote to be considered quality education programs. The three areas include instruction, curriculum, and professionalism. Within each of the three categories of emphasis are more explicit areas of concentration.

First is the emphasis on instruction. Teacher education candidates must be well versed in the knowledge of curriculum design. Although state standards provide guidelines on what should be taught at which levels, it is still up to schools of education

to provide specifics on organizing curriculum in a manner that can be seen as continuous and carried out in intellectually sound and organizationally creative ways.

Classroom management is also a high priority for teacher education candidates. For an environment conducive to learning to be established, the classroom must be organized and maintained in a manner which is conducive to meeting students' needs and providing an atmosphere in which learning can take place. Another essential component for effective teaching is the ability to motivate and engage students in the learning experience. Teacher education programs should provide candidates with methods and ideas on how to gain and maintain student attention.

The complexion of education in schools is ever changing as various forms of student diversity continue to expand the types of methodologies that must be employed to meet all learners' individual needs. The complexity of the teaching practice expands exponentially in direct correlation to student diversity. Teacher education candidates need to be equipped with the ability to understand the various forms of diversity they may encounter in their classrooms as well as skills on how to teach a diverse population. In addition, knowledge of child growth and development is essential to ensure that a teacher is diversifying instruction in a manner necessary to meet all students' needs. Teacher education programs should provide a sound theoretical background in growth and development so teacher candidates have a solid framework upon which to build their instruction.

In a society in which technological advances are outdated more quickly than they can be marketed, teacher education programs must be on the forefront of implementing the use of technology. Teacher candidates must not only be well versed in the various

forms of technology available, but also how to put those forms to use for instructional enhancement. Finally, teacher education candidates need to be exposed to various forms of assessment and the proper ways and times to utilize them. In addition, candidates must learn how to analyze assessment results and use those results to tweak instruction and form curriculum.

The second area of emphasis is on curriculum. Teacher candidates must be provided with the foundations of education including history, philosophy and psychology. The other content emphasis is on pedagogy and methods of instruction, usually specific to subject matter. Teacher education programs need to assure that candidates are supplied with continuous opportunities to become better teachers and more knowledgeable of best practices.

Programs should assist students in understanding proper pedagogical techniques such as how to engage students in learning over extended periods of time. Problem solving skills and inquiry learning should be part of the curriculum in an effort to provide teacher candidates with tools to develop these same skills within their students. Furthermore, teacher candidates must be provided with early and sustained experiences to practice the content and pedagogical skills that they are learning. There can be immense gaps between theory and practice. Quality teacher education programs will provide students with early and on-going opportunities for field based experiences to aid in bridging those gaps.

Third, teacher education programs must more fully address issues of professionalism. Darling-Hammond, Griffin, and Wise (1992) defined professional behavior as being considerate of others, maintaining confidentiality, being punctual, and

exhibiting other behaviors that are considered civilly acceptable. Teacher education programs must help students learn the expectations of the teaching field in terms of professionalism in words and actions and communication skills with all vested parties.

It is an age of accountability where legislation such as NCLB has set standards for elementary and secondary school performance. Subsequently, accrediting organizations such as NCATE, NBPTS, INTASC and State Boards of Education are dynamically involved in the development of evolving processes for review of teacher preparation programs to ensure teacher candidate proficiency in instruction, curriculum and professionalism. Programs must provide performance evidence ensuring teacher improvement over time.

In conclusion, effective teacher education programs must provide sufficient coursework in teaching methods, balance theory and practice, and instill in candidates the importance of professional conduct. With these areas identified as components of quality teacher education programs, it then becomes the task of education departments to evaluate their programs and determine if they are meeting the needs of their teacher candidates. Teacher education programs must necessarily learn to self-assess. No single model of a program will meet the needs of all prospective teachers (Cochran-Smith, 2006); however, all teacher education programs must ensure that program completers have mastered the basics of instruction, curriculum, and professionalism before they are asked to practice independently.

CHAPTER THREE: RESEARCH METHODS

Introduction

Gay (1996) defined a case study as "the in-depth investigation of one 'unit,' e.g., individual, group, institution, organization, program, document, and so forth" (p. 219). The purpose of this case study was to perform a comprehensive investigation of the effectiveness of the University of Pittsburgh at Bradford's (Pitt-Bradford) teacher education program.

The history of the education program was explored through interviews of individuals involved with program development and implementation, as well as an intensive study of artifacts and documents such as newspaper clippings, books published on local historic events, and the University of Pittsburgh magazine, *Portraits*. In addition, the study obtained specific feedback from completers of the Pitt-Bradford program on their perceptions of the importance of instruction, curriculum, and professionalism in a teacher preparation curriculum as well as their beliefs about their preparation in these areas.

It is the goal of the University of Pittsburgh at Bradford's education program to fully prepare candidates in the areas of instruction, curriculum and professionalism so they may excel in the teaching vocation. Patton (1990) stated there are basic questions that must be asked during a program evaluation. These descriptive questions include the following: "What are the goals of the program? What are the primary activities of the program? How do people get into the program? What is the program setting like? What happens to people in the program? What are the effects of the program on participants?" (p. 374-375). By answering these questions through qualitative analysis, as well as

quantitative data provided by the survey results, this case study was able to determine how well the Pitt-Bradford education program prepares candidates.

Research Questions

Question 1 - How do Pitt-Bradford education completers rate the importance of instruction?

Question 2 - How do Pitt-Bradford education completers rate their level of preparedness in the area of instruction?

Question 3 - How do Pitt-Bradford education completers rate the importance of curriculum?

Question 4 - How do Pitt-Bradford education completers rate their level of preparedness in the area of curriculum?

Question 5 - How do Pitt-Bradford education completers rate the importance of professionalism?

Question 6 - How do Pitt-Bradford education completers rate their level of preparedness in the area of professionalism?

The following sections present the research design: a description of the population and setting of the Pitt-Bradford education program including specification of the sample selected for data collection, a description of instrumentation, a description of the procedure used to collect data, and the statistical analysis of the data.

Research Design

A case study is a comprehensive assessment of one setting, group, or event (Bogdan & Biklen, 2003). Thus, this research project can be classified as a case study in that it focuses on a particular group of people, teacher education program completers, in a

particular setting, Pitt-Bradford. Qualitative information was collected through interviews of key participants in the development and growth of the education program at Pitt-Bradford.

The sampling method chosen for the interviewees was, according to Patton (1990), a maximum variation sampling. This purposeful sampling strategy allows the researcher to identify emerging patterns from significant variation and is "of great value in capturing the core experiences and central, shared aspects or impacts of a program" (p. 172). In addition, an intensive study was completed on artifacts and documents such as newspaper clippings, books published on local historic events, and the University magazine, *Portraits* (Bogdan & Biklen, 2003; Gay, 1996).

Quantitative data collection was obtained through survey responses. Gay defined a survey as "an attempt to collect data from members of a population in order to determine the current status of that population with respect to one or more variables" (1996, p. 251). The *Armstrong Survey for Teacher Program Effectiveness*, which is based on 14 domains identified as essential components of effective teacher education programs via the literature review, will provide data on completers' perceived degree of importance and level of preparedness provided by the Pitt-Bradford teacher education program. These variables were operationally defined as scores on the researcher developed *Armstrong Survey for Teacher Program Effectiveness*. Both the qualitative and quantitative information collected were used to provide input on program design and structure.

Population and Sample

Participants for this case study were completers of the teacher education program at University of Pittsburgh at Bradford. Pitt-Bradford is located in rural northwestern Pennsylvania. The campus enrolled 1312 students in the fall of 2006. At the time of the study, there were 176 students registered as either elementary or secondary education majors representing about 13% of the student population.

The researcher obtained a list of all students who completed the education program since its conception in 1993. Because of the limited number, the researcher utilized the total population of program completers from both the elementary and secondary program resulting in a population of 206.

All completers, regardless of current employment, were asked to participate. There was no differentiation in data analysis for traditional or non-traditional students during fulfillment of the undergraduate studies leading to certification. Traditional students were identified as those age 24 or younger. Non-traditional students are identified as those who are 25 years of age or older (IES National Center for Education Statistics, n.d.) or are returning as post-baccalaureate students seeking teacher certification only. The target return rate was 50% plus one which calculated to 104 surveys (Kerlinger & Lee, 1999).

Instrumentation

Qualitative information was collected during interviews of individuals involved with program development and implementation. Interviewees were informed of the purpose of the interview as it relates to the research and assurances of confidentiality were given (Bogdan & Biklen, 2003). The interview format used was an informal

conversational style. Patton (1990) deemed this style appropriate when there is a need for flexibility in allowing the interview "to pursue information in whatever direction appears to be appropriate" (p. 281). The informal conversational interview format also allows the interviewer to approach the same interviewee on several occasions to ask follow up questions or for clarification of information as the project progresses. Patton claimed this approach allows the interviewer to be highly responsive to each interviewee thus allowing for differences which may exist among those interviewed and serves as a reliability and validity check.

In addition, material from an intensive study of artifacts and documents such as newspaper clippings, books published on local historic events, and the University of Pittsburgh magazine, *Portraits,* was collected for analysis. Qualitative information was assembled, analyzed, categorized by patterns in responses, and presented in a summative evaluation (Patton, 1990).

Data were gathered from Pitt-Bradford completers of the elementary and secondary education programs using the *Armstrong Survey for Teacher Program Effectiveness*. The *Armstrong Survey for Teacher Program Effectiveness* explores completers' perceptions on level of importance and level of preparedness of the various components of Pitt-Bradford's teacher education program.

The instrument was a 21 question survey divided into three sections. The first section (questions 1 – 6) was designed to gather demographic information including gender, current grade taught, number of years teaching, year completed, and current occupation if not teaching so that data analysis can identify differences in reports by sex, grade level, or years teaching.

The second section (questions 7 – 20) listed 14 domains identified as indicators of effective teacher education programs. The questionnaire asked respondents to report two things – first, how important they think specific variables in the areas of instruction, curriculum and professionalism are when teaching in a real classroom, and second, how well they think the education program at Pitt-Bradford prepared them in those areas. Questions seven through 13 addressed instruction; questions 14-17 addressed curriculum related topics, and questions 18-20 addressed professionalism.

The response format for the rank questions, a Thurstone scale, asked respondents to select from a list of statements that represent different points of view from those with which they are in agreement (Gay, 1996). The responses included extremely important, very important, moderately important, somewhat important, and unimportant for the value of importance. For the level of preparedness, the responses included very well prepared, well prepared, moderately prepared, somewhat prepared and unprepared (see Appendix A).

Question 21 was an open-ended question which asked completers to write in comments or suggestions that will help improve the education program at Pitt-Bradford. According to Bogdan and Biklen (2003), open-ended questions "allow the subjects to answer from their own frame of reference rather than from one structure by prearranged questions" (p. 3) often resulting in useful qualitative data.

A pilot study testing for readability was conducted with students taking fall courses at Marshall University Graduate College (MUGC). Subjects were graduate students currently enrolled in education courses. Each participant in the pilot was asked to complete the *Armstrong Survey of Education Program Effectiveness* which reflects

variables identified as indicators of effective teacher education programs. Next, each participant was asked to complete a survey polling his or her agreement along a 5 point scale, with the following statements: I thought the instructions were clear; I understood the questions; I understood the different sections; I thought there was enough detail in the question to feel comfortable rating the item on the provided scale; I thought the items were relevant to teachers; I thought the length of the survey was appropriate.

Each item elicited a respondent score on a Likert type scale ranging from 1 (I strongly disagree) to 5 (I strongly agree). Additionally, space was left after each item and respondents were prompted to clarify their ratings or add detail to their reports as appropriate for each item. Feedback was analyzed and subsequent revisions to the data analysis plan and changes in the instrument were made by the researcher (see Appendix B).

Data Collection Procedures

Qualitative information was collected through interviews of individuals involved with program development and implementation. Additional material from an investigation of artifacts and documents such as university web pages, catalogs, newspaper clippings, books published on local historic events, and the University of Pittsburgh magazine, *Portraits,* were also collected for analysis.

Self-reported surveys were mailed out to the target population. All program completers received a packet of information assembled by the researcher. The packet included a cover letter explaining the purpose of the survey, the importance of the participation of all completers, a confidentiality statement, a confirmation of approval by the Office of Research Integrity at Marshall University and the University of Pittsburgh,

and contact information for anyone who might have questions or need clarification (see Appendix C). The packet also contained the *Armstrong Survey of Education Program Effectiveness* with directions and a self-addressed, postage-paid return envelope.

Each postage-paid return envelope was coded with a unique identifying number which was tracked via a lookup table for re-mailing purposes only. Two weeks after the initial mailing, a post-card reminder was sent to those who had not yet responded (see Appendix C). Four weeks after the initial mailing, a second packet, including a follow-up letter (see Appendix C), was sent to those who did not respond in attempt to increase return rates (Dillman, 2000). With institutional review board approval, phone calls were made to remaining non-responders six weeks after the first mailing in attempts to increase return rates to meet the target rate of 50% plus one.

Data Analysis

Qualitative responses were analyzed, organized, and presented in a summative evaluation (Patton, 1990). Major events in the development and implementation of the program were described in chronological order. Pertinent details on the setting of Pitt-Bradford including the makeup of the students and faculty were provided. Details on program components as well as methods of student acceptance into the education program and required performances while completing the program were described. Information about previous program evaluations were included along with steps taken to improve the program based on results of the evaluations. Analysis of the qualitative input on the survey was completed and a summation of suggestions for program improvement was included in the research results.

Demographic data were coded on nominal and ordinal scales and entered into the database. Additionally, scores from each Thurstone scale was coded for every individual. Data representing questions from curriculum, instruction, and professionalism were analyzed. Subsequent analyses were conducted on individual items in addition to the cumulative scores. Data were entered by the researcher.

Open-ended question responses written onto surveys by respondents were analyzed, categorized, and reported as available. Patton (1990) stated, "any common patterns that emerge from great variation are of particular interest and value in capturing the core experiences and central, shared aspects or impacts of a program" (p. 172). Therefore, answers were analyzed and any developing patterns were identified and investigated.

An intensive study was completed on artifacts and documents such as newspaper clippings, and published books on the local history of Bradford, PA. In addition, qualitative data were collected through interviews of key participants and articles from the University of Pittsburgh magazine, *Portraits* on the development and growth of the education program at Pitt-Bradford.

Summary

This chapter provides information pertaining to the procedures utilized to collect and analyze data. This case study was designed to determine the effectiveness of the Pitt-Bradford teacher education program. Information for this case study was collected through interviews of key participants in the development and growth of the education program at Pitt-Bradford, an intensive study of artifacts and documents such as newspaper clippings, books published on local historic events, and a self-report survey

questionnaire titled the *Armstrong Survey of Education Program Effectiveness*. Due to the nature of the research and population size, the entire population was included in the survey. Descriptive data included the means and standard deviations, and frequencies as well as any other appropriate statistical analysis. Qualitative information written onto surveys by respondents was analyzed and reported as available. The data analyses conducted are presented in the following chapter.

CHAPTER FOUR: A PRESENTATION OF THE FINDINGS

Introduction

In order to perform a thorough investigation of the degree of importance and perceived level of preparedness of the instruction, curriculum and professional skills taught through the University of Pittsburgh at Bradford coursework a comprehensive case study was conducted on the teacher candidate preparation program. The study was conducted through mixed methods in which both quantitative and qualitative data were collected.

The history of the education program was explored through interviews of individuals involved with program development and implementation. Furthermore, an intensive study of artifacts and documents such as newspaper clippings, books published on local historic events, and the University of Pittsburgh magazine, *Portraits,* was conducted. In addition, the study obtained specific feedback from completers of the Pitt-Bradford program on their perceptions of the importance of instruction, curriculum, and professionalism in a teacher preparation curriculum as well as their beliefs about their preparation in these areas. The results of the study are based on gathering of historical data on the development and past performance of the program as well as feedback from program completers. This chapter presents data to address each of the research questions.

Qualitative Case Study

History of the City of Bradford, PA

"Where there was once hemlock and pine, now there was brick, stone, concrete and steel to give every mark of permanency to our town."

(Johnston, 1979, p. 24)

A mountainous and untamed area of northwestern Pennsylvania, which would later become known as Bradford, was first settled around 1823. The first inhabitants were prospectors depending on the lumber industry, but hoping to strike it rich by locating a stream of coal as found elsewhere in Pennsylvania. Strike it rich they did, but not in the manner expected. In 1875, the population of the area had grown to approximately 600 people and Lewis Emery, Jr. recognized Bradford's potential as a fossil fuel reserve. He drilled the first well in 1875 and struck oil; the boom was under way. "Oil-crazed they were. Men who knew nothing about oil knelt to feel and smell the earth" (Johnston, 1979, p. 9). By the end of the century wells were producing one hundred thousand barrels of oil daily and the population of Bradford had grown to over 15,000 (Johnston, 1979).

The Bradford region was recognized as the first billion dollar oil field (*Penn-Brad Oil Museum*, n.d.). Dozens of mansions sprang up in the valley to house the many millionaires and their families. The lumber industry also continued to add to the wealth of the region. The scores of oil wells and rapid development, including an extensive railroad transportation system, began to take its toll on the natural resources of the region. The oil itself was not an unlimited supply and by the first part of the 20th century, the oil wells were beginning to dry up (Johnston, 1979).

The History of the University of Pittsburgh at Bradford

Until the early 1960s there were no institutions of higher education in the northwestern region of Pennsylvania. In 1962, Raymond N. Zoerkler, a Bradford geologist with the Hanley and Bird Company, and Robert Cole, Bradford Hospital's chief administrator, made a request to Edward H. Litchfield, chancellor of the University of

Pittsburgh at the time, to propose that Pitt establish a campus in that northwestern region of Pennsylvania. On October 16, 1962, Chancellor Litchfield approved the creation of a new Pitt campus in the northwestern region. Litchfield followed his announcement by appointing a committee of community leaders to serve as the advisory board for the new Pitt campus in Bradford. Dr. Donald E. Swarts was named the first president and J.B. Fisher, president of Kendall Refining, was named the first chairman of the advisory board (*Shaping a Campus*, n.d.).

The advisory board immediately began work to open the University of Pittsburgh at Bradford (Pitt-Bradford). The board purchased a building from Bradford Hospital and renovated it into classrooms, laboratories, a library and student lounges. On September 3, 1963, Pitt-Bradford's first class of students began courses. At conception, Pitt-Bradford was a two-year feeder college. The campus attracted students from all over Pennsylvania, as well as from New Jersey, New York and other states and offered transfer programs to 143 full-time and 145 part-time students. By 1964, the student body had grown to 380 full-time and 100 part-time students. A need for student housing was evident, so the college purchased a local 125-room hotel to provide living quarters for resident students (*Shaping a Campus*, n.d.).

Development of a New Campus. Growth continued and on April 18, 1967, J.B. Fisher announced that Witco-Kendall Corporation would donate approximately 78 acres of land for the construction of a new campus. Simultaneously, the City of Bradford and Bradford Township jointly announced they would make a 33-acre parcel of adjacent land available to Pitt-Bradford for development as a recreation area. This setting, just outside

of the city of Bradford, became the site for a new, expanded campus (*Shaping a Campus*, n.d.).

In the early 1970s Pitt-Bradford began construction of the new campus. The construction of two academic buildings, Swarts Hall and Fisher Hall, began. Over the next two decades, other capital improvements including a residence hall complex, a sports center, outdoor recreational and athletic fields, a student union, and a library were completed (*Shaping a Campus*, n.d.).

Campus expansion and growth were revitalized in 1995 when the college announced the success of its ongoing capital campaign. More than $10 million was raised, exceeding its goal by more than 25%. One significant contributor was the Blaisdell family of Bradford, owners of Zippo Manufacturing. Their dollar-for-dollar matching gift program for the college's fine and performing arts building project accounted for nearly $3.5 million. In October 2002, the college launched its $13 million Complete the Campus campaign. The goal was to help the college secure the facilities, technology, student financial aid and academic support to attract and support an enrollment of 1,500 full time equivalent (FTE) students (*Shaping a Campus*, n.d.).

Program Growth. While the new campus was under construction, Pitt-Bradford shifted its academic focus from two-year to four-year programming. The first degree program, an A.S. in petroleum technology in 1975, was expanded in 1979 with the designation of baccalaureate degree-granting status by Pitt-Bradford Board of Trustees and the Pennsylvania Department of Education. With financial assistance from a Title III grant, Pitt-Bradford added several bachelor-level programs beginning in 1985: biology, computer science, geology, history/political science, chemistry, economics, psychology,

mathematics and communication (*Shaping a Campus*, n.d.). A collaborative effort with St. Bonaventure to provide courses for teacher education also began in 1985.

Campus Demographics. The enrollment for Pitt-Bradford during the fall of 2006 was 1,312 students. Of these, 1111 students were enrolled full-time with the remaining 201 students attending part-time. Minority students constituted 6.1% of the total population with 79% of the students being of traditional age. The majority of students (85.5%) who attend Pitt-Bradford are from Pennsylvania.

Currently, the total faculty count at Pitt-Bradford is 122. There are 65 full-time faculty members with an additional 57 part-time faculty. The student to teacher ratio is 13:1 with the typical class size around 17 students. Faculty demographics reveal there are nearly twice as many full-time male faculty members as female. Approximately 62% of the full-time faculty members have an earned doctorate or other terminal degree. Twelve percent of the full time faculty are minority.

General Education Course Requirements. The University's general requirements for the bachelor's degree include the following: a) minimum of 120 semester credits with at least 30 credits in upper-level courses; b) the General Education Program; c) the major, which includes satisfying the requirements of the department(s) responsible for the major; d) a minor, if one is required by the department responsible for the major; and e) and a cumulative Quality Point Average of 2.00 in all University courses. There is a residence requirement (the final 30 semester credits and at least half of the credits in the major must be completed at Pitt-Bradford). No more than 12 credits with S grades can be applied toward the 120 semester credits. Furthermore, all courses required for a major, minor, and General Education Program must be taken for letter

grades with the exception of those courses designated as graded S or N only. Finally, to receive the final diploma, there is an obligation for settlement of all financial obligations to the University (*General Policies*, n.d.).

The General Education Program that all majors are required to include is comprised of 50 hours and includes the following components: Written Literacy 6 credits; Mathematics 3 credits; Freshman Seminar 3 credits; Arts and Letters 9 credits; Behavior, Economic, and Political Science 9 credits; History, Culture, and Philosophical Inquiry 9 credits; Physical, Life, and Computational Sciences 10 credits; and Physical Education 1 credit (*General Policies*, n.d.). Currently, there are 26 majors offered leading to baccalaureate degrees (B.A., B.S., B.S.N.), and three majors leading to associate degrees (A.S., A.A.) offered at Pitt-Bradford (*By the Number: Fact Sheet,* n.d.).

Library Resources. Library resources for Pitt-Bradford students are substantial. Overall, Hanley Library holdings include more than 89,000 volumes (books) and more than 4,000 types of audio-visual material (including audio CD and cassette), videos, kits, puppets, etc. About 206 of the audio-visual materials are specifically related to elementary or secondary education. Furthermore, there are 342 print journal titles of which 27 specifically relate to elementary or secondary education, and 14,470 microform titles either microfilm or microfiche.

In addition, through the University Library System, students have access to: more than 9,000 e-journals of which about 388 specifically relate to elementary and secondary education, approximately 170,000 e-books, 250 databases including several general all purpose databases, plus five specifically relating to education including ERIC.

PITTCat is the online catalog for all University of Pittsburgh Libraries (ULS). For items needed but not housed in Bradford, users are invited to request items through Interlibrary Loan from other ULS libraries or from E-Z Borrow, a consortium of over 50 college and university libraries.

Curriculum Resource Center. The Curriculum Resource Center (CRC) was added to Pitt-Bradford's education program in the fall of 2005. The mission of the CRC is to "support the curriculum of the education program by providing quality materials and services to pre-service teachers and education department faculty" (*Curriculum Resource Center*, n.d.). The goals of the CRC are to provide the following services: a) collect and house quality P-12 curriculum materials including teacher resource books, curriculum guides and/or standards, P-12 textbooks, children's and young adult literature, and media materials (audio and visual materials intended for use in P-12 settings); b) communicate and promote available materials and services to pre-service teachers and education faculty, as well as to all other members of the campus community of learners; c) invite and welcome local educators, camp counselors, home school families, etc. as users of the CRC materials and services; d) collaborate with education faculty in CRC collection development; and e) assess the CRC with the cooperation of the library director and education program director (Curriculum Resource Center, n.d.).

The CRC is located in the library and includes a collection of children's and young adult literature and K-12 textbooks for certification areas offered on campus. There are puppets and kits available and some more traditional teacher resources as well. Connected to the Center are two rooms containing a computer, color printer, Ellison Machine, and consumable teaching materials.

Marietta Frank (personal communication, June 12, 2006), writer of the grant which funded the CRC, is delighted with the ways that the CRC is being used. Frank commented that she has seen several students who are not education majors use the CRC for various reasons. In some instances, students prefer to study in the comfortable atmosphere sitting on bean bag chairs and surrounded by children's books and puppets. In other circumstances, non-education students use the materials to prepare for other classes such as public speaking or sociology.

According to Frank (personal communication, June 12, 2006), education students and instructors are utilizing the CRC to a great extent. Several education instructors bring their classes to the CRC throughout the course of the semester to use the materials, or even provide an opportunity to teach mock lessons in the classroom-like atmosphere. The reading methods teacher, who is also an elementary teacher in the Bradford area School District, brings her school students on campus for cooperative activities with her reading methods students. Frank has also witnessed some education students bringing their own children to the CRC to take advantage of the children's literature and teaching resources available.

Members of the Bradford community are also utilizing the CRC. On several occasions, Frank (personal communication, June 12, 2006) has seen adults, who are not students at Pitt-Bradford, with children in the CRC tutoring, reading, and otherwise using the area in the manner for which it was intended. Frank proudly admitted that she truly believes all the goals of the CRC were met this school year.

University of Pittsburgh at Bradford's Education Program

In 1985, Pitt-Bradford began a cooperative effort with St. Bonaventure University to provide certification in both elementary and secondary education areas. As interest in the program grew and enrollment figures increased, Pitt-Bradford's education program began to look for ways to offer its elementary education courses in Bradford rather than students having to travel to St. Bonaventure, which is located in Allegany, NY.

According to Marietta Frank (personal communication, June 12, 2006), Reference and Bibliographic Instruction Librarian who served as coordinator of the education program for 10 years, there were numerous reasons for the decision to create an education program solely based at Pitt-Bradford. First, Pitt-Bradford paid the difference in tuition for qualifying (based on GPA) students who were taking education classes at St. Bonaventure University. Considering the fact that St. Bonaventure is a private college in a neighboring state, the tuition difference amounted to a considerable sum.

Second, the challenges of having two campuses were becoming overwhelming with varying starting and ending dates for semesters and different holiday and break dates. In some instances, students who were taking classes at both sites might go without a spring break or experience longer semesters because of the different university calendars.

The third reason manifested itself in the difficulty in coordinating courses scheduled between two campuses. Developing a schedule which allowed students to have access to needed courses in a timely fashion was not an easy task.

Fourth, students were having trouble identifying which campus was considered their home campus. When asked to fill out forms for Praxis exams, students were often uncertain which school to list for where they received their training in education.

And finally, the cooperative program was very difficult to explain to prospective students and their parents. There was some concern that this confusion could lead to recruitment difficulties. Furthermore, parents of more traditional students were hesitant to have their children driving to the St. Bonaventure campus to take the required courses. In the fall semester of 1991, Pitt-Bradford separated from St. Bonaventure and began its cooperative elementary education program with the School of Education at Pitt-Oakland. Conversion of the secondary program followed shortly thereafter. Pitt-Bradford's first class of teachers, consisting of four students, completed the program in the spring of 1992 (Educating Educators, 1998).

In 2003, Pitt-Bradford requested permission to approach the Pennsylvania Department of Education for stand alone status and it was granted. The University of Pittsburgh still required, however, that education students complete a double major. This meant that students seeking certification in elementary or secondary education had to combine the education major with another content major at Pitt-Bradford. Students wishing to be certified in secondary education areas would select the appropriate related content areas: math education with math, English education with English, etc. Post-baccalaureate students who sought certification at the secondary level had to possess a related first major and complete coursework to fulfill the core requirements in the education major. The elementary major could be paired with any content area major at Pitt-Bradford.

In the spring of 2006, however, the double major was eliminated and students could then graduate with a Bachelor of Science in Education (*Education Program,* n.d.). Currently, students pursuing teaching licensure through Pitt-Bradford can major in Elementary Education or Secondary Education in the fields of Biology, Business, Chemistry, English, Environmental Education, Health and Physical Education, Mathematics, and Social Studies.

In addition to the teaching majors, a non-teaching education minor is provided at Pitt-Bradford. Students who wish to work with children, such as a therapeutic support staff or as juvenile probation officers or counselors, can take courses on the learning and development of children. The minor is designed to help pre-professionals understand the school setting where children spend the greater part of each day; to learn about the health and wellness of all children; and to better understand the growth, development, and education of the exceptional child (*Education Program,* n.d.).

To complete the program, student teachers complete a 14 week student teaching experience. To qualify as a cooperating teacher, one must have three years of satisfactory certificated teaching experience, and have at least one year in the building in which the student teacher is placed (*Chapter 354 General Standards,* n.d.). In addition, the cooperating teacher must be teaching and certified in the same certification area which his or her student teacher is seeking. Additionally, Pitt-Bradford has guidelines governing the student teacher experience. First, students may not have both placements in the same school district and placements must occur at two different grade levels. For elementary student teachers, one placement must be in Kindergarten, first, second, or third grades. The second placement is at the fourth, fifth or sixth grade levels. For

secondary student teachers, one placement must be at grade seven, eight, or ninth grades, and the other placement must be at the tenth, eleventh, or twelfth grade level.

Pitt-Bradford places students in McKean County as well as neighboring counties and, occasionally, students are placed in schools in the neighboring state of New York. Both public and private schools are utilized. Cooperating teachers are brought in for orientation before each term and also provided with a handbook that is updated yearly.

Mission. The mission statement of Pitt-Bradford's teacher education program maintains:

> The University of Pittsburgh at Bradford is dedicated to the education of students in a world of rapid political, economic, scientific, and cultural change. The Education Department seeks to graduate students who have general knowledge and specific content knowledge, as well as sound theory and practice in education (*Mission Statement,* n.d., ¶2).

The program strives to fulfill that mission by meeting the following goals: a) helping students acquire computation, communication, information-gathering skills, and critical thinking skills; b) requiring education students to follow the same curriculum as others ensures that their knowledge of the content area will be the equivalent of those not seeking certification; c) promoting interaction between students, faculty and master teachers from the area; and d) providing field based experiences through the entire education curriculum (*Mission Statement,* n.d.).

Program Demographics. According to data from enrollment services, for the fall of 2006, there were 176 declared elementary or secondary education majors at Pitt-Bradford. Of those 176 students, 160 were full-time with the remaining 16 designated

part time. Sixty-nine percent (n=122) of students were female and the remaining thirty-one percent (n=54) were male. A total of four education majors were minorities and 120 were traditional students. Traditional students were identified as those age 24 or younger. Non-traditional students are identified as those who were 25 years of age or older (IES National Center for Education Statistics, n.d.).

Data collected from the most recent Title II report which covered the years 2005-2006 reveals the following information: The number of students enrolled in the Introduction to Education course was 311 compared to 248 in the previous five year report spanning 1996 to 2001. The average age of students was 24.5 with the gender favoring female at 72%. Ninety-five percent of the students were Caucasian. Eighty-eight percent were from Pennsylvania. Seventy-five percent of the students were enrolled full time.

A total of 27 teacher candidates registered to take the Praxis I or Praxis II exam during the 2005-2006 school year. The number of candidates does not equal the sum of the total tests taken since a candidate can take more than one assessment. There was a 100% success rate of the ten students who took the Praxis I PPST test in each of the three areas of reading, writing and math. Twelve of the thirteen students who attempted the Elementary Education Curriculum and Instruction test passed resulting in a 92% success rate. Finally, 15 out of 15 students taking the Fundamental Subjects Content Knowledge test passed resulting in an additional 100% pass rate.

Passing rates for secondary program completers were not reported due to the lack of sufficient reporting numbers. To report results with less than ten scores could skew percentages disproportionately. However, according the J. C. Burgert (personal

communication, February 11, 2007) all four students who took the English Language Literature Content Knowledge test passed on the first try, two of the three who took the Social Studies Content Knowledge test passed, both students who took the Business Education test passed, and the student who took the Environment Education Test also passed.

Pennsylvania Department of Education Review Process

According to the Pennsylvania Department of Education, the requirements for a state-approved teacher education program have been raised significantly in recent years. State approved teacher education programs must pass an approval process based upon general and subject-specific guidelines, rather than a minimum number of credits. These criteria set by the Department of Education and implemented by the preparing institution, are based upon the ten standards of Chapter 354: mission, assessment, admissions, design, field experiences, student teaching, collaboration, advising and monitoring, exit criteria and faculty (*Rules and Regulations*, n.d.).

The PA Department of Education conducts evaluations to ensure the requirements in Chapter 354 are met prior to approving a preparing institution. The Department may review approved preparation programs at any time, but regular evaluations of approved programs are conducted at 5-year intervals. Evaluation teams are appointed by the Department and are comprised of professional educators and personnel from institutions of higher education. The evaluation teams' recommendations to the Department determine the approval of programs (*Rules and Regulations*, n.d.).

Pitt-Bradford last underwent a PA review in 2002. The program passed the review and was granted a five year approval. However, six of the ten categories were

cited for the standard being met with weakness and the University had to respond on how those weaknesses would be addressed.

First, standard one, Mission, was met with weakness. Pitt-Bradford failed to prove they had a broadly-based collaborative effort on the development of the mission statement. In addition, the mission statement was not found in the general catalog or on the website. The response was to have the Teacher Education Advisory Committee meet and review the mission statement. The mission statement was posted on the website, and included it in the next revision of the catalog. In addition, during the summer of 2006, brochures on the education program were published for recruiting purposes. These brochures also included the mission statement.

Standard two, assessment, was also met with weakness. During the time of the 2002 review, Pitt-Bradford was still under the umbrella of the main campus and their information was part of the aggregate information supplied to the main campus of University of Pittsburgh at Oakland; therefore, Pitt-Bradford did not have data unique to its own students. This weakness was corrected once Pitt-Bradford became a stand alone program and was able to collect data for only those students enrolled in the Pitt-Bradford education program.

Field experience, standard five, was also met with weakness because of Pitt-Bradford's failure to provide evidence that the field experiences reflect a range of sequential and developmental experiences. Furthermore, Pitt-Bradford failed to prove if those experiences required the teacher candidates to work with diverse students in diverse settings. The response for this weakness suggested a partial disagreement with the finding. The written response indicated that the field experiences do relate to course and

program objectives as evidenced by course syllabi. The only field experience not directly associated with a particular course was a 25 hour tutoring assignment for elementary education majors. The issue of evidence of working with diverse students was not addressed in the response. The Educating the Exceptional Child course, which was added in the spring of 2001, does, however, include six hours of field experience observing special needs students.

Standard six, student teaching, was met with weakness with the recommendation that the education program establishes selection criteria for potential cooperating teachers and develop well-planned training sessions for those teachers. Pitt-Bradford's response was to develop an application form for cooperating teachers which clearly defined the selection criteria. In addition, Pitt-Bradford continues to work on the development of close working relationship with area school administrators in an effort to encourage administrators to recommend only those teachers who would provide a worthwhile experience for student teachers.

The fifth area of weakness noted in the 2002 Pennsylvania Department of Education review of Pitt-Bradford's education program was in standard ten, exit criteria. This citation was made because Pitt-Bradford failed to cross-reference their course offerings with PA Academic Standards and Learning Principles. The response was that a syllabus workshop was held to assure that each syllabus would reflect the integration of PA Academic Standards and how each course contributed to the attainment of the Learning Principles.

Standard ten, faculty, was the final area of weakness noted by the PA review team. Pitt-Bradford met this standard with weakness because, although elementary

education students comprised the majority of students enrolled in the program, none of the full-time education faculty had background in elementary education. In addition, it was recommended that the program develop and use a system to monitor the performance and effectiveness of adjunct faculty. Pitt-Bradford addressed this concern by employing a full-time faculty member with elementary education experience. Adjunct faculty must prove effectiveness through high student ratings for professional performance and new adjunct faculty must go through an initiation process and be subject to the university-wide student evaluation process as well as peer observation and review.

Based on the five year review cycle, the education department of Pitt-Bradford should have been for reviewed during the 2006-2007 school year. However, the PA Department of Education teacher certification review process is currently undergoing major revisions and the review process has been temporarily suspended until the changes are complete.

Survey Results

An extensive investigation of Pitt-Bradford's education program was performed based on data gathered from completers' reports of perceived value of content in the areas of curriculum, instruction, and professionalism. In addition, completers rated how well prepared they were for real-world teaching by the content of the Pitt-Bradford teacher education program. Lastly, program completers were afforded the opportunity to provide suggestions for program improvement.

Description of the population

Quantitative data were obtained through survey responses. The pilot of the survey was completed and editorial changes were made for clarity and readability as

recommended by the pilot group. The *Armstrong Survey for Teacher Program Effectiveness* (see Appendix A), which is based on 14 domains identified as essential components of effective teacher education programs via the literature review, provided data on completers' perceived degree of importance and level of preparedness provided by the Pitt-Bradford teacher education program.

The original mailing of 206 packets to program completers occurred on October 19, 2006. A follow-up postcard was sent two weeks later, and a third mailing to non-responders was mailed on November 20, 2006. In an attempt to increase return rates to meet the targeted 50% plus one the researcher made a final contact, with IRB approval, in the form of phone calls two months after the initial mailing.

A total of 107 responders (52%) participated in the survey. There were 82 females (76.6%), 23 males (21.5%), and two (1.9%) who did not identify their sex. Sixty-four (59.8%) of the responders entered the program as baccalaureate seeking. Forty (37.4%) entered as post-baccalaureate students seeking teacher certification. Three (2.8%) responders did not supply this information. Seventy-six (71%) of the responders identified themselves as currently holding a teaching position. Twelve (11.2%) stated they were substitute teaching. Eleven responders (10.3%) indicated they were in other education related positions. These included teacher support staff, therapeutic support positions, graduate level work, and administrative positions. Seven responders (6.5%) identified themselves as currently not employed in an education field. One responder (.9%) did not provide this information.

The mean years of teaching experience was 3.72 and the mean years since program completion was 5.07. Forty-eight of the responders completed the program

prior to 2003 with the remaining 59 completing between the years 2003 and 2006. The purpose for breaking completers into these two categories was for further data analysis comparing responses of those who completed the program prior to Pitt-Bradford being a stand alone program to those who completed after this status was granted.

Current grades taught were broken into categories based on common public school configurations. Based on these configurations, five responders (4.7%) currently teach in preschool or kindergarten, nine responders (8.4%) teach in first or second grade, 14 (13.1%) in upper elementary identified as grades three, four and five, 15 (14%) in middle grades including sixth, seventh, and eighth grades, 21 (19.6%) responders identified themselves as currently teaching in high school, and eight (7.5%) in a junior high/high school split. A total of 12 responders (11.2%) identified themselves in other areas which did not fall into the previously mentioned categories.

Data Analysis

Six research questions were developed to ascertain the level of preparedness and degree of importance of the instruction, curriculum and professional skills taught through the Pitt-Bradford coursework. The area of instruction was addressed through questions seven through 13 on the survey. Curriculum was addressed in questions 14, 15, 16 and 17. Professionalism was covered in questions 18 through 20. Reliability on summative variable scores grouping specific items using Chronbach's Alpha denied cohesiveness of the individual components as a summative whole because of the diverse nature of their content. Therefore, the larger conceptual areas will be represented by the individual items. Missing data were left blank in attempt to have more authentic interpretation of the data.

Question #1. How do program completers rate the importance of instruction?

The survey questions related to the area of instruction in Table 1 included the ability to perform the following tasks: classroom management, engage students, motivate students, address diversity in the classroom, teach at developmentally appropriate levels, use technology and use alternative assessments. The responses were rated on a Thurstone scale of one to five with the numbers respectively representing the range of statements: unimportant, somewhat important, moderately important, very important and extremely important.

The data identified that responders rated importance of ability to manage the classroom on the high end of very important (M = 4.90, SD = .295). The ability to engage students was rated very important (M = 4.71, SD = .514). The third question in instruction, ability to motivate students, was rated very important (M = 4.70, SD = .502). Ability to address diversity in the classroom was also rated very important, but at a slightly lower rate (M = 4.11, SD = .975). The high standard deviation on this question resulted from the range of scores from the lowest level of one, unimportant, to the highest level of five, extremely important.

Ability to teach at developmentally appropriate levels was ranked by responders as very important (M = 4.63, SD = .561). Ability to use technology also had a wide range of one to five resulting in an overall rating at the low end of very important (M = 4.09, SD = .931). The final question, ability to use alternative assessment, also rated on the low end of very important (M = 4.11, SD = .800) with a wide range of responses from one, unimportant, to five, extremely important.

The importance of differentiation in the classroom was demonstrated through two responder's comments including "Differentiation is HUGE!" and "The Educating of the Exceptional Child class was important." In addition, one comment on the importance of motivation was provided by a responder. "Theory and knowledge mean nothing if you don't understand how to motivate them to learn."

Table 1

Perceived Level of Importance of the Identified Seven Characteristics of Instruction in an Effective Teacher Education Program

	N	Min.	Max.	Mean	Std. Dev.
Ability to manage the classroom	105	4	5	4.90	.295
Ability to engage students	105	3	5	4.71	.514
Ability to motivate students	105	3	5	4.70	.502
Ability to address diversity in the classroom	104	1	5	4.11	.975
Ability to teach at developmentally appropriate levels	104	3	5	4.63	.561
Ability to use technology	105	1	5	4.09	.931
Ability to use alternative assessment	105	1	5	4.11	.800

Question # 2. How do program completers rate their level of preparedness in the area of instruction? The survey questions related to the area of preparedness in instruction included the ability to perform the following tasks: classroom management, engage students, motivate students, address diversity in the classroom, teach at developmentally appropriate levels, use technology and use alternative assessments. Findings are illustrated in Table 2. There were a wide range of answers from one, unprepared, to five, extremely well prepared in all but one item in this category. According to the data, responders rated their preparedness in the ability to manage the classroom as moderately prepared (M = 3.15, SD = .973). The ability to engage students was rated moderately prepared (M = 3.66, SD = .866). The third question in instruction, ability to motivate students, was rated moderately prepared (M = 3.46, SD = 1.042).

Ability to address diversity in the classroom was also rated moderately prepared, but at a slightly lower rate (M = 3.03, SD = .923). Ability to teach at developmentally appropriate levels was ranked by responders as moderately prepared (M = 3.20, SD = .934). Ability to use technology also had a wide range of one to five resulting in an overall rating at the low end of moderately prepared (M = 3.49, SD = 1.236). The final question, ability to use alternative assessment, also rated on the low end of moderately prepared (M = 3.14, SD = 1.092).

Comments by responders overwhelmingly indicated a need for more preparation in diversifying instruction. Comments included statements such as the following: "I feel that more should have been taught in the area of teaching students with major behavior issues and students with social and emotional issues," "Greater emphasis on differentiation for all students," "More classes on special education and IEP's, adapting classroom lessons and tests," "My Pitt methods classes helped me to learn subject matter and teach particular lessons, but not so much how to differentiate those particular lessons to meet the many different needs. I wish I had gotten more help with identifying 'special needs' children and 'gifted' children."

Another area which solicited several comments from responders was in the area of classroom management. "Having taught for six years, I feel that I was not as prepared as I should have been in the area managing a classroom," "I would encourage Pitt to emphasize classroom management more in their teacher preparation," "More classroom management courses need to be taught. I remember feeling that this was an area that I felt totally helpless in and struggled with my first year of teaching."

Responder's comments also indicated a lack of information on alternative assessment. Comments included suggestions for "More information on alternative assessments" and recognition of "I think that assessments are an area where I could have been more prepared," and "Designing assessments and different ways to assess rather than tests."

Finally, the need for more training in the areas of motivation and engagement were identified through the following comments: "Address more ways to motivate students, not only engage them," "Need to focus on motivating students to learn…," "How to communicate with teenagers to get them on your side to be able to engage and motivate them."

Table 2

Perceived Level of Preparedness of the Identified Seven Characteristics of Instruction in an Effective Teacher Education Program

	N	Min.	Max.	Mean	Std. Dev.
Ability to manage the classroom	104	1	5	3.15	0.973
Ability to engage students	104	2	5	3.66	0.866
Ability to motivate students	104	1	5	3.46	1.042
Ability to address diversity in the classroom	103	1	5	3.03	0.923
Ability to teach at developmentally appropriate levels	102	1	5	3.20	0.934
Ability to use technology	103	1	5	3.49	1.236
Ability to use alternative assessment	104	1	5	3.14	1.092

Question # 3. How do completers rate the importance of curriculum?

Table 3 represents the questions on the survey that were related to importance of curriculum including knowledge of the following items: curriculum design, subject matter content, instructional techniques, and bridging theory and practice. Knowledge of curriculum design was rated by responders as very important (M = 4.05, SD = .836). Knowledge of subject matter content was also rated as very important (M = 4.51, SD =

.710). Knowledge of instructional techniques was rated very important (M = 4.37, SD = .738). Knowledge of bridging theory and practice through field-based experiences was rated on the high end of moderately important (M = 3.97, SD = .980). All of the questions in the area of curriculum demonstrated high standard deviations due to the large range in minimum to maximum answers reported by the responders.

Many comments were given by responders on their perception of the importance of field based experiences. One responder stated, "Hands on is the best experience. Teaching a lesson in front of your peers is nothing like being in front of children." Another responder concurred, "I would recommend more time in a real classroom teaching lessons instead of teaching practice lessons to college peers. Also, starting to observe and teach before method classes would help prepare students and allow them to be sure that education is indeed the profession for them." The perceived importance of field experiences was also validated by the responder who wrote, "It is actual experience in a classroom that determines success."

One comment on the importance of using Pennsylvania Academic standards to create lessons was given, "Incorporating PA Content Standards and Anchors in student teaching for our lesson plans and using the Pitt template for lesson plans is impressive to administrators."

Table 3

Perceived Level of Importance of the Identified Four Characteristics of Curriculum in an Effective Teacher Education Program

	N	Min.	Max.	Mean	Std. Dev.
Knowledge of curriculum design	105	2	5	4.05	.836
Knowledge of subject matter content	104	2	5	4.51	.710
Knowledge of instructional techniques	104	1	5	4.37	.738
Knowledge of bridging theory and practice	104	1	5	3.97	.980

Question # 4. How do completers rate their level of preparedness in the area of curriculum? The questions on the survey that were related to preparedness of curriculum include knowledge of the following items: curriculum design, subject matter content, instructional techniques, and bridging theory and practice are displayed in Table 4. Knowledge of curriculum design was rated by responders on the low end of moderately prepared (M = 3.06, SD = 1.127). Knowledge of subject matter content rated as moderately prepared (M = 3.71, SD = 1.160). Knowledge of instructional techniques was also rated moderately prepared (M = 3.83, SD = .991). Knowledge of bridging theory and practice through field-based experiences was rated by responders as moderately prepared (M = 3.55, SD = 1.109). All of the questions in the area of curriculum demonstrated high standard deviations due to the large range in minimum to maximum answers reported by responders.

Comments from responders regarding their perception of how well prepared they were focused greatly on field based experiences. According to one responder, "I learned the most from field experiences such as observations, student teaching, doing lessons." Another responder indicated there was a need for more classroom teaching and observation time, "More classroom experience would have been helpful – too much time was spent at Pitt-Bradford." Other comments addressed the responder's perception on preparation of content, particularly in the area of methods courses. "Elementary Education is focused on reading/literacy activities. While at Pitt I only took one course in which this was the focus. All of the others, teaching science, social studies, arts and music were not as valuable. Perhaps the focus of these courses should be literacy based" and "The teachers that taught methods courses during my time did not prepare me with

current theories/practices. For example, balanced literacy. Other graduates from 'state schools' were exposed to these things." One comment indicated the need for better preparation in aligning content with Pennsylvania Academic Standards.

Table 4

Perceived Level of Preparedness of the Identified Four Characteristics of Curriculum in an Effective Teacher Education Program

	N	Min.	Max.	Mean	Std. Dev.
Knowledge of curriculum design	103	1	5	3.06	1.127
Knowledge of subject matter content	101	1	5	3.71	1.160
Knowledge of instructional techniques	103	1	5	3.83	0.991
Knowledge of bridging theory and practice	103	1	5	3.55	1.109

Question # 5. How do completers rate the importance of professionalism?

The third, and final, category under the importance of the different program components, the area of professionalism, is presented in Table 5. The individual survey questions addressing this category included ability of the teacher to collaborate with others, willingness to participate in professional development, and ability to identify and utilize classroom and external resources. An inspection of the results reveals that the importance of collaborating with others was rated by responders as very important (M = 4.55, SD = .720). Willingness to participate in professional development was also rated as very important (M = 4.06, SD = .853). The final question, ability of the teachers to identify and utilize classroom and external resources rated as very important (M = 4.34, SD = .758).

One responder indicated the importance of collaboration with outside agencies as evidenced by this statement, "Spend observation hours at education-related facilities (Guidance center, Beacon light, etc.) to see how many of these 'outpatient' services are now in the schools."

Table 5

Perceived Level of Importance of the Identified Three Components of Professionalism in an Effective Teacher Education Program

	N	Min.	Max.	Mean	Std. Dev.
Ability of teacher to collaborate with other teachers, parents, and administrators	105	2	5	4.55	.720
Willingness of teachers to participate in professional development	105	2	5	4.06	.853
Ability of teachers to identify and utilize classroom and external resources	104	2	5	4.34	.758

Question #6. How do completers rate their level of preparedness in the area of professionalism? Table 6 represents the third, and final, category under the level of preparedness of the different program components, professionalism. The individual survey questions addressing this category included ability of the teacher to collaborate with others, willingness to participate in professional development, and ability to identify and utilize classroom and external resources. Responders rated they were moderately prepared (M = 3.22, SD = 1.254) in the area of collaborating with others. Willingness to participate in professional development was also rated as moderately prepared (M = 3.44, SD = 1.144). The final question, ability of teachers to identify and utilize classroom and external resources, was rated by responders as being moderately well prepared (M = 3.62, SD = 1.025).

Two comments by responders disclosed the belief that more preparation was needed in the area of collaboration. "I feel that I was not as prepared as I should have been in the area of dealing with parents," and "My only suggestion would be to address the collaboration with parents and administration."

Table 6

Perceived Level of Preparedness of the Identified Three Components of Professionalism in an Effective Teacher Education Program

	N	Min.	Max.	Mean	Std. Dev.
Ability of teacher to collaborate with other teachers, parents, and administrators	104	1	5	3.22	1.254
Willingness of teachers to participate in professional development	101	1	5	3.44	1.144
Ability of teachers to identify and utilize classroom and external resources	102	1	5	3.62	1.025

Ancillary Data Analysis

The purpose of the study was to determine how well Pitt-Bradford prepared teacher candidates. Therefore, an obvious data analysis which needed to be performed was a comparison of how program completers rated level of importance to their levels of preparedness on each of the 14 domains. To test for significant differences between level of importance and perceived level of preparedness on each of the 14 domains, a paired samples t-test was used. Table 7 demonstrates that on all 14 domains identified as domains of effective teacher education programs, responders ranked the level of importance at a significantly higher level than their perceived level of preparedness.

Table 7

Level of Significance based on Paired T-Test of the Fourteen Program Components

		t	df	Sig. (2-tailed)
Pair 1	Manage classroom	17.803	103	.000
Pair 2	Engage students	11.514	103	.000
Pair 3	Motivate students	11.418	103	.000
Pair 4	Address diversity	8.645	102	.000
Pair 5	Developmentally appropriate	12.333	101	.000
Pair 6	Use technology	4.092	102	.000
Pair 7	Alternative assessment	6.903	103	.000
Pair 8	Curriculum design	7.345	102	.000
Pair 9	Subject matter	5.882	99	.000
Pair 10	Instructional techniques	4.505	102	.000
Pair 11	Field-based experiences	3.344	102	.001
Pair 12	Collaboration	10.067	103	.000
Pair 13	Professional Development	4.992	100	.000
Pair 14	Resources	6.556	101	.000

* $p < .05$

Comparison between pre 2003 and post 2003 Program Completers

An analysis of the mean scores of defined groups, pre and post stand alone status, showed several significant differences in the ratings of earlier program completers from those who completed the program since the granting of stand alone status in 2003, particularly on the mean scores of level of preparedness. Table 8 displays responders' ratings on level of importance. Table 9 displays responders' ratings on level of preparedness.

When a paired samples t-test was run on the comparisons of level of importance and level of preparedness between pre-2003 completers and those who completed 2003 and after, no statistical significance emerged on the questions comparing importance. However, on the level of preparedness, six of the 14 questions resulted in statistical significance at the .05 level. These questions included ability to manage the classroom, ability to teach at developmentally appropriate levels, ability to use technology, ability to

use alternative assessment, knowledge of curriculum design, and willingness to participate in professional development.

Table 8

A Comparison of Program Completers Mean Scores Before and After Granting of Stand Alone Status on Perception of Level of Importance

	Program Completed	N	Mean	Std. Dev.
Ability to manage the classroom	Pre 2003	46	4.91	.285
	2003 or later	59	4.90	.305
Ability to engage students	Pre 2003	46	4.74	.491
	2003 or later	59	4.69	.534
Ability to motivate students	Pre 2003	46	4.67	.519
	2003 or later	59	4.71	.493
Ability to address diversity in the classroom	Pre 2003	46	4.20	.778
	2003 or later	58	4.03	1.108
Ability to teach at developmentally appropriate levels	Pre 2003	46	4.72	.455
	2003 or later	58	4.55	.626
Ability to use technology	Pre 2003	46	4.24	.848
	2003 or later	59	3.97	.982
Ability to use alternative assessment	Pre 2003	46	4.22	.696
	2003 or later	59	4.03	.870
Knowledge of curriculum design	Pre 2003	46	3.98	.856
	2003 or later	59	4.10	.824
Knowledge of subject matter content	Pre 2003	45	4.64	.645
	2003 or later	59	4.41	.746
Knowledge of instructional techniques	Pre 2003	45	4.42	.723
	2003 or later	59	4.32	.753
Knowledge of bridging theory and practice through field-based experiences	Pre 2003	45	4.02	1.033
	2003 or later	59	3.93	.944
Ability of teacher to collaborate with other teachers, parents, and administrators	Pre 2003	46	4.65	.604
	2003 or later	59	4.47	.796
Willingness of teachers to participate in professional development	Pre 2003	46	4.13	.778
	2003 or later	59	4.00	.910
Ability of teachers to identify and utilize classroom and external resources	Pre 2003	46	4.33	.732
	2003 or later	58	4.34	.785

Table 9

A Comparison of Program Completers Mean Scores Before and After Granting of Stand Alone Status on Perception of Level of Preparedness

	Program Completed	N	Mean	Std. Dev.
Ability to manage the classroom	Pre 2003	46	2.87	.934
	2003 or later	58	*3.38	.952
Ability to engage students	Pre 2003	46	3.52	.863
	2003 or later	58	3.78	.859
Ability to motivate students	Pre 2003	46	3.37	1.019
	2003 or later	58	3.53	1.063
Ability to address diversity in the classroom	Pre 2003	46	2.91	.962
	2003 or later	57	3.12	.888
Ability to teach at developmentally appropriate levels	Pre 2003	45	2.96	1.021
	2003 or later	57	*3.39	.818
Ability to use technology	Pre 2003	45	2.84	1.021
	2003 or later	58	*3.98	1.162
Ability to use alternative assessment	Pre 2003	46	2.78	1.134
	2003 or later	58	*3.43	.975
Knowledge of curriculum design	Pre 2003	45	2.67	.953
	2003 or later	58	*3.36	1.165
Knowledge of subject matter content	Pre 2003	44	3.39	1.061
	2003 or later	57	3.96	1.180
Knowledge of instructional techniques	Pre 2003	45	3.60	1.095
	2003 or later	58	4.02	.868
Knowledge of bridging theory and practice through field-based experiences	Pre 2003	45	3.36	1.026
	2003 or later	58	3.71	1.155
Ability of teacher to collaborate with other teachers, parents, and administrators	Pre 2003	46	2.96	1.282
	2003 or later	58	3.43	1.201
Willingness of teachers to participate in professional development	Pre 2003	45	2.98	1.177
	2003 or later	56	*3.80	.980
Ability of teachers to identify and utilize classroom and external resources	Pre 2003	45	3.36	.933
	2003 or later	57	3.82	1.054

$p < .05$ for paired samples t-test

Data Collected on Qualitative Question

Analysis of the qualitative input on the survey was conducted using an emergent category method. Comments were read and grouped based on common themes. All suggestions given, with the exception of the expansion of the Pitt-Bradford teacher education program to include a master's level degree, and several which were grouped

under a miscellaneous category, aligned with the 14 domains already identified as necessary for effective teacher education programs. Nine categories emerged from the analysis including field experiences, content knowledge, special needs students, instructional techniques, classroom management, collaboration, motivation, graduate needs, and miscellaneous. Only the first five categories, however, were mentioned multiple times.

Field experience comments totaled 18 in number and focused primarily on the need for more time in actual classrooms observing and teaching. Twenty-one content knowledge comments were offered, forming category two, with several mentioning the need for more material on teaching reading (i.e. balanced literacy).

The next most common comment, although only three in number, was to provide more information on alternative assessment strategies. The remaining suggestions covered a wide variety of topics. The category of special needs students solicited 13 comments from responders most of which focused on the need for more content on how to differentiate instruction and provide appropriate educational experiences for students of varying special needs.

The fourth category, pedagogy, resulted in nine comments from myriad avenues. Suggestions ranged from keeping secondary and elementary students separated to providing a template for lesson plans. The final category that had several comments which easily grouped together was classroom management. Six students requested more material dealing with classroom management and discipline be provided in the program.

CHAPTER FIVE: CONCLUSIONS AND IMPLICATIONS

Introduction

Far and away the best prize that life offers is the chance

to work hard at work worth doing.

Theodore Roosevelt

The purpose of this case study was to perform a comprehensive investigation of the effectiveness of the University of Pittsburgh at Bradford's (Pitt-Bradford's) teacher education program. Qualitative data were collected through interviews of key participants in the development and growth of the education program at Pitt-Bradford. In addition, an intensive study was completed on artifacts and documents such as newspaper clippings, books published on local historic events, and the University magazine, *Portraits*. Qualitative data were also gathered from student surveys.

Quantitative data were gathered from 107 program completers' survey responses which reported perceived value of the content of Pitt-Bradford's education program in the areas of curriculum, instruction, and professionalism. In addition, completers rated their perception of how well the Pitt-Bradford teacher education program prepared them for teaching. Finally, responders were asked to give suggestions for program improvement.

Overall findings indicated that responders agreed with the literature on what constitutes an effective teacher education program rating all 14 domains as very important. In addition, results indicated program responders perceived they were moderately prepared on all of the 14 domains. However, there were very different responses in most areas from students who completed the program prior to stand alone status granted in 2003 and responders who have completed the program since then. In all

cases, students completing the program in 2003 or later rated their level of preparedness higher than completers prior to 2003. A paired samples t-test indicated that six of the 14 comparisons were significant at the .05 level.

Summary of Findings

Question One: How do Pitt-Bradford teacher education completers rate the importance of instruction?

Teacher education program completers' ratings on the seven components of instruction supported the literature stating these components are, indeed, paramount to high quality teaching. Ratings of each of the seven components including ability to manage the classroom, ability to engage students, ability to motivate students, ability to address diversity in the classroom, ability to teach at developmentally appropriate levels, ability to use technology, and ability to use alternative assessment all fell into the ranking of very important.

Ability to manage the classroom had the overall highest mean supporting Karweit and Slavin's (1981) study indicating the importance of classroom management in creating an educational atmosphere conducive to learning. Likewise, the ability to motivate and engage students both resulted in mean scores high on the very important scale. Bruning (2006) and Martin (2006) both found that motivation and engagement play a key role in providing an atmosphere that "translates into student learning" (Bruning, 2006, p. 1).

The work of Milner et al. (2003) on the importance of teacher candidates having a wide variety of experiences with children from diverse backgrounds was confirmed by program completers' responses ranking this domain as very important. However, this

very important ranking was second to the lowest in mean scores in the category of instruction. A possible explanation for this might be that, although program completers understand the importance of knowledge of diversity in the classroom, the fact that Bradford, PA and surrounding areas are comprised of a relatively homogenous society (predominately white) results in a somewhat lower ranking than other components of instruction. The lower ranking might also be indicative of teacher candidates recognizing only race or ethnic group as types of diversity without taking into consideration other factors such as socio-economic status or special needs.

The question relating to the ability to teach at developmentally appropriate levels resulted in a strong endorsement for Comer and Maholmes' (1999), Darling-Hammond's (2001), and Jacobs' (2001) studies revealing that teacher candidates must have knowledge of how children grow and develop and they must be able to put that knowledge to use in creating experiences that make learning possible.

Ability to use technology, although still falling into the very important range, had the lowest overall mean. This may indicate that although program completers feel it is important to have knowledge of technology, lack of sufficient knowledge or resources in this area does not impair teaching as greatly, for example, as lack of classroom management skills. However, Jacobs (2001) claimed that a wide variety of technological materials, and knowledge of how to use them, can enhance instruction.

When comparing scores of students who completed the program prior to the granting of stand alone status in 2003, the rating of the level of importance on ability to use technology was the only score on importance that rendered any remarkable differences. Students who completed the program prior to 2003 implied that level of

importance of technology was very important. Those who completed the program after 2003 rated it is moderately important. The difference could be contributed to the fact that technology plays such a big role in day to day activities that recent completers consider it a regular skill that is ingrained through many facets of life, therefore, not necessarily an important emphasis in teacher education.

Even though responders indicate they perhaps do not believe ability to use technology is as important as other characteristics of effective teacher education programs, the Pitt-Bradford education program does not concur. This stance is evidenced by the development of a Computers in Education class in the fall of 2001 geared strictly toward the integration of technology into curriculum. Furthermore, teacher candidates are required to show evidence of integration of technology into many of their lesson plans and are even required to demonstrate aptitude through the teaching of a lesson plan using a SMART Board.

Question Two: How do Pitt-Bradford teacher education completers rate their level of preparedness in the area of instruction?

A comparison of perceived level of importance and level of preparedness indicated that Pitt-Bradford does not prepare program completers as well as they feel they should be in the area of instruction. Mean scores on all seven components fell into the moderately prepared range. In addition, many of the suggestions fell into areas that were addressed through the questions under the category of instruction.

The topic of classroom management elicited six comments from responders. In all cases, the commentary indicated a need for a stronger classroom management component within the program curriculum. One responder commented that after "Having

taught for six years, I feel that I was not as prepared as I should have been in the area managing a classroom." Another program completer stated that "I would encourage Pitt to emphasize classroom management more in their teacher preparation." The comment "I remember feeling that this was an area that I felt totally helpless in and struggled with my first year of teaching" clearly described one responder's thoughts. Other comments confirmed that more information on how to manage discipline in a classroom needed to be taught.

The mean scores of program completers prior to 2003 rated their level of preparedness as somewhat unprepared compared to moderately prepared by those who completed the program after stand alone status was granted. This indicated a positive change in the program resulting in better preparation in this area.

Even though they were separate questions on the survey, motivation and engagement were mentioned jointly by three responders in their qualitative information. Responders' comments stated the program needs to offer a greater focus on motivating students to learn. One responder stated, "Theory and knowledge mean nothing if you don't understand how to motivate them to learn." Another comment supported the importance of rapport building through the statement, "[there needs to be more on] how to communicate with teenagers to get them on your side to be able to engage and motivate them." The very fact that motivation and engagement were used as if they were synonymous terms might be an indicator of program completers' misunderstanding of the difference between the two components which could, in turn, be a sign of an area of needed clarification in the program.

Program completers' mean scores on motivation and engagement of students were also very close, implying, yet once again, that teacher candidates are not well versed on the difference between the two. Although scores on level of preparedness prior to 2003 were somewhat lower than after, both results fell into the moderately prepared range.

As with motivation and engagement, the questions regarding level of preparedness on ability to address diversity in the classroom and ability to teach at developmentally appropriate levels resulted in the two areas addressed jointly in qualitative comments. However, ability to teach at developmentally appropriate levels ranked slightly higher than ability to address diversity in the classroom which had the lowest mean score on all 14 domains.

The need for more coursework to address the needs of special needs students was mentioned by 13 responders. The majority of those comments addressed the need for differentiation in the classroom, supporting the desire to have been better trained in this area. One current special education teacher stated, "I currently teach in an inclusion classroom. I definitely feel that inclusion and teaching varying levels were never discussed." Even students who felt the content methods courses were sufficient believed there was a deficiency on how to diversify the content. "My Pitt methods classes helped me to learn subject matter and teach particular lessons, but not so much how to differentiate those particular lessons to meet the many different needs."

Development of children, especially special needs children, was addressed by one responder who commented the program needs to provide more, "Information on differentiation and gifted or exceptional education, learning disabilities and childhood diseases." "The educating of the exceptional child class was important. The ADAPT

book used in that class gives good examples of how to develop worksheets, handouts, and manipulatives." However, there appeared to still be a tendency toward teaching for elementary teacher education candidates as evidenced by the request for, "More information on how to implement differentiated learning in the high school classroom."

Interestingly, more than just cognitive differences were mentioned indicating that at least two students recognized diversity occurred in more than one form. "I feel that more should have been taught in the area of teaching students with major behavior issues and students with social and emotional issues." Another responder commented, "I wish I had gotten more help with identifying 'special needs' children and 'gifted' children."

The mean scores of program completers prior to 2003 rated their level of preparedness on ability to address diversity in the classroom and ability to teach at developmentally appropriate levels almost identically. Ratings prior to 2003 indicated students were somewhat unprepared compared to moderately prepared by those who completed the program during 2003 or later. The researcher recognized that comments from completers on developmentally appropriate practices were fused with comments on diversity in the classroom. This recognition created a question of the program's effectiveness in differentiating between recognition of various forms of diversity in the classroom and teaching at developmentally appropriate levels.

The ability to use technology in the classroom was the second highest ranked mean on the seven questions related to perceived level of preparedness. There were, however, no comments provided on suggestions of improving technology instruction in the program. Perhaps the lack of comments is indicative of the overall belief that adequate preparation was being provided.

There was a great difference in the ratings of level of preparedness in technology for students completing the program prior to and after stand alone status was granted. Students prior to 2003 rated themselves as somewhat prepared compared to the rating of moderately prepared by those completing the program after 2003. It is worth noting, as well, that the ranking of moderately prepared was only two hundredths away from a well prepared score.

A contributing factor could be the addition, in the fall of 2001, of a course entitled Computers in Education. Prior to this course, a computer course was required of education students, but it was a general computer course taught by a variety of people and did not, necessarily, focus on issues or skills relating to education. Students typically take this course their freshman or sophomore year; thus the results would be demonstrated in the 2003 class. Another causative factor could be the purchase of a SMART Board for the education department and the requirement that each teacher candidate use it for at least one lesson.

The difference could also be contributed to the reality that technology is a growing part of society as a whole, and program completers might be entering the program with a better overall knowledge of technology and that knowledge could result in credit being vicariously given to the education program.

Ability to use alternative assessment was the second to lowest score on level of preparedness in the category of instruction and the third lowest scores on all 14 domains. Yet, teaching candidates comments about assessment and alternative assessments was mentioned only three times as a weakness of the program. All three students requested

more information on how to adapt classroom lessons and tests using alternative assessment strategies.

Once again there was a notable difference between the mean score of program completers prior to 2003 and those after. Completers prior to 2003 indicated they were somewhat unprepared compared to those completing the program during or after 2003 rating their level of preparation as moderately prepared. Qualitative comments in this area, however, indicate a need for continued improvement in the area of alternative assessment.

Question Three: How do Pitt-Bradford teacher education completers rate the importance of curriculum?

Pitt-Bradford completers essentially agreed with the literature on the importance of curriculum components. Ratings ranging from the low end to middle level of very important were indicated in the areas of knowledge of curriculum design, knowledge of subject matter content, and knowledge of instructional techniques.

Knowledge on how to design curriculum was the third lowest rated of all 14 domains on the level of importance. Even though it was rated low in comparison with the other 13 questions, it still was ranked, overall, on the low end of the very important scale. Shulman (2000) discussed "wisdom of practice" which refers to a teacher's understanding of the necessity of deep thought going into curriculum development and revision. Pennsylvania, as with most states, has a set of standards which are used to drive all curricula across grade levels and subject areas. The standards driven curriculum practice could possibly be the contributing factor to teacher candidates rating this component as the lowest score of importance. With the underlying belief that there is

little they can do to change it, responders might have reflected this as being not as important as factors over which they feel they have control.

Wise and Leibrand (2001) and Minor et al. (2002) discussed the importance of content knowledge in the preparation of teacher candidates. Responders to the *Armstrong Survey for Teacher Program Effectiveness* agreed that this is, indeed, a very important piece of a teacher education program. Survey responders endorsed research on the importance of content knowledge through both their quantitative and qualitative input. Not only did the knowledge of content question offer the highest ranking of the four components under the category of curriculum, falling midway in the very important range, but many of the comments offered by responders also addressed the component.

Knowledge of various pedagogical practices also resulted in a very high rating. Berry (2005) and Murphy, Delli, and Edwards (2004) attested to the importance of having early and numerous forms of instruction on pedagogical techniques. Survey responders upheld the researchers work on the importance of this component to a teacher education program.

On the question regarding level of importance of bridging theory and practice through field-based experiences, a mean score resulted in a rating of only moderately important - the only question of all 14 which resulted in a rating less than very important. The researcher found the rating of this question to be contradictory with qualitative comments.

Scannell (n.d.), Darling-Hammond and Baratz-Snowden, (2005), and Jacobs (2001) all suggested in their research that field based experiences are critical components in teacher education programs. Considering that the importance of field based

experiences was the second most frequently mentioned topic in the qualitative question, overwhelmingly indicating the need for more time in the field, there is an obvious discrepancy between responders' ratings and qualitative comments. This inconsistency leads the researcher to believe that the question was ambiguous or confusing to the survey responders.

Question Four: How do Pitt-Bradford teacher education completers rate their level of preparedness in the area of curriculum?

The question regarding knowledge of curriculum design resulted in the second lowest rating of all 14 domains. Program completers perceive that they were moderately prepared in this area, but on the low end of the scale. When comparing this with the level of importance rating as well as their qualitative statements, the responders appear to be less concerned with how to actually develop curriculum than they are with how to align their curriculum with content standards developed by the state of Pennsylvania. One responder specifically asked for "More information on aligning content with standards." Only one responder indicated the understanding of the importance of curriculum development as demonstrated by the request for a "Curriculum development course to (learn how to) design curriculum."

Program completers prior to 2003 rated the level of preparedness as somewhat prepared compared to moderately prepared ratings of students who completed the program after stand alone status was granted. This difference could be contributed to the introduction of PA Academic Standards. Teacher candidates were required to code their lesson plans to these standards beginning the fall of 2004. This task could possibly

equate to curriculum development for the completers since it is heavily stressed in the program that standards drive the curriculum.

Twenty-one responders provided feedback on the area of knowledge of subject matter content. Many of the comments focused on the need to separate secondary teacher candidates from elementary with the often cited complaint that the courses were geared more toward elementary candidates since they are the majority of the program. One responder requested "For secondary education, classes on different techniques in the subject area." A second comment supported this request, "Separating secondary and elementary students in courses would help as things are different."

Although this particular component of effective teacher education programs solicited the most qualitative responses indicating an area of weakness, it was interestingly the second highest rated question on the level of preparedness. This rating indicates that even though program completers perceive they are only moderately prepared in this area, they believe that knowledge of content is one of the strongest components in the teacher preparation program.

The mean scores of program completers prior to 2003 rated their level of preparedness on knowledge of subject matter very closely to the rating of those who completed the program in 2003 or later. Both ratings indicated students were moderately prepared. The lack of noteworthy difference in this area could signify that program completers consider content matter as core subject material rather than methods courses. Furthermore, the granting of stand alone status in no way affected the curriculum of core classes.

Knowledge of instructional techniques was the highest rated of all 14 domains on perceived level of preparation, falling just short of reaching the level of well prepared. Several of the qualitative comments showed that survey responders believed they needed more opportunities to actually practice instructional techniques, particularly at the secondary level. These comments again indicated, as found in comments on content knowledge, that program instruction is geared more toward elementary education students. "Keeping secondary and elementary students separated would be better for classes in which they have to present lessons." Another responder commented, "The program needs to allow those seeking certification in Secondary Education to have more, and meaningful experiences in the secondary atmosphere. I feel we spent a great deal of time addressing elementary education issues, and little secondary education issues." Comments signify the need for the education program to develop more courses which are geared specifically toward secondary teacher candidates.

The next most cited concern in the area of content was the need for more methods courses, especially in the area of reading. "Elementary Education is focused on reading/literacy activities. While at Pitt I only took one course in which this was the focus. All of the others, teaching science, social studies, arts and music were not as valuable." Another responder commented, "The teachers that taught methods courses during my time did not prepare me with current theories/practices. For example, balanced literacy." With new teachers so immersed in ramifications of *No Child Left Behind*, perhaps they are much more aware of the emphasis on effective teaching practices and the early focus of NCLB on reading and literacy, which is reflected in their overall ratings.

Program completers prior to stand alone status granted in 2003 rated their preparedness in instruction techniques as being moderately prepared. However, completers from 2003 forward rated themselves as being well prepared. This difference could be explained through the introduction of two courses into the program content. Reading and Writing in the Content Curriculum and Secondary Methods was offered for the first time in the fall of 2000 and 2001 respectfully. Prior to this, a general methods and special methods course was offered. Although the Reading and Writing in the Content Curriculum and Secondary Methods courses were in place prior to the 2003 granting of stand alone status, they might not have begun affecting students' course completion requirements until 2002 or 2003 due to a grandfather clause preventing change to course requirements for a student, once a student has been officially accepted into the program.

For the question related to knowledge of bridging theory and practice through field-based experiences, responders indicated they perceived moderate preparation in this area. It was clear, though, that program completers understand the need for improved preparation through field-based experiences as evidenced by 18 responders' comments. Responders comments indicated an agreement with Darling-Hammond, Hudson, & Kirby's (1989) work supporting the necessity of getting teacher candidates out into actual classrooms early and often. Comments from responders suggested maintaining or even increasing the number of hours required. "Hand-on is the best experience. Teaching a lesson in front of your peers is nothing like being in front of children," and "I learned the most from field experiences such as observations, student teaching, doing lessons."

Some responders were very specific on how they believed the field based experiences should occur. "I believe it would help future teachers if they were required to spend portions of time teaching lessons and observing in every grade. For example, k-6 teachers have to spend time at every grade level." Another response supported the literature stating that field experiences need to occur early and often. "I would recommend more time in a real classroom teaching lessons instead of teaching practice lessons to college peers. Also, starting to observe and teach before method classes would help prepare student and allow them to be sure that education is indeed the profession for them."

Although the score for program completers after 2003 was slightly higher than those who completed before, both groups rated themselves as moderately prepared. The introduction of Education Lab I and Education Lab II courses in the fall of 2006 and Spring of 2007 hold the potential of increasing the score on the level of preparedness. Each of these courses has a 20 hour field component built in with the explicit intention of providing more field based opportunities for students. In addition, in the Education Lab II course, students are required to teach two lessons in front of their peers.

Question Five: How do Pitt-Bradford teacher education completers rate the importance of professionalism?

Darling-Hammond (1999a) discussed how educational reform must not only address areas of curriculum and instruction, but also professionalism, specifically how to work in a collegial manner with others. Comer and Maholmes (1999) spoke directly on the necessity of building relationships with parents while Ryan and Cooper (2007) addressed the value of building rapport with fellow teachers and administrators.

Responders to the *Armstrong Survey for Teacher Program Effectiveness* corroborate these researchers' opinions on the level of importance of a teacher being able to collaborate with others by rating this question as very important.

Although it was rated as very important, the actual understanding of the level of importance of on-going professional development was not demonstrated by survey responders. Willingness of teachers to participate in professional development gained the overall lowest score on survey responders' views of level of importance. Jacobs (2001) suggested that effective teacher education programs instill in their teacher candidates the importance of reflective teaching and the need for one to take steps to refine and improve one's teaching. Again, even though it ranked as very important, the fact that it ranked lowest among the professionalism domains, as well as the fact that not a single comment was given in this area, could be evidence that the Pitt-Bradford teacher education program does not instill strongly enough the importance of this effective teaching skill in its teacher candidates.

The ability of teachers to identify and utilize classroom and external resources was researched by Darling-Hammond et al. (2005) and discussed by Ryan and Cooper (2007). "Prospective teachers should be aware of major resources in the field and those that are in use locally, and know how to find additional resources and critically assess what is available" (Darling-Hammond et al., 2005, p. 189). Survey responders substantiated this belief by indicating this ability is very important. Furthermore, one qualitative comment was offered indicating the need for teachers to be aware of resources available to them.

Question Six: How do Pitt-Bradford teacher education completers rate their level of preparedness in the area of professionalism?

Remaining consistent, survey responders rated their level of preparedness as moderately prepared in the area of ability to collaborate with other teachers, parents, and administrators. Two responders provided suggestions for a stronger emphasis on teaching collaboration skills, naming parents and administration as the main areas of weakness. "Having taught for 6 years, I feel that I was not as prepared as I should have been in the area of dealing with parents," and "My only suggestion (for program improvement) would be to address the collaboration with parents and administration."

Survey responders who completed the program prior to 2003 rated their level of preparedness on ability of teacher to collaborate with other teachers, parents, and administrators as somewhat unprepared compared to ratings of moderately prepared for responders completing the program after stand alone status was granted. There have been no obvious program changes that could result in this difference in rating. Thus, the researcher concluded that perhaps the shear stability of the program with a somewhat static set of professors and instructors could perhaps have contributed to the results.

Survey responders rated willingness of teachers to participate in professional development also as moderately well prepared. However, no qualitative comments were offered as suggestions on how to better prepare candidates in this area. Responders' surveys of those who completed the program prior to stand alone status compared to those who completed afterward offered a substantial difference. Completers prior to 2003 rated themselves as somewhat prepared compared to moderately prepared by the

second group. The researcher was unable to ascertain any specific reasons why this difference may have occurred.

On the final question of the ability of teachers to identify and utilize classroom and external resources, completers again rated the program as moderately preparing them in this area. One comment suggested that teacher candidates should, "Spend observation hours at education-related facilities (Guidance center, Beacon light, etc.) to see how many of these 'outpatient' services are now in the schools." This comment points out that more could be done by education program planners to assure that teacher candidates are made aware of support agencies available and their roles in the education of students in the area. Both pre and post stand alone program responders rated themselves as moderately prepared in this area. The difference between the scores was negligible.

In summary, survey responders agreed that the 14 domains identified by the literature as essential characteristics of an effective teacher education program are, indeed, very important. The study also found that Pitt-Bradford's teacher education program moderately prepares teacher education candidates.

Ancillary data analysis did, however, indicate that program completers during the year 2003 or later rated their degree of preparedness at higher levels. All 14 domains showed in increase in means from the pre 2003 to the 2003 and after completers. This difference indicates that recent program changes have been effective in improving overall quality of the program.

Program changes which have occurred in recent years include the addition of several courses including the following: a secondary instructional methods/curriculum design course; a computer in education course which focuses on the use of technology in

teaching; a reading and writing in the content curriculum course; a second reading methods course for elementary education majors, and development of the exceptional child course and the re-arrangement of the practicum course into three lab courses resulting in an earlier and more intensive field study component.

These changes were implemented based on completer and current student feedback gathered from other evaluation sources. The significance of these changes in curriculum may not yet be evidenced in completer evaluations. Due to course completion contracts, when a course is added to the program it does not affect students who are already admitted, therefore, it can take several semesters for results to become evident.

Implications of Findings

The results of this study support the belief that individual education departments must perform routine self-evaluations and build their curriculum on the foundation of best practices (Cochran-Smith, 2006; Comer & Maholmes, 1999; Dean, Lauer, & Urquhar, 2005; Scannell, n.d.). As DiObilda, Bolay, Foster, and Addison (2001) pointed out, teacher educators are concerned with both accountability and evaluation of teacher education programs, "(a program evaluation) can help determine how well a program prepares teachers while examining those constituent elements of the program perceived as contributing to the development of teachers" (p. 52) .

Implications of this research study indicate the 14 domains identified by the literature as being critical to an effective teacher education program are confirmed by completers of the Pitt-Bradford teacher education program. Furthermore, mean scores on level of preparedness indicate that, although completers believe they are being moderately prepared by the Pitt-Bradford teacher education program; there is a

significant difference in level of importance and level of preparedness in all 14 domains. These results suggest there are definite areas of weakness which need to be addressed.

Based on a comparison of the mean scores, ability to manage the classroom is the area which exhibits the greatest difference in level of importance compared to level of preparedness. This category is followed by ability to teach at developmentally appropriate levels, ability to collaborate with other teachers, parents and administrators and ability to motivate students. The most glaring areas in need of improvement based on qualitative feedback include more opportunities for field based experiences, enhanced content training especially in the area of balanced literacy, and a segregation of elementary and secondary teachers in more than just methods courses to better address differences between the levels.

Based on qualitative and quantitative data collected one suggested course of action for the Pitt-Bradford teacher education program to take would be to enhance the instruction on classroom management. Although classroom management is the focus of one entire course, and covered in sections in several others, perhaps teacher candidates are not aware of that emphasis. Renaming the education lab II class to include classroom management in the title as well as emphasizing the areas of other courses which include classroom management strategies are two possible changes.

The second area in which programmatic changes need to be made is the division of elementary and secondary students in more than just methods courses. Several comments indicated there was a strong tendency toward elementary strategies and techniques. As the program grows and more sections of courses are needed, program administrators should consider breaking classes into secondary education and elementary

education so stronger emphasis can be placed on proper pedagogical techniques and classroom management strategies.

Third, the Pitt-Bradford teacher education program needs to enhance the curriculum in the area of differentiating instruction for diverse learner needs. A two-part plan is needed to address this problem. First, instructors must be careful to distinguish between types of diversity among learners. Based on qualitative comments, program completers appear to only recognize cognitive differences when discussing diversity. Second, there must be in infusion of more education on how to differentiate instruction based on individual learners' needs. One way to do this would be to add an additional course into the curriculum which focuses on education of exceptional learners. Another would be to require each course already in existence to have a component which focuses on differentiation of instruction.

The results of this study informed the Pitt-Bradford teacher education program administrators of the candidates' perceived strengths and weaknesses of program content. The results of this self-evaluation may be used as the foundation for future Pitt-Bradford program curriculum alignment, program design, and structure ultimately helping to reach the goal of the University of Pittsburgh at Bradford's education program to fully prepare candidates in the areas of instruction, curriculum and professionalism so they may excel in the teaching vocation.

Suggestions for Future Research

Further investigation of program completers with a larger population would perhaps provide additional information regarding how well the teacher education program at Pitt-Bradford prepares teacher candidates. As the program continues to grow

and more completers are produced each year, results of the survey could be more indicative of the current nature of the teacher education program as opposed to surveying completers who finished nearly 15 years ago.

Another possible direction for research would be to investigate if particular demographic variables such as gender, candidate's degree level when entering the program (i.e. baccalaureate seeking or post baccalaureate), and the certification level pursued could affect a completer's perception of level of importance and degree of preparedness. Initial statistical analysis did not indicate enough of a significance to pursue in this research study, but the particular items that did flag could warrant further, more in depth, analysis are part of research focused more directly on those variables.

The role of education reviews, such as those performed by the Pennsylvania Department of Education are continuing to be built more and more strongly around standards (Darling-Hammond & Baratz-Snowden, 2005; Griffin, 2002; Wise & Leibrand, 2000). In light of the move toward standards, future research could involve how curriculum alignment with standards is influencing program content.

Finally, a study conducted on all Pennsylvania teacher education program completers would provide a more diverse, statewide view of teacher candidate preparedness. This information could, in turn, affect guidelines governing the implementation of education programs or perhaps, even, the review process instituted by the PA Department of Education.

Summary

This investigation has substantiated the importance of the 14 domains grouped under categories of instruction, curriculum and professionalism identified by the

literature as essential to the formation of an effective undergraduate teacher education program. The study has also suggested that program completers of the University of Pittsburgh at Bradford teacher education program perceive they are moderately prepared for teaching. However, there is also evidence of program improvement in recent years based on comparison of scores between those who completed the program prior to the granting of stand-alone status and those who completed after it.

The potential for making teacher preparation programs as effective as possible calls for regular evaluation of those programs. These evaluations must then be used to aide in determining the need for, and direction of, changes in program structure and content. Children are dependent upon those who teach them; teachers are dependent upon those who train them. Characteristics that are currently identified as components of good programs, however, are not static. Only through on-going, systematic self-evaluations will programs be able to adjust to changing needs of education, thus providing high quality teacher preparation programs.

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APPENDICES

Appendix A: Survey

Appendix B: Pilot

Script for Pilot Survey

Pilot Survey

Appendix C: Institutional Review Board

Survey Cover Letter

Post Card Reminder

Follow-up Letter

Appendix D: Qualitative Comments from Survey Responders

APPENDIX A: PROGRAM REVIEW SURVEY

THE ARMSTRONG SURVEY OF TEACHER PROGRAM EFFECTIVNESS

ARMSTRONG SURVEY OF TEACHER PROGRAM EFFECTIVENESS

Section I – Please complete the information below.

1. Sex? □ Male □ Female
2. Year of Program Completion _____
3. Number of Years teaching? _____
4. Current grade(s) taught? _____ _____
5. Current occupation if not teaching? _____
6. When you entered the Pitt-Bradford teacher education program were you □ post-baccalaureate
   □ baccalaureate seeking

Section II – Please circle the number that corresponds with the level of importance you have found the item to be in classroom experience. Also, circle the number in the second column that corresponds with how well the education program prepared you in that area.

Number values rating importance

1 = Unimportant
2 = Somewhat important
3 = Moderately important
4 = Very important
5 = Extremely important

Number values rating preparedness

1 = Unprepared
2 = Somewhat prepared
3 = Moderately prepared
4 = Well prepared
5 = Extremely well prepared

		Importance Low-----High	***Preparedness Low-----High***
7	Ability to manage the classroom	**1 2 3 4 5**	**1 2 3 4 5**
8	Ability to engage students	**1 2 3 4 5**	**1 2 3 4 5**
9	Ability to motivate students	**1 2 3 4 5**	**1 2 3 4 5**
10	Ability to address diversity in the classroom	**1 2 3 4 5**	**1 2 3 4 5**
11	Ability to teach at developmentally appropriate levels	**1 2 3 4 5**	**1 2 3 4 5**
12	Ability to use technology	**1 2 3 4 5**	**1 2 3 4 5**
13	Ability to use alternative assessment	**1 2 3 4 5**	**1 2 3 4 5**
14	Knowledge of curriculum design	**1 2 3 4 5**	**1 2 3 4 5**
15	Knowledge of subject matter content	**1 2 3 4 5**	**1 2 3 4 5**
16	Knowledge of instructional techniques	**1 2 3 4 5**	**1 2 3 4 5**
17	Knowledge of bridging theory and practice through field-based experiences	**1 2 3 4 5**	**1 2 3 4 5**
18	Ability of teacher to collaborate with other teachers, parents, and administrators	**1 2 3 4 5**	**1 2 3 4 5**
19	Willingness of teachers to participate in professional development	**1 2 3 4 5**	**1 2 3 4 5**
20	Ability of teachers to identify and utilize classroom and external resources	**1 2 3 4 5**	**1 2 3 4 5**

Section III - Additional Information

21. Please write any comments or suggestions that will help improve the education program at the University of Pittsburgh at Bradford.

In case you lose your self-addressed, stamped envelope, please return survey to:
Donna Armstrong, Assistant Professor of Education
234C Swarts Hall, 300 Campus Drive
Bradford, PA 16701

APPENDIX B: PILOT

SCRIPT FOR PILOT STUDY

PILOT STUDY SURVEY

SCRIPT FOR PILOT STUDY

You are invited to participate in a pilot survey. Participation in the pilot is strictly voluntary and you will be asked to sign a form indicating that you understand this. The intent of this research project is to identify perceived strengths and weakness of program content at the University of Pittsburgh at Bradford's teacher education program. Information collected from this survey will be used to guide improvements in teacher candidate preparation. To check for survey validity and structure, it is useful to pilot the instrument with other education professionals such as yourselves.

First, you are asked to complete the *Armstrong Survey for Teacher Program Effectiveness* which reflects common components of pre-service training to familiarize yourself with the survey questions and structure. Next, you will be asked to complete a second survey which asks you to rate on a 5 point Likert scale your agreement with statements about the *Armstrong Survey for Teacher Program Effectiveness*. Each item will elicit a respondent score ranging from 1 (I strongly disagree) to 5 (I strongly agree). Space will be left after each item and you are asked to clarify you rating or add detail to your report as appropriate for each item.

Thank you for your participation in this pilot survey.

PILOT STUDY SURVEY

Please rate your responses using the following scale: 1 (I strongly disagree) to 5 (I strongly agree).

	Low-----High
1. I thought the instructions were clear.	**1 2 3 4 5**
Comments:	
2. I understood the questions.	**1 2 3 4 5**
Comments:	
3. I understood the difference between the three sections.	**1 2 3 4 5**
Comments:	
4. I thought there was enough detail in the questions to feel comfortable rating the item on the provided Likert scale	**1 2 3 4 5**
Comments:	
5. I thought the items were relevant to teachers	**1 2 3 4 5**
Comments:	
6. I thought the length of the survey was appropriate	**1 2 3 4 5**
Comments:	

7. How long did it take you to complete the survey?

APPENDIX C: INSTITUTIONAL REVIEW BOARD

SURVEY COVER LETTER

POSTCARD REMINDER

FOLLOW-UP SURVEY COVER LETTER

SURVEY COVER LETTER

Approved by the Office of Research
Integrity at Marshall University

November 16, 2006

Dear Teacher,

You have been selected to participate in this doctoral research study as a completer of the teacher education program at the University of Pittsburgh at Bradford. In this age of reform and responsibility, teachers are held accountable for the success of their students; likewise, education programs are held accountable for the teachers they produce. The purpose of this study is to determine the degree to which the education program prepared you for teaching and your perception of the level of importance of various program components.

Possible benefits of this research include the identification of areas of strength and weakness in the Pitt-Bradford education program which may result in changes in program development and enhancement. In addition, this research will add to the body of knowledge about completer perception of the necessary components for a good teacher preparation program.

I realize that your time is precious. The attached questionnaire will only take a few minutes to complete. Participation is voluntary, and your responses are confidential. Data will be securely stored and will be reported in aggregate form only with no identification of individual teachers. Your responses are very important, and your timely participation will greatly strengthen my research. However, there is no penalty for declining to participate in this study or for partial completion.

Please answer the questions as honestly and accurately as possible. I am requesting that all responses be returned by **November 30, 2006**. Enclosed you will find a stamped, self-addressed envelope for your mailing convenience. Please keep this letter for your records. If you have any questions or would like further information on this study, you may contact me at 814-368-3182. If you have questions about your rights as a research subject, you may contact Dr. Stephen Cooper, IRB#2 Chair, at the Office of Research Integrity at Marshall University at 304-696-7320.

Please accept my gratitude in advance for your cooperation and timely participation in this research study.

Appreciatively,

Donna M. Armstrong
Assistant Professor of Education
234C Swarts Hall, 300 Campus Drive
Bradford, PA 16701

POSTCARD REMINDER

Dear Teacher:

You recently received a packet requesting your participation in a study for the teacher education program at Pitt-Bradford. For those of you who have returned your surveys, I would like to offer my sincere gratitude for your time and contribution.

If you have not yet returned your survey, I request that you consider doing so. It will only take a few minutes to complete it and your input is extremely valuable for the growth and improvement of our program. Even if you are not currently teaching, information you provide will help guide program changes. Please take a few minutes of your time to fill out and return the survey.

Appreciatively,

Donna M. Armstrong
Assistant Professor of Education
234C Swarts Hall, 300 Campus Drive
Bradford, PA 16701

FOLLOW-UP COVER LETTER

November 30, 2006

Dear Teacher,

Recently you received a packet requesting your participation in a study for the teacher education program at Pitt-Bradford. The letter accompanying the packet explained that the purpose of this study is to determine the degree to which the education program prepared you for teaching and your perception of the level of importance of different program components. **In case you have misplaced your first packet, here is the information again**.

We believe that possible benefits of this research include the identification of areas of strength and weakness in the University of Pittsburgh at Bradford's education program which may result in changes in program development and enhancement. In addition, this research will add to the body of knowledge about completer perceptions of the necessary components for a good teacher preparation program.

I realize you are very busy, but the attached questionnaire will only take a few minutes to complete, and even if you are not currently teaching, you input is still very valuable. Participation is voluntary, and your responses are confidential. Data will be securely stored and will be reported in aggregate form only with no identification of individual teachers. Your responses are very important, and your timely participation will greatly strengthen my research. However, there is no penalty for declining to participate in this study.

Please take time to answer the questions as honestly and accurately as possible. I am requesting that all responses be returned by **December 15, 2006**. Enclosed you will find a stamped, self-addressed envelope for your mailing convenience. Please keep this letter for your records. If you have any questions or would like further information on this study, you may contact me at 814-368-3182. If you have questions about your rights as a research subject, you may contact Dr. Stephen Cooper, IRB#2 Chair, at the Office of Research Integrity at Marshall University at 304-696-7320.

Please accept my gratitude in advance for your cooperation and timely participation in this research study.

Appreciatively,

Donna M. Armstrong
Assistant Professor of Education
234C Swarts Hall, 300 Campus Drive
Bradford, PA 16701

APPENDIX D: RESPONDER COMMENTS

QUALITATIVE COMMENTS FROM RESPONDERS

Table 10

Qualitative comments provided by responders

Category	Comments
Field experiences	Hand-on is the best experience. Teaching a lesson in front of your peers is nothing like being in front of children; Keep number of fieldwork hours per class; however, it would help if students were given a standard for contacting schools, teachers and principals. For instance, more contact with local school from education director and/or professors. Some principals were rude, unaccommodating or simply didn't always follow through for us trying to make observation hours; I learned the most from field experiences such as observations, student teaching, doing lessons; I think the more experiences in the actual classroom, the better; I believe it would help future teachers if they were required to spend portions of time teaching lessons and observing in every grade. For example, k-6 teachers have to spend time at every grade level; More classroom experience would have been helpful – too much time was spent at Pitt-Bradford; It is actual experience in a classroom that determines success. I know the number of hours education student spend in the classrooms has increased dramatically since I left. My recommendation would be to actually get them planning and teaching a lesson or unit earlier and more often; My feeling is that the more time you spend in the classroom, the better off you will be; More actual classroom hours; Longer student teaching assignment; Get the students into the classroom more. Observations are fine, but hands-on is critical. I like what SBU does with their intern program. The students become a part of the classroom before their student teaching experience; More hands-on training; Field experience was by far the most significant portion of the program. There are so many things that you just can't teach in a classroom. You can only learn by doing; Most of what I needed to know, I didn't learn until my 1st year teaching. I had to rely on my colleagues to help me with things I think that I should have learned in college; More time in the classroom throughout the program, not just during student teaching; Spend observation hours at education-related facilities (Guidance center, Beacon light, etc.) to see how many of these "outpatient" services are now in the schools; I would recommend more time in a real classroom teaching lessons instead of teaching practice lessons to college peers. Also, starting to observe and teach before method classes would help prepare student and allow them to be sure that education is indeed the profession for them; I feel that a field block would benefit students greatly before going into the classroom to student teach. Instead of spending many hours in many classrooms, it might benefit going-to-be teachers more to spend many hours in one classroom.
Content	Elementary Education is focused on reading/literacy activities. While at

knowledge	Pitt I only took one course in which this was the focus. All of the others, teaching science, social studies, arts and music were not as valuable. Perhaps the focus of these courses should be literacy based. Teachers don't have time to do the "fun" things we learned; Teach us how to grade and keep a grade book; More emphasis on reading (teaching reading) is essential in college training; I think it would be extremely beneficial to spend time teaching teacher manuals. For example, trying to base weekly lesson plans around the manual and a curriculum. As a new teacher, the first year is extremely overwhelming. There is no time to make creative lessons for every subject, every day. It is more realistic to go by the manual and create a spectacular lesson once a week; I think student should have experience with balanced literacy. I don't feel I knew the components and this is highly emphasized in the BASD; Instead of putting an emphasis on Bloom's Taxonomy, teach/use more of the assessment anchors; At the time I went through the program, I felt that UPB/St. Bonaventure did a good job with background into theory necessary to succeed; For secondary education, classes on different techniques in the subject area; When I attended Pitt-Bradford, the methods classes I took were very ineffective. I learned how to teach from substituting "on the job". I hope t hat methods classes have improved; Areas of concern include how to adjust to new ideas, ACT 48 knowledge and Instructional II knowledge; Curriculum development course to design curriculum; Preparing complete units would be beneficial. We only did one the entire time. This would help students see what a unit actually entails; Information on NCLB; Provide students with a plethora of resources to use in their content area (i.e. websites, books, materials, contacts, etc.); More methods classes; The program did not teach us how to teach a lab, which is crucial in my field; I was one of the only secondary education in a classroom full of elementary education, so I did not benefit form several classes since it was geared towards the majority of the class; Separating secondary and elementary students in courses would help as things are different; I felt I learned much more after graduation and during my master's work. The teachers that taught methods courses during my time did not prepare me with current theories/practices. For example, balanced literacy. Other graduates from "state schools" were exposed to these things; More information on alternative assessments; I think that assessments are an area when I could have been more prepared. Designing assessments and different ways to assess rather than tests.
Special Needs Students	I feel that more should have been taught in the area of teaching students with major behavior issues and students with social and emotional issues; Greater emphasis on differentiation for all students; More classes on special education and IEPS, adapting classroom lessons and tests; The educating of the exception child class was important. The ADAPT book used in that class gives good examples of how to develop worksheets, handouts, and manipulatives; Really need to address needs

Graduate Needs	of IEP students by instructional diversity; I currently teach in an inclusion classroom. I definitely feel that inclusion and teaching varying levels were never discussed. We learned how to teach on level students not above or below level; Information on differentiation and gifted or exceptional education, learning disabilities and childhood diseases; A class on how to recognize special needs learners and modify instruction and assessment; Differentiation is HUGE. My Pitt methods classed helped me to learn subject matter and teach particular lessons, but not so much how to differentiate those particular lessons to meet the many different needs. I wish I had gotten more help wit identifying "special needs" children and "gifted" children; IEPs; More information on how to implement differentiated learning in the high school classroom; More time spend on such things as IDEA, 504, NCLB would have been beneficial; More information on differentiation
Pedagogy	I found the classes in which all we did was take turns presenting a topic or teaching a lesson completely useless; Keeping secondary and elementary student separated would be better for classes in which they have to present lessons; More mock interviews and insight on how to get an interview. Since I graduated in December 2003, I have only been invited for four interviews; Helping students prepare a portfolio, reference file, and preparing them for interviews would greatly improve your program; Encourage/introduce use of UPB template for lesson/unit plans; Experience designing performance rubrics; Incorporating PA Content Standards and Anchors in student teaching for our lesson plans and using the Pitt template for lesson plans is impressive to administrators; More information on aligning content with standards; The program needs to allow those seeking certification in Secondary Education to have more, and meaningful experiences in the secondary atmosphere. I feel we spent a great deal of time addressing elementary education issues, and little secondary education issues.
Classroom Management	Having taught for 6 years, I feel that I was not as prepared as I should have been in the area managing a classroom; I would encourage Pitt to emphasize classroom management more in their teacher preparation; More classroom management courses need to be taught. I remember feeling that this was an area that I felt totally helpless in and struggled with my first year of teaching; Information on classroom management; A class on classroom management; Classroom discipline
Collaboration	Having taught for 6 years, I feel that I was not as prepared as I should have been in the area of dealing with parents; My only suggestion would be to address the collaboration with parents and administration.
Motivation	Address more ways to motivate students, no only engage them; Need to focus on motivating students to learn. Theory and knowledge mean nothing if you don't understand how to motivate them to learn; How to communicate with teenagers to get them on your side to be able to engage and motivate them.

	Pitt-Bradford needs to offer a masters in Elementary Education, curriculum or special education. This past year in the two BASD elementary schools, I can think of over 20 teachers that started their masters. Some online, some through a cohort with Gannon. This would be a great opportunity for Pitt-Bradford; It would be best as a 5 year program where you earn your masters, too. I already had my B.S. and I have 60 extra credits now for teaching but I still have to get a masters.
Miscellaneous	Many preparedness items are difficult to really learn until you actually teach. I think the program at Pitt is excellent; A lot of techniques came through experience in the classroom and cannot be taught; Many of the things that make excellent teachers can not be taught in a program. Some people are "natural" teachers; I had a wonderful experience; It was difficult to get to a mid-afternoon class when student teaching; Get full time college educators who have taught at the right levels, not educators who have not and do not currently teach or stay up to what is actually going on in a classroom today; My undergraduate program was more beneficial than my graduate program; UPB is a top-notch school for teacher training; The education program was good. They have added tougher requirements which have improved the program; I was never hired for a permanent position although I did have a long-term placement for most of a school year. I believe a big reason is that my degree was no in elementary education because Pitt-Bradford didn't have a major in education; I feel my Pitt-Bradford education prepared me for my career. I'm extremely proud of my Pitt-Bradford education; Eliminate the number of hoops an individual must go through to achieve the education degree; Pitt has a bad reputation for unprofessional students going into the field for observation and experience. Maybe better screening of teacher candidates could eliminate unprofessional and immature Pitt students from getting into the field. As a student at Pitt, I was aware of teacher candidates cheating in college; # 15 (knowledge of subject matter) does not apply to Pitt-Bradford. My degree in my subject matter was not from Pitt; Allow students to major in elementary education; I thought the program was very good; I was upset when I graduated and realized that I needed to pay for 24 more credits because of the direction of my advisor sent me at Pitt-Bradford. Because of the dual major, I did not think I had to take the 24 credits. Now I find myself paying for the credits when I could have graduated with a BS in applied math and returned for my education degree. There is a need for more cooperation and cohesion between staff. The requirements need to be similar for all needed courses; A good "study" might be to follow a first year teacher, and have them record all of the things they had to learn. Then, use this information to design a class that informs and prepares Secondary teachers; I appreciate what Pitt's program did for me and I am very satisfied teaching; Helping students prepare for the testing process for certifications. The university should also back the teacher up on problems that should arise.

CURRICULUM VITAE

DONNA M. ARMSTRONG

EDUCATION

Marshall University
Doctor of Education in Curriculum and Instruction, 2007
Marshall University
Master of Arts in Leadership Studies, 2002
Marshall University
Education Specialist, 2001
West Virginia University
Master of Arts in Elementary Education, 1999
Bluefield State College
Bachelor of Science Early/Middle Education, 1995
Honors: Magna Cum Laude

CERTIFICATION

State of West Virginia, K-8 Multi Subjects, Permanent
Specializations: Middle School Science and Social Studies
State of West Virginia, Professional Administrative Certificate, Provisional
Specializations: Supervisor General Instruction, Principal

PROFESSIONAL EXPERIENCE

2004-2007	Assistant Professor of Education
2003-2004	Principal Hillsboro School
2001-2003	Special Grants Director Pocahontas County BOE
2000-2001	Dean of Students Hillsboro School
1997-2000	Classroom Teacher Hillsboro Middle School
1995-1997	Classroom Teacher Hillsboro Elementary School

TEACHING RELATED ACTIVITIES

- Peer Reviewer for Pennsylvania Teacher Educator Journal – Fall 2006 – present
- Member of the Promotion and Renewal Committee – Fall 2005 to present
- Presented at the Children's Literature Conference in Greensburg, PA – Summer 2006
- Advised students – Fall 2005, Spring 2006, Fall 2006
- Taught overload Fall 2005 and Fall 2006
- Taught summer course - Session A Summer, 2005
- Advisor to Education Club – Fall 2004 – Present