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**INVESTIGATING THE RELATIONSHIPS BETWEEN  
EMOTIONAL INTELLIGENCE AND  
PRESERVICE TEACHERS' VIEWS OF TEACHER EFFECTIVENESS**

A Dissertation in  
Curriculum and Instruction

by

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### **Abstract**

In this study the researcher examined the relationship between emotional intelligence and teacher effectiveness beliefs of Elementary and Kindergarten Education preservice teachers. The study also investigated preservice teachers' beliefs about teacher effectiveness with regards to their years in college of education, gender, and GPA. In addition the study examined preservice teachers' emotional intelligence with regards to their years in college of education and GPA. Quantitative data were gathered for this study.

The participants were 99 students at The Pennsylvania State University, College of Education, Elementary and Kindergarten Education Major. Two instruments were used for this study: Bar-On Emotional Quotient Inventory Short Form and Teacher Effectiveness Beliefs Survey. Data collection occurred in spring 2008.

Results analysis involved descriptive statistics, ANOVA, and Pearson correlation. Descriptive statistics showed that the study involved more females than males, and that there were four levels of GPA and four levels of years in College of Education.

This study found that preservice teachers tend to believe primarily in the importance of teacher factors, and then student-related factors, and the least in other personnel-related factors. Also, there were some significant differences in preservice teachers' teacher effectiveness beliefs associated with emotional intelligence skills. In addition, this study found that years in College of Education and gender account for some differences in beliefs about teacher effectiveness. Finally, preservice teachers were found to possess emotional intelligence skills in average range, while their emotional intelligence, stress management, and adaptability account for some differences in GPA. Based on these findings, the researcher provided recommendations for

teacher education programs and future research that are intended to improve the quality of teacher education in United States colleges.

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## **Chapter 1**

### **Introduction**

The presented study explored the link between preservice teachers' emotional intelligence and their beliefs about teacher effectiveness. In this chapter, this study is introduced in eight parts: significance of the study, problem statement, needs for the study, purposes of the study, research questions, hypotheses, terms, and limitations and delimitations.

#### *Significance of the Study*

The significance of the study is encapsulated in three major statements about the focus of this study. Each is discussed below.

First, it is important to identify preservice teachers' views and beliefs about effective teaching because their views and beliefs influence their learning about teaching (Collinson, 1996). According to Wilson, Readance and Konopak (2002), preservice and inservice teachers' beliefs are correlated with their instructional choices. However, preservice teachers in teacher education programs hold a variety of beliefs about teaching, teachers' roles, learning, and goals for teaching that may not be necessarily functional for effective teaching (National Council for the Accreditation of Teacher Education, 2002). Studies show that some of these differences in preservice teachers' beliefs are explained by differences in their major and teacher education program (File & Gullo, 2000; Lin et al., 1999b), years in college (Ganser, 1996), and gender (Gencer & Cakiroglu, 2007). When developing teacher education programs that meet preservice teachers' professional needs, it is helpful to explain these differences in beliefs.

Second, it is important to identify the emotional intelligence characteristics of preservice teachers because emotional intelligence is crucial for effective teaching (e.g., Nias, 1996; Ryan

& Deci, 2000). Emotional intelligence has been found to positively correlate with teachers' ability to balance personal and professional lives (Nias, 1996). Positive regulation and empathic sensitivity as components of emotional intelligence are found to predict teachers' self-efficacy (Chan, 2004). Also, the interpersonal, intrapersonal, and general mood components of emotional intelligence predict the student teacher performance of preservice teachers (Drew, 2007). This evidence from limited research about the emotional intelligence of teachers highlights the crucial role of emotional intelligence in effective teaching. Thus, study of the emotional intelligence characteristics of preservice teachers can help identify their professional needs in this area.

Third, it is important to examine the possible relationship between emotional intelligence and teacher effectiveness beliefs in preservice teachers because such a relationship can serve to highlight the formation of functional and dysfunctional beliefs that later on determine effective and ineffective teaching. So far, both beliefs about teacher effectiveness (e.g., Ganser, 1996) and teachers' emotional intelligence (e.g., Drew, 2007) have been found to be significant determinants of effective teaching. However, it is not clear how emotional intelligence affects teacher effectiveness. Teachers who score high on emotional intelligence scales and who are also effective do not necessarily display emotionally intelligent behaviors (Boyd, 2005). Thus, other venues of emotional intelligence may influence teacher effectiveness. Penrose, Perry and Ball (2007) found that emotional intelligence correlates with self-efficacy beliefs, or the teachers' beliefs about their ability to teach. In other words, emotional intelligence may contribute to teacher effectiveness through its influence on beliefs about teacher effectiveness. Other than Penrose et al.'s (2007) study, no study directly examines the possible link between emotional intelligence and beliefs. This study makes an important contribution by filling the gap.

In sum, as shown in the three major importance statements cited above, the results of this study can help steer the development of teacher education programs. In the next section the problem statement is explained based on the importance of the study.

### *Statement of the Problem*

Emotional intelligence has been found to predict different aspects of teaching (Chan, 2004; Drew, 2006). However, we lack an adequate explanation for how this effect occurs. One possible way can be through beliefs (Penrose et al., 2007). In other words, emotional intelligence can influence beliefs about teaching, which in turn determines effective and ineffective teaching. Currently, there appear to be no studies of preservice teachers' emotional intelligence and its relationship with beliefs about teacher effectiveness. In light of the theoretical importance of the construct of effective teaching (Chan, 2004; Drew, 2006; Ryan & Deci, 2000), there is a need for documentation of preservice teachers' emotional intelligence and its relationship to beliefs about teacher effectiveness.

### *Needs for the Study*

There were three needs for this study. First, as described by Seng (1998), effective teaching is the application of professional skills in a manner that meets the students' developmental and educational needs. It is important to gain an understanding of how preservice teachers perceive effective teaching in light of teaching priorities. This information can be utilized in the development of teacher training programs.

Second, there are no adequate studies of preservice teachers' beliefs about effective teaching (e.g., Ganser, 1996). Information on the views and beliefs of preservice teachers is

important because such information reveals their thoughts about learning to teach (Collinson, 1996). Armed with this information, teacher training programs can be effectively updated.

Third, it is important to determine whether emotional intelligence contributes to the formation of beliefs about teacher effectiveness in preservice teachers. Their perceptions and beliefs about teacher effectiveness are critical to a better understanding of the areas in which they need more training and development.

In sum, it is important to equip preservice teachers with the necessary skills to help them teach effectively. Teacher education programs do not have adequate data on emotional skills and needs necessary to characterize the effectiveness of preservice teachers (Collinson, 1996). Further, the findings from this study may be used as a reference for teacher education programs and professional development programs to ensure proper teaching behaviors and educational outcomes for teachers.

#### *Purposes of the Study*

There were three purposes of this study. The first purpose was to identify preservice teachers' beliefs about teacher effectiveness. The second was to examine the emotional intelligence characteristics of preservice teachers. The third purpose was to investigate the relationship between emotional intelligence and teachers' beliefs about effectiveness, years in college, gender, and grade point average (GPA) in a sample of preservice teachers in the Penn State College of Education.

#### *Research Questions for the Study*

To accomplish the purposes of this study, several research questions were addressed. The five research questions addressed in this study follow:

1. What are preservice teachers' beliefs about teacher effectiveness as identified through the Teacher Effectiveness Beliefs Survey (TEBS)?
2. Is there a relationship between preservice teachers' emotional intelligence as measured by the Bar-On Emotional Quotient Inventory Short Form (Bar-On EQ-i:S) and their beliefs as measured by the TEBS?
3. Is there a relationship between preservice teachers' beliefs about teacher effectiveness as measured by the TEBS and their: (a)GPA, (b)years in a teacher preparation program, and (c) gender?
4. What are preservice teachers' emotional intelligence qualities as measured by Bar-On EQ-i:S?
5. Is there a relationship between preservice teachers' emotional intelligence qualities as measured by the Bar-On EQ-i:S scores and their: (a)years in a teacher preparation program and (b)GPA?

#### *Hypotheses for the Study*

The study was guided by three hypotheses. These hypotheses were as follows:

H(1): There is a significant difference in preservice teachers' beliefs about teacher effectiveness and their GPA ,gender and years in a teacher preparation program.

H(2): There is a significant difference in preservice teachers' emotional intelligence qualities and their years in a teacher preparation program and GPA.

H(3): There is a statistical relationship between preservice teachers' emotional intelligence and their beliefs about teacher effectiveness.

#### *Definition of Terms*

Three operational definitions are provided below, in accordance with the study.

### *Preservice Teachers*

Preservice teachers are those teachers in training and enrolled in preservice education programs. This study focused on Elementary and Kindergarten Education Major students in the Department of Curriculum and Instruction at The Penn State University.

### *Teacher Effectiveness*

Teacher effectiveness is a multifaceted concept incorporating all aspects of teachers' backgrounds, skills, and dispositions, ranging from personality to knowledge to technical skills (Stronge & Hindman, 2006). These characteristics of teachers eventually determine student learning.

### *Emotional Intelligence*

Emotional intelligence is the understanding and management of emotions for a cognitive outcome. This study focused on self-awareness, emotional management, motivation, empathy and social skills as these refer to emotional intelligence (Goleman, 1996).

### *Limitation of the Study*

The main limitation of the study was the nature of the assessment instruments. Both Bar-on EQ-i:S and the TEBS were self report instruments that might limit the objectivity of the answers (Bursuck et al., 1996).

### *Delimitation of the Study*

This study had one main delimitation—it is limited to the Elementary and Kindergarten Education Majors in the Department of Curriculum and Instruction at The Pennsylvania State University, University Park Campus. Thus, study findings may not be a representative of other teacher education programs throughout the United States or external to United States.

### *Chapter Summary*

In this chapter, study background, questions, purposes, and needs were introduced. Study limitation and the delimitation were presented. This study's three purposes were outlined. It was determined that due to the importance of emotional intelligence (Chan, 2004) and beliefs about teacher effectiveness in teaching (Ganser, 1996), study results can be crucial to gaining an understanding of the needs of preservice teachers and to the development of teacher education programs.

## Chapter 2

### LITERATURE REVIEW

The focus of this literature review is on preservice teachers' beliefs and emotional intelligence as these relate to teacher effectiveness. Specifically, each section provides a basis for each of three purposes of the proposed study. The first purpose is to identify preservice teachers' beliefs about teacher effectiveness. The second purpose is to identify the emotional intelligence characteristics of preservice teachers. The third purpose is to investigate the relationship between preservice teachers' beliefs and emotional intelligence.

A limited amount of research has been conducted on this topic, as noted by researchers (e.g., Hubbard, Ross, Santoli & Salyern, 2005; Kaufhold & Johnson, 2005). Research on beliefs about effectiveness is also limited (e.g., File & Gullo, 2000; Ganser, 1996).

#### *Overview of Teacher Effectiveness and Beliefs about Teacher Effectiveness*

Teacher effectiveness is conceptualized differently in the education literature (e.g., Collinson, Killeavy, & Stephenson, 1999, Sanders & Horn, 1998; Stronge, Tucker, & Ward, 2003). Since it is variable, views of teacher effectiveness determine teachers' teaching behaviors (Beijaard & Verloop, 1996; Collinson, 1996; Rhine, 1998). Preservice teachers, the focus of the proposed study, hold variable beliefs about teaching, learning, and teacher effectiveness in general (Geddis & Roberts, 1998; Roberts, 1998). In order to understand where preservice teachers stand in their beliefs, this section begins with a discussion of teacher effectiveness factors and proceeds with dimensions of teacher effectiveness. Finally, taking together these dimensions and factors, this section focuses on preservice teachers' views of teacher effectiveness.

### *Selected Factors in Teacher Effectiveness*

Identifying preservice teachers' different beliefs about teacher effectiveness requires an understanding of factors influential in teaching effectiveness. The prioritization of these factors determines teachers' beliefs about effectiveness (Ganser, 1996). From this point, this section presents two factors in teacher effectiveness: teacher and external.

Teacher factors are the most influential school-related factors influencing student achievement (Rivkin, Hanushek, & Kain, 1998). An analysis of the achievements of 400,000 students in 3,000 schools revealed that teacher quality is far more important than school quality. The same study concluded that class size, teacher education, and teacher experience had little importance. Further, the No Child Left Behind Act (2002) underlines the significance of teachers. Accordingly, teacher factors that determine effectiveness and quality are: teaching experience, teacher certification, engagement in certain types of coursework, and performance on standardized assessments. In terms of teacher factors, strong cognitive skills are one of the primary factors (Educational Testing Service [ETS], 1997; Wubbels, Levy & Brekelmans, 1997). Some of these cognitive skills include: selection, organization and delivery of the content; tailoring teaching strategies according to student needs; creativity; time management; skillful questioning; and continuous learning. Effective teachers are also described as caring, motivating, empathic, and in control (ETS, 1997; Norton, 1997; Wubbels et al., 1997). All of these mean that while teachers are important for education, there are some particular characteristics they should possess for effectiveness.

The second type of factors that influence teacher effectiveness is external factors. Although not as often studied as teacher factors, these factors are crucial to teacher effectiveness. Some of these factors include: students' backgrounds and characteristics such as intelligence,

ability, and socioeconomic status (Stroot et al., 1998); school climate, including resources provided by the school (Ma, Bruont &, Sturm, 2007); the ambiguous goals set by administrators, the community; and teachers themselves (Anderson, 1991; Pratt, 1993); and the related roles assigned to teachers (Esteve, 2000).

Briefly, both teacher factors and external factors influence teacher effectiveness. In other words, rather than relying on one factor, teacher effectiveness is determined through multiple teacher as well as external factors. It is essential to underline these external factors as well as teacher factors in the proposed study because the first purpose of this study relates to preservice teachers' awareness of all of these factors. From this point of view, teacher effectiveness is a construct that incorporates teacher characteristics, students' backgrounds, school climate and resources, goals, and related roles of the teachers. At the same time, teacher effect occurs on different agents such as students, school, and other staff. In other words, teacher effectiveness occurs in different dimensions.

The next section focuses on selected dimensions of teaching.

#### *Dimensions of Teacher Effectiveness*

As discussed in the previous section, teacher effectiveness is influenced by different factors. This section focuses on the different dimensions of teacher effect. While the ultimate goal for teachers is to increase student gains, this goal is attained through teachers' interaction with and influence on multiple dimensions that indirectly affect students, such as other teachers, parents, and school (Cheng & Tsui, 2002). It is important to identify these dimensions when investigating preservice teachers' beliefs about teacher effectiveness (the first purpose of this research) because their beliefs may be closer to reality as they are aware of the multidimensional nature of teacher effectiveness. From this point of view, the dimensions of teacher effectiveness

are discussed in two parts: main models of teacher effectiveness, and the different dimensions of these models.

According to Cheng and Tsui (1999), seven main models are used in determining teacher effectiveness. These models are described as follows. The first model is the goal and task model, which focuses on the goals and tasks set by the teacher and the school to determine what makes an effective teacher. The second is resource utilization, which emphasizes the teacher's effective use of materials and resources as a way to achieve goals. The third model is process, or the teacher's contribution to school functioning and effective education. The fourth is school constituencies' satisfaction, which requires the teachers to meet the expectations set by students, parents, school, and community. Fifth is accountability—the teachers' accountability and professionalism. The sixth model is the absence of problems, which emphasizes teachers' abilities to foresee, identify, and solve problems, weaknesses, and crises. The seventh is continuous learning, or the teachers' awareness of changes in the profession and utilization of resources for professional development. In other words, when considered separately, a teacher can have different levels of effectiveness in each of these models. The above seven models, identified by Cheng and Tsui (1999), are critical to the Teacher Effectiveness Beliefs Scale (Ganser, 1996), which is one of the dependent variables in the proposed study.

Cheng and Tsui (2002) integrated the seven factors into a model of teacher effectiveness that they called total teacher effectiveness. This integrated model has three parts. First, they determined the levels of teacher effectiveness to be individual, group, and school. Second, they identified the effectiveness domains as those involving teacher effectiveness, and including quality and performance in multiple behavioral, affective and cognitive domains that influence students. The third is the actor dimension—teachers and students—functioning at three levels—

individual, group, and school. They determined that their framework of total teacher effectiveness took into account these dimensions as three domains (affective, behavioral, cognitive), three levels (individual, group, and school), and two actors (teachers and students). They conceptualized teacher effectiveness as dynamic interplay among all these levels, agents, and factors. In other words, this framework includes teacher and external factors. As described earlier, external factors include student and school characteristics. Teacher factors are teacher characteristics such as knowledge and ability. Teacher effect may be found in individual student's learning or among students as a group. This multidimensional idea emphasizes teacher qualities, behaviors, strengths, and weaknesses, and also possible limitations in terms of students and schools. As important, teacher effectiveness as conceptualized here calls for teacher education programs and staff development that covers not only cognitive or behavioral but also affective domains at the individual, group, and school levels. Therefore, when used in preparing preservice teachers, this framework ensures awareness of all determinants, factors, and dimensions of teacher effectiveness rather than reliance on a single factor and elimination of others.

In sum, the above discussion focuses on the factors and dimensions of classroom teachers' effectiveness. These factors and dimensions need to be identified in order to understand where preservice teachers stand in their beliefs about teacher effectiveness—the first purpose of this study. Cheng and Tsui's (2002) framework focuses on a unified view of teacher effectiveness. The next section focuses specifically on preservice teachers' beliefs about teacher effectiveness, which may be the determinants of teaching abilities.

*Preservice Teachers' Beliefs and Understanding of Teacher Effectiveness*

Implementation of a teacher effectiveness framework starts with the education of preservice teachers—not just a checklist of courses but also a transformation of teacher candidates' beliefs about education. This transformation is important because it determines teaching behaviors later on (Ganser, 1996). Beliefs are significant ingredients in teaching and learning. Preservice teachers' views and beliefs especially influence their learning about teaching (Collinson, 1996). The National Council for the Accreditation of Teacher Education (2002) supported the idea that teacher candidates should be able to reflect on and confront entering beliefs and to change these beliefs in the context of research and promising practice.

Thus, this section presents studies on preservice teachers' beliefs and understandings of teacher effectiveness in three parts. First, it provides brief information about findings from studies about the general education beliefs of preservice teachers. Second, it discusses studies about preservice teachers' beliefs about effective teacher traits. Third, it presents studies of the self-efficacy beliefs of preservice teachers.

Preservice teachers, when in teacher education programs, have a variety of general beliefs about education, such as teaching, teachers' roles, learning, and teaching goals, which may not necessarily parallel those in a teacher effectiveness framework such as Cheng and Tsui's (2002). Early research documents significant differences in preservice teachers' beliefs about teaching. Some see it as a distribution of knowledge (e.g., Brookhart & Frean, 1992). Others (e.g., Comeaux, 1992) believe teaching is a form of telling. But others (e.g., Klein, 1996) believe that teaching facilitates discovery. Such differences are essential to underline because they also form the basis of understanding teacher effectiveness, which is the first purpose of the proposed study.

Wilson, Readance, and Konopak (2002) examined preservice and inservice secondary social studies teachers' beliefs and instructional choices about learning with text. Learning with text refers to utilizing books and other forms of text for education. The participants were 35 preservice and 35 inservice secondary social studies teachers at a major Southeastern university. The independent measure of the study was teaching status—being a preservice or inservice teacher. The dependent measure in the study was beliefs about learning with text. Participants completed four surveys—a set of 15 beliefs statements about how learning with text takes place (process model); another set of 15 beliefs statements about how learning with text develops (instructional approach); and two sets of lesson scenarios about vocabulary and comprehension instruction. Each instrument was scored to classify teachers' beliefs and lesson choices as representative of that explanation. For the two sets of beliefs statements, teachers choosing a majority of statements reflecting one explanation were classified as that explanation. These sets were derived from three different theoretical orientations—text-based, reader-based, and interactive.

Quantitative and qualitative analysis of the responses revealed the following results in two main categories. The first was about group differences in orientations. For this one, descriptive statistics were used. Descriptive statistics included frequency counts and percentages of orientations regarding how learning with text takes place and how it develops, including vocabulary and comprehension instruction. Accordingly, both groups of teachers primarily had reader-based orientations across the instruments, followed by interactive orientations on the two sets of beliefs on the vocabulary and comprehension lessons. The second result involved the match between beliefs and lesson choices. In other words, it compares the beliefs and lesson plan choices among participants to see if they correspond. Each possible belief and lesson

combination was analyzed through a 1 (belief) x 2 (lesson match/ not match) contingency table. The results showed a significant relationship between reader-based explanations and vocabulary and comprehension lessons. Specifically, 22 teachers who chose that explanation also chose the corresponding lesson plan. This finding is especially crucial to the proposed study about preservice teachers' beliefs because these findings support the idea that their beliefs about teaching influence the way they teach, as reflected in their lesson plan choice.

Ganser (1996) specifically focused on preservice teachers' beliefs about teacher effectiveness in his study. The participants were 441 preservice teachers enrolled at the University of Wisconsin-Whitewater who represented three different stages of teacher preparation. The first stage was observation and participation, the second was field study, and the third was student teaching. Also, 150 inservice teachers participated in this study from three school districts in Wisconsin. These participants filled out a survey that asked them to distribute 100 points among ten factors associated with total teacher effectiveness. Accordingly, the dependent variables were the scores assigned to these factors. The independent variables were respondent level (preservice or inservice teachers), and stage of preservice teachers (observation and participation, field study or student teaching). The data were analyzed by providing the mean number of points and standard deviation for each of ten factors, and a sum of four factors associated with the teacher, which were called teacher factors (F1, F2, F3, F4); the three factors associated with pupils, called the pupil factors (F5, F6, F7); and three factors associated with other persons (other teachers, principals and other professionals working in a school) (F8, F9, F10), which were called other person factors. These factors were calculated and then rank-ordered on the number of points assigned.

The study had three main results. First, preservice and inservice teachers assigned most points to teacher factors, with the mean score for each being 55.85 and 59.18, respectively. This means that the majority of these preservice and inservice teachers believed that teacher factors that included intelligence, personality, background and preparation contributed most to teacher effectiveness compared to other factors such as pupil factors (intelligence, personality, and background) and other person factors (other teachers, principals, and other school professionals). Second, the respondents assigned significantly fewer points to other person factors— $M=21.54$  for preservice teachers and  $M=18.58$  for inservice teachers. In other words, the respondents believed that other teachers, principals, and other school professionals such as guidance counselors had little importance in teacher effectiveness. The rationale for this finding was that these preservice and inservice teachers had a high sense of self-efficacy and relied on teacher characteristics for effectiveness. The third main finding was while preservice teachers assigned 55.85 points to teacher factors, this number of points increased with more advanced stages of teacher preparation. Specifically, the observation and participation group assigned 54.44, the field study group assigned 56.92, and the student teaching group assigned 57.73 points. In contrast, the number of points assigned to pupil factors decreased as the stage level increased. In other words, these preservice and inservice teachers revealed a higher level of responsibility about being a teacher as their experience level increased. These findings are important because both the population used, which is preservice teachers, and the type of beliefs, which are beliefs about teacher effectiveness, are similar to those in the proposed study.

File and Gullo (2000) also found that preservice teachers attribute high levels of responsibility to teachers for effective education and learning. For this study, the beliefs of 119 preservice teachers at the beginning or end of Early Childhood Education or Elementary

Education programs were compared. Significant patterns were revealed in each major. The dependent measures of the study were the scores on the Beliefs about Primary Grades Curriculum and Teaching Survey. The independent variables in the study were the preservice teachers majoring in early childhood education or elementary education; and the level of education at the beginning or end of the program. The survey was in two sections: Primary Grade Beliefs and Instructional Activities Section. The Primary Beliefs Section was composed of items about primary grade teaching practices. This section utilized a five-point Likert scale, with 1 being not at all important, to 5 being extremely important. A sample statement from the Primary Beliefs section is: "It is \_\_\_\_\_ for teachers to use reinforcements such as treats, stickers, and/or stars to encourage appropriate behavior." Six scores were estimated as a composite score and five subscale scores. The subscales for the Primary Grade Beliefs section were: Behavior Management, Teaching Strategies, Child Expectations, Curriculum, and Assessment. The second section of the survey, Instructional Activities, included items about preservice teachers' beliefs about the appropriateness of various primary grade activities. For this section, preservice teachers rated the various activities according to how often they believed certain activities should take place in the primary classroom. For this purpose a five-point Likert scale was used, where 1 being almost never, to 5 being daily. A sample item from the Instructional Activities Section was, "How often should children in a primary class play competitive games to learn factual material (e.g., math facts, states)?" This section provided four scores: a composite score and three subscale scores. The subscales for the Instructional Activities section of the survey included Behavior Management, Child Directed, and Teacher Directed. A 2x2x2 ANOVA was used to analyze the responses. Factor A was the major of the students: early childhood or

elementary. Factor B was the level of education: beginning or ending of the program. Factor C was the scores for the activities and beliefs sections.

There were three main results from this study. First, early childhood education students had a significant beliefs score, which was  $F(1,44)=5.25, p<.05$ , while their activities composite score was not significant— $F(1,44)=1.04$ . Second, there were no differences in beliefs scores between beginning students and student teachers— $F(1,73)=0.13$ , not significant. Beginning students scored higher on the activities composite score— $F(1,73)=5.60, p<.05$ . Third, the main finding was that there was a relationship between beliefs and program major— $F(1,119)=13.517, p<.001$ . Examination of the means indicated that early childhood education students had higher scores than those in elementary education programs on beliefs. In addition, neither the year in the program— $F(1,119)=1.74$ —nor interaction— $F(1,119)=3.27$ —was significant. Program major had a significant main effect on the activities composite score— $F(1,119)=19.80, p<.001$ . The main effect for year in program was not significant— $F(1,119)=0.64$ . In other words, these results revealed that among early childhood education students, the ones at the end of their program preferred a more child-directed curriculum than those at the beginning of their program. On the other hand, elementary education students at the end of their program believed in the value of behavioral classroom management strategies and preferred fewer child-directed activities compared to students at the beginning of their program. This research is important to the first purpose of this study, which was to investigate preservice teachers' beliefs about teacher effectiveness, because it helps to shape the hypotheses of the proposed study by suggesting that program major differences influence beliefs while year in program influences only beliefs about curriculum preference.

Research on preservice teachers' beliefs (e.g., Ganser, 1996) also focuses on their assumptions about effective teachers' characteristics. Minor, Onwuegbuzie, Witcher, and James (2000) conducted a study to investigate preservice teachers' views of the characteristics of effective teachers. The participants were 134 preservice teachers enrolled in an introductory-level education course for education majors at a large university in southern Georgia. The independent measures were educational beliefs, gender, ethnicity, preferred grade level for teaching, and year of study. The dependent measure was the participants' scores on Preservice Teachers' Perceptions of Characteristics of Effective Teachers Survey (PTPCETS), which asks participants to identify, rank, and define three to six characteristics that they believe effective teachers should possess. To identify educational beliefs, they also completed a Survey of Educational Beliefs, which asked them to provide demographic information, such as gender and age, and filled out a 40-item Likert-type scale about views of education. The Likert scale was a five-point scale, with 1 being strongly disagree, to 5 being strongly agree.

The analyses used to analyze the scores was multistage qualitative and quantitative. A sequential mixed analysis was conducted in four stages. In the first stage, the phenomenological mode of inquiry—inductive, generative, and constructive—was used to examine students' responses about their perceptions of effective teachers. The percentage of students who cited each attribute was estimated. Through constant comparison, units that appeared similar in content were categorized. This method of analysis provided different themes related to preservice teachers' perceptions of the characteristics of effective teachers. The second stage of the analysis involved using descriptive statistics to analyze the hierarchical structure of emergent themes. In the third stage, a series of chi-square analyses was performed to determine which background variables were correlated with each of the themes. Using Bonferroni adjustment, the

error rate at the 5% of level of significance was maintained. In the fourth stage, an explanatory factor analysis was conducted to ascertain the underlying structure of these themes.

There were four main results of this study. First, of the 134 preservice teachers, 28.4% were transmissive, 12.7% were progressive, and 59% were eclectic in terms of their educational orientation. Second, the following effective teacher characteristics emerged from these preservice teachers' responses with endorsement rates: student centered (55.2%), effective classroom and behavior manager (33.6%), competent instructor (33.6%), ethical (29.9%), enthusiastic about teaching (23.9%), knowledgeable about subject (19.4%), and professional (15.7%). Third, using the Bonferroni adjustment to control for Type 1 errors ( $p < .05$ ), no significant relationship was found between these categories and preservice teachers' race, year of study, and preferred grade level for teaching, with the exception of the category of effective classroom and behavior manager, which was endorsed by more men than women. Similarly, there were no gender differences with respect to student-centered, competent instructor, ethical, enthusiastic about teaching, knowledgeable about subject, and professional categories. Fourth, when these characteristics were factorized hierarchically according to the variance they were assigned, three main factors emerged. The first one was composed of competent instructor, student-centered, and effective classroom and behavior manager; the second one was ethical and professional themes; and the third one was enthusiastic and knowledgeable about subject. Related to the proposed study's first purpose of examining preservice teachers' beliefs about teacher effectiveness, while preservice teachers' beliefs vary, their race, year of study, and preferred grade level for teaching have no influence and gender has a small influence on preservice teachers' beliefs.

Lin, Taylor and Gorrell (1999a) also focused on teacher characteristics as determinants of teacher effectiveness. The participants were 298 Taiwanese early childhood preservice teachers. The purpose of the study was to compare these preservice teachers' beliefs about teaching and learning in terms of their point in the program and to evaluate the impact of teacher education programs in Taiwan. The sample was from one polytechnic institute and four teachers colleges in Taiwan. Accordingly the dependent variables were beliefs about effective teacher traits identified by six questions. The independent variables were their year in program and the college they attend. The participants, who were in their first or third year of teacher education program, completed a six-question survey about the perceptions of their roles as teachers, of ways that children learn, and of their relationships with children. For example, one survey question was, "What will be your most important role as a teacher?" The responses to these six questions were translated, sorted, and coded, and the descriptions of central beliefs were generated. The coding of the responses involved identifying common keywords and generating themes. Accordingly, the frequency of each keyword was estimated by assigning 0 (absent) or 1 (present) to the teacher groups. Later, the two groups were compared according to the frequency of emphasis of each theme. In addition, the descriptive analysis of individual categories was compared across two groups of preservice teachers. The themes by which the two groups differed were identified by ranking all six questions according to frequency.

There were four main results of this study. First, three main themes for general teacher roles came up using qualitative content analyses and grounded theory. Accordingly, it was found that these preservice believe the following characteristics are effective teacher traits, such as being patient—first-year students, 58%; and third-year students, 45%; and being loving, 52% for first-year students and 44% for third-year students. The second theme was being professional,

with 33% and 30% for first- and third-year students, respectively. The third theme was being considerate of students, with percentages of 9% and 7.5%, respectively.

The second result was that these preservice teachers also believed that classroom practice requires building relationships, exhibiting characteristics of mentorship and lovingness, considering individual students, and using good pedagogical concepts. The percentages of preservice teachers believing in the importance of mentorship were 1% for both groups; and lovingness, 4.5% and 5% for first- and third-year students, respectively; considering individual students, 9% and 12%; and using good pedagogical concepts, 6% for both groups. The third result was that these preservice teachers also differed in their beliefs about the way that children learn. They indicated that the self-discovery approach to learning and individual learning were the venues for learning, with percentages of 8% and 10% for first- and third-year students, respectively.

The fourth result was that, related to these, they had varied responses to the main goals of education. The percentages for these goals were: trying new things, 12% and 7%, respectively, for first- and third-year students; and interaction in the classroom, 37% and 28%, respectively. Related to the purpose of the proposed study, as evident in the percentages for teacher characteristics, these preservice teachers indicated a strong emphasis on individual teacher characteristics in repeating themes. Also, year in teacher education program stood as a crucial factor in preservice teachers' beliefs about teaching and learning.

Lin et al. (1999b) also examined preservice early childhood and elementary teachers' educational beliefs depending on year of study and major. The study had three purposes. The first purpose was to compare preservice early childhood and elementary teachers' perceived efficacy. The second was to compare their beliefs regarding teaching and learning. The third was

to investigate the relationship between their sense of efficacy and their beliefs regarding teaching and learning. Participants were 382 preservice early childhood education and elementary education students at either a midwestern or southeastern university. The independent measures were age, gender, major, minor, university, and level of degree. The dependent measures were the scores on the two instruments—the Gibson and Dembo Teacher Efficacy Scale and six open-ended questions. The Gibson Dembo Teacher Efficacy Scale was used to measure personal teaching efficacy and general teaching efficacy. The revised scale used here included 18 items. These items were rated using a five-point Likert-type scale ranging from 5 being strongly agree to 1 being strongly disagree. In this scale, higher total score meant higher levels of perceived efficacy. Six open-ended questions sought preservice teachers' beliefs about teaching and learning. An example was, "What is your most important role as a teacher?" A statistical analysis of responses to the Gibson and Dembo Teacher Efficacy Scale was conducted using a general linear model. Univariate analyses were used to examine the differences among three dependent variables (university, group, and major). The answers to the six open-ended questions were analyzed using a qualitative, inductive approach in which responses from the six open-ended questions were broken down into thought units, coded according to keywords, and then organized into themes. Using Non Numerical Unstructured Data Indexing Search and Theory Building software for the qualitative analysis, the percentages of responses on each theme were calculated. Emerging themes and frequency ranking of responses for the six questions by each variable were examined to identify themes that differed by major, university setting, or point in program.

Study results revealed statistically significant interactions between self-efficacy beliefs and the two teacher preparation programs examined, the stage of the preservice teachers'

program(years in program), and the major in which they were enrolled. This study had three main results. First, preservice teachers at the end of their program ( $M=66.09$ ) had higher efficacy scores than preservice teachers at the beginning of their program ( $M=64.32$ ). However, according to the univariate analysis of variance for the sum of 18 items, there were no significant main effects for major (early childhood and elementary) or for university (midwestern university, southeastern university). The main effect for the group (beginning, ending) was significant,  $F(1,373)= 11.133, p<.05$ . The interaction between major and main effect was significant— $F(1,373)=4.935, p<.05$ . The second result was that according to MANOVA, there was a statistically significant interaction between the two universities' teacher education programs and the point at which preservice teachers were in their respective programs (beginning or ending levels)— $F(18, 356)=2.017, p<.05$ . There was also a statistically significant interaction between these two universities' teacher education programs and the preservice teachers' major (early childhood and elementary)— $F(18, 356)=1.928, p<.05$ . These findings emphasize the significance of not only the influence of preservice teachers' beliefs on their self-efficacy, which in turn determines their effectiveness, but also the importance of teacher preparation programs on the establishment of these beliefs.

The third result was that the analysis of the six open-ended questions revealed differences between frequency rankings of preservice teachers' beliefs for both midwestern and southeastern programs, as well as between early childhood and elementary programs. The themes revealed from preservice teachers were pedagogical responsibilities, management responsibilities, teacher role, teacher characteristics, teacher expectations of children and how they learn, and teacher goals. These findings are significant to the proposed study because they suggest that differences are due to years in program but not to major and university.

Gencer and Cakiroglu (2007) explored Turkish preservice teachers' science teaching efficacy and classroom management beliefs. They conducted a study with 584 preservice science teachers enrolled in teacher education programs in nine selected institutions in Turkey. The independent variables were gender and year of study. The dependent variables were self-efficacy beliefs and classroom management beliefs. Two instruments were used. The first was the Science Teaching Efficacy Beliefs Instrument Form B (STEBI-B) designed to measure the efficacy of teaching science to preservice teachers. This instrument consisted of 23 items and was scored with a five-point Likert-type scale ranging from 5 being strongly agree to 1 being strongly disagree. A sample item from this instrument was, "I will continually find better ways to teach science". The second instrument was Attitudes and Beliefs on Classroom Control (ABCC), which included 26 items and was scored across a 4-point Likert-type scale ranging from 4 (describes me very well) to 1 (describes me not at all). A sample item from this instrument was, "I believe the teacher should direct the students' transition from one learning activity to another".

There were six results from this study. First, a descriptive analysis of the self-efficacy survey indicated generally positive self-efficacy beliefs expressed by most of the preservice teachers regarding science teaching on both subscales of the STEBI-B, with means ranging from 3.21 to 4.26. Second, in terms of classroom management, results revealed that preservice science teachers preferred a non-interventionist style on the people management subscale, including teacher-student relationships with means ranging from 1.51 to 2.08, reverse scored. For example, respondents believed in giving students opportunities to create their own daily routines, judge the quality of their own work, pursue their own interests, and select their own seats.

However, the third result was that the participants' mean scores for interventionist instructional management were also high, ranging from  $M=3.20$  to  $M=3.29$  on different items. This means that participants were found to be more interventionist on the instructional management subscale that is about aspects of classroom management, such as monitoring seatwork, structuring daily routines, and allocating materials. This means that preservice science teachers believe in their ability to teach science effectively (PSTE) and that students can learn science given effective instruction (STOE).

The fourth result was that there were no differences due to gender. For this, t-tests were conducted to determine differences between male and female preservice teachers regarding efficacy beliefs and classroom management orientations. The significance level of .05 revealed no significant differences between male,  $M=50.48$  with a standard deviation of 7.02, and female prospective teachers' efficacy beliefs,  $M=50.77$  with a standard deviation of 6.22. There were also no significant differences between classroom management orientations of males,  $M=36.07$  with a standard deviation of 4.84, and females,  $M=36.66$  with a standard deviation of 4.35. The fifth result was that the findings revealed no significant differences between third-year and fourth-year prospective teachers regarding efficacy beliefs— $M= 50.49$ ,  $SD=6.11$  and  $M= 50.73$ ,  $SD=6.74$ , respectively. There were also no significant differences between classroom management orientations of third- ( $M=18.96$ ,  $SD= 3.89$ ) and fourth-year ( $M=19.40$ ,  $SD=4.16$ ) prospective teachers. The sixth result was obtained through Pearson product-moment correlations performed to explore whether a relationship existed between preservice science teachers' science teaching efficacy beliefs and their classroom management beliefs. A significant positive correlation was found between the instructional management subscale of the ABCC inventory and both the PSTE ( $F=143$ ,  $p<.01$ ), and the STOE ( $F=135$ ,  $p<.01$ ) subscales of the

STEBI-B. There was also a significant negative correlation between the people management subscale of the ABCC inventory and both the PSTE ( $F=339, p<.01$ ) and the STOE ( $F=299, p<.01$ ) subscales of the STEBI-B with a small effect size. In other words, the more preservice science teachers believed in their personal abilities to teach science and enhance students' learning, the less interventionist they were about people management orientation. For this study, it is crucial to emphasize that year of study and gender made no difference in preservice teachers' beliefs. Also, these preservice teachers believed in personal responsibility for effective teaching.

In summary, the first purpose of the proposed study is to explore preservice teachers' beliefs about teacher effectiveness. Accordingly, there is a significant variance among preservice teachers' beliefs (Ganser, 1996) while these influence their method of teaching (Wilson et al., 2002). Major and teacher education program affect beliefs about classroom practice (File & Gullo, 2000; Lin et al., 1999b). In both of these studies, early childhood preservice teachers indicated more student-oriented classroom teaching beliefs compared to elementary education majors. Years in college, on the other hand, provided inconsistent results. In Ganser's (1996) study, as years in college and experience increased, the points assigned to teacher factors increased. Similarly, in Lin et al.'s (1999b) study, self-efficacy correlated with years of study in college. However, for specific effective teacher characteristics, year of study made no difference (Minor et al.). Neither did self-efficacy beliefs (Gencer & Cakiroglu, 2007). Gender, on the other hand, does not account for any difference in self-efficacy (Gencer & Cakiroglu, 2007) beliefs about effective teacher traits (Minor et al., 2005). There is strong emphasis among studies on teacher characteristics for effective teaching (Ganser, 1996; Lin et al., 1999a; Lin et al., 1999b). Among these, classroom management, professionalism, and ethicality appear most common.

Thus, for the proposed study major, years in teacher education program and gender stand as three factors that may influence preservice teachers' effectiveness beliefs as the first purpose of this study.

The next section focuses on emotional intelligence as another factor in teacher effectiveness. The discussion addresses the crucial nature of emotions and emotional intelligence for teaching, using findings from different studies.

#### *Emotional Intelligence: Significance for Teacher Effectiveness*

The second purpose of the study is to identify the emotional intelligence characteristics of preservice teachers. For this reason this section focuses on the significance of emotional intelligence to teacher effectiveness. It proceeds in three steps. First, the roles of emotions in teaching are discussed. Second, selected studies about the influence of emotional intelligence on teacher effectiveness are provided. Third, the emotional intelligence characteristics of preservice teachers are discussed.

#### *Roles of Emotions in Teaching*

The link between teachers' emotional intelligence and effectiveness relies greatly on the roles of emotions in teaching. It is important to highlight the importance of emotions for teaching in the proposed study for two reasons. First, the possible influence of emotional intelligence on the teacher's effectiveness depends on the significance of emotions to teaching. In other words, if emotions are important to teaching, emotional intelligence is critical to teaching, too. Second, this serves as a basis for the emotional intelligence characteristics of teachers. In the following paragraphs, in order to demonstrate the role of emotions, three notions are emphasized. The first one is that emotions are integral parts of education. The second is that emotions may have different functions in the classroom. Third, teacher emotions influence students' learning.

Emotional intelligence may be a developing concept in the education field but emotions and emotional issues have always been accepted as integral parts of being a teacher and teaching (Hargreaves, 1998). In fact, Hart (2000) characterizes teaching as an occupation with high emotional demand and frequent stressful activity. Teaching is related to various other kinds of emotions. Teachers also feel love and affection (e.g., Godar, 1990), joy (Golby, 1996; Hargreaves, 2000), satisfaction, and pleasure (as cited in Sutton, 2003; Sutton, 2000). Negative emotions include anger, frustration (e.g., Hargreaves, 2000), anxiety (e.g., Erb, 2002), and helplessness (Kelctermans, 1996).

Both positive and negative emotions have their own unique functions in classroom teaching. For example, love and affection result in caring, which is a characteristic of elementary school teaching, while anger may help in classroom management (Woods & Jeffrey, 1996). In general, negative emotions tend to decrease teachers' motivation, while positive emotions, on the other hand, broaden thinking and serve to open new teaching venues for teachers (Csikszentmihalyi, 1990). Expressed negative emotions, especially anger, can play different roles in teaching. Teacher's anger can be a source of sadness, shame, and guilt in students (Thomas & Montgomery, 1998, p. 374) and may also serve to communicate classroom standards (Goldenberg, 1989) if appropriately channeled.

Teachers' emotions influence learning because emotions are integral parts of education for students, too. Golby (1996) claimed that education fosters complete development of students, including socioemotional and cognitive domains. His qualitative analysis of interviews with two experienced female teachers revealed that what teachers reflect emotionally influences their relationships with their student—trust, commitment, and motivation. Similarly, Sutton and Wheatley (2003) reviewed the available literature on teachers' emotions and supported the

finding that students are influenced by teachers' emotions but found little explanation for the link between teachers' emotions and teachers' own cognitions or motivation.

As described by Hargreaves (2001), teaching is emotional. He presented the term “emotional geographies of teaching”, referring to the patterns of closeness and distance in human interactions that shape the emotions experienced about the relationships to us, each other, and the world around us. In this study, which aimed to explore the emotional geographies of teaching, interviews were conducted with 53 elementary and secondary teachers. A qualitative analysis of these interviews revealed five emotional geographies of teacher parent interactions sociocultural, moral, political, physical, and professional. The analysis further indicated that teaching triggers, colors, and expresses feelings and actions of teachers and also influences the ones they teach. For example, students can be enthusiastic about or bored by teachers. Also, parents may approach or stay away from teachers depending on teachers' expressed feelings and actions. Thus, the way in which teachers express their emotions influences their students and others.

In summary, emotions have the potential to influence teachers' experiences with teaching both positively and negatively. Therefore, the way in which emotions are understood, reflected, and managed—emotional intelligence—may hold promise in the field of education. This highlights the second purpose of this study, which is to identify the emotional intelligence characteristics of preservice teachers. The next section focuses on available studies of teachers' emotional intelligence.

### *Influence of Emotional Intelligence in Effective Teaching*

Emotional intelligence, which includes such essential ingredients as emotions and cognitions, has the potential to meet the needs of education today. This section, which focuses on

the influence of emotional intelligence in effective teaching, provides the basis for this study's second purpose—to identify the emotional intelligence characteristics of preservice teachers.

In a recent study (i.e., Rushton, Morgan, & Richard, 2007), the Myers-Briggs Type Inventory (MBTI) and Beiderman Risk Taking (BRT) scale were administered to 58 teachers in Florida. These teachers were nominated for the Florida League of Teachers (FLoT) by their superintendents/directors. The purpose of this study was to determine whether those nominated for the FLot, which has a rigorous selection process, share more common personality preferences (as determined by the MBTI) with teachers other than those found elsewhere in the U.S. Teachers selected for the FLot were compared on personality preferences with both U.S. and local samples of teachers to see if teachers who were considered effective shared personality preferences and/or differed from the typical public profile.

The MBTI is a 166-item self-report inventory that identifies learning preferences, teaching styles, and personality characteristics. Four separate scales are continuous in nature and indicate a person's preference for a particular index. These four scales are: Extraversion (E) versus Introversion (N), Sensing(S) versus Intuition (I), Thinking (T) versus Feeling (F), and Judging (J) versus Perceiving (P). Sixteen possible combinations of letters are possible from the four dichotomous pairs. Each "type" (e.g., ENTJ or ISFP) refers to a dynamic interaction with individual preferences for those related traits. The BSSS was utilized to measure five categories of sensation- (very high, high, average, low, very low) seeking for the 58 participants. The scale is a forced-choice format that gives the respondent two choices for related behaviors—one involving a greater degree of risk and the other a lesser degree of risk. The scoring of the instrument was done by assigning one point to the high-risk activity and zero to the low or no-risk activity. The total score reflected the degree of risk-taking in which a person is willing to

participate, with high scores indicating a greater willingness to take risks and low scores indicating a lesser willingness. According to these scorings, there were four types of data—MBTI results on the 58 participants in this study; comparison data for 804 randomly selected teachers; comparison data for a random sample of Florida elementary school teachers ( $N=189$ ); and results of the BSSS for the 58 study participants.

There were four results. The first was that descriptive analysis of the responses from 58 FLOT teachers indicated that 83% could be categorized in the low, average, or high categories while the majority of these respondents scored in the average category (37%). The low and high-risk-taking categories were 24% and 22%; the remaining 13% were in the very low category, with no participants scoring in the very high category. These results suggest that teachers accepted as effective in their field were not extreme risk-takers.

For the second result, data analysis included the frequency and percentage of responses for each MBTI type, for each combination of two types, and for each combination of four types. A Chi-square statistical measure was generated that compared the 58 study participants with a national sample of 804 teachers who had demonstrated teaching as their preferred occupation. A second Chi-square was generated comparing the study sample to 189 Florida elementary school teachers who also had completed the MBTI. When MBTI results for teachers nominated for the FLoT ( $N=58$ ) were compared to the sample of teachers who selected teaching as their chosen profession ( $N=804$ ), there was a significant difference ( $p<.001$ ) among some of the specific traits. Specifically, the sample of FLoT educators had a strong preference for choosing the following traits: E, N, and P. The third result was that when teachers were nominated for acceptance into the FLoT and a random sample of Florida elementary school teachers ( $N=189$ ) were compared, the individual traits reported as significant ( $p<.001$ ) were again, E, N, and P.

Comparisons of dual combinations revealed that the following were significant for FLoT: EP, NF, NP, FJ, and EN. The third result was that when the combined four MBTI types of FLoT candidates ( $N=58$ ) and the USA national random sample of 804 teachers were compared, it was discovered that combined types of ENFP and ENTP differed significantly at the  $p<.001$  and  $.05$  levels, respectively, when compared to the random sample of teachers. A close look at the study results revealed that types of effective teachers are very similar on emotional intelligence traits. Specifically, feeling, perceiving, and extroversion refer to self-awareness, empathy and social skills, respectively. These studies highlight personal-social variables on teacher's effectiveness as opposed to cognitive and intellectual ones. Emotional intelligence, incorporating emotions and cognitions as one, has the potential to explain more variance than each alone.

Classroom management is another area to which emotional intelligence can contribute. It is also a major problem in education. The behavioral techniques tried so far are not influential enough. This can be due to the lack of an essential ingredient: emotional understanding. Emotional understanding (e.g., empathy) is a dimension of emotional intelligence as defined by Mayer and Salovey (1990), and is key to healthy and open communication in the school environment (Denzin, 1984). For example, when emotional understanding is lacking, a teacher can misunderstand a stressed student's behaviors as aggressiveness and hostility. This teacher, acting upon this misunderstanding, may unintentionally modify his/her personal approach to the student and influence teaching and learning negatively. This lack of emotional understanding may also emotionally suppress the educator's behaviors, leading to detrimental effects on children's development (e.g., Maehr & Midgley, 1996). Ryan and Deci (2000) focused on directly controlling teachers' behaviors as a reflection of autonomy, defined as striving to realize authentic self, meet needs, and comply with own values and interests to the point of devaluing

others'. According to self-determination theory (SDT), autonomy refers to the striving to realize one's authentic self as reflected in one's basic needs and self-chosen values, interests, and goals devaluing others' goals and values. Ineffective teachers tend to use directly controlling teacher behaviors (DCTB), such as not letting children work according to their preferred style, giving continuous directions to children, or prohibiting children from voicing opinions that differ from those expressed by the teacher. One of the sources of DCTB can stem from teachers' personal dispositions. A teacher who is less perceptive of others' needs and emotions—a component of emotional intelligence—is more likely to utilize DCTB (Assor, Kaplan, Kanat-Maymon, & Roth, 2005).

Teachers also need emotional intelligence to balance their personal and professional lives and to prevent emotional burnout. Emotional burnout is common among teachers and stems from failure to manage their own or others' emotions due to attempts to keep up with organizations', in this case the school's, expectations (Nias, 1996). In a recent study (Mendes, 2003), emotional intelligence was found to significantly contribute to the prevention of emotional burnout in 49 secondary teachers as measured by the Multifactor Intelligence Scale (MEIS) and the Maslach Burnout Inventory- Educators Survey (MBI-ES). The purpose of this study was to compare the emotional intelligence of 49 credentialed secondary teachers with their current burnout levels. Descriptive statistics and Chi square were used to analyze the results.

This study had three main results. First, in the high emotional exhaustion subgroup ( $n=15$ ), there was a negative correlation ( $-.53$ ) between emotional exhaustion and managing emotions. Second, among emotionally exhausted teachers ( $n=15$ ), there was a negative correlation ( $-.65$ ) between personal accomplishments and managing emotions. Third, in the total sample, there was a positive correlation between number of years in teaching and identifying

emotions ( $r=.33$ ,  $p<.02$ ). The results of this study suggest that as teachers improve their management of emotions, they are less likely to be emotionally exhausted, which in turn decreases burnout and increases their effectiveness. In other words, these results serve as other evidence that emotional intelligence can contribute to effectiveness.

Findings about the effect of emotional intelligence on preservice teachers are limited to a few studies. For instance, Drew (2006) investigated the relationship between emotional intelligence and student teacher performance among 40 student teachers at the University of Nebraska. The purpose of the study was to determine whether student teacher performance was associated with emotional intelligence. In this study, Student Teacher Performance (STP) was measured using a behavior-based evaluation process and emotional intelligence was measured using the Bar-On EQi. In a descriptive analysis of the data, a relationship was found between College Supervisors' STP rating and emotional intelligence. No such relationship was found based on data on Cooperating Teacher and Student Teacher perspectives for emotional intelligence and STP pair. There was a particularly statistically significant association between total Emotional Quotient, including scores for Intrapersonal, Interpersonal, and General Mood Scales, and two or more aspects of STP. Stress management and adaptability scale scores from the Bar-On EQi had no relationship with any aspect of STP. In other words, the influence of emotional intelligence on effective teaching can be componential rather than as a whole.

In another study, O'Brienwood (1999) compared the emotional intelligence of 28 master teachers with that of 145 general teachers. Slightly better emotional intelligence scores were found for master teachers—those selected as exemplary by their schools. Participants responded to an Emotional Quotient Profile composed of five scales: self awareness, emotional intelligence, nonverbal behavior, business judgment, and adaptive coping. Accordingly, the total score for

master teachers was 422.8 and 416.7 for general teachers. This indicates that emotional intelligence may contribute to teacher advancement.

Chan (2004) conducted a study of perceived emotional intelligence and general self-efficacy and self-efficacy toward helping others. The participants were 158 secondary school teachers enrolled in the author's courses in guidance and counseling for in-service training at the Chinese University of Hong Kong. The participants provided information on gender, age, teaching experience, school subjects taught, and guidance status, and filled out questionnaires that included the 33-item Emotional Intelligence Scale (EIS), the Wegner–Schwarzer–Jerusalem (GSE) 10-item general self-efficacy scale, and the Schwarzer–Wegner (SETH) 10-item self-efficacy toward helping scale. The EIS assesses emotional intelligence based on self-report responses about the appraisal and expression of emotions in the self and others, regulation of emotions in the self and others, and utilization of emotions in solving problems. It is a five-point scale ranging from 1 being strongly disagree to 5 being strongly agree. The GSE and the SETH are designed to assess respondents' perceived self-efficacy in general, and in the specific area of helping others, respectively. In completing the GSE and the SETH, respondents were asked to judge how true items were, using a four-point scale ranging from 1 being not at all true to 4 being exactly true. To assess the perceived emotional intelligence of this sample of secondary school teachers, their relevant item responses to the EIS were scored using four empirical scales representing four components of perceived emotional intelligence. The four empirical scales are empathic sensitivity, positive regulation, positive utilization, and emotional appraisal. A total score was computed by summing all items to yield a score of perceived global emotional intelligence. Teachers scored most highly on positive utilization ( $M=11.72$ ,  $SD=1.66$ emotional appraisal ( $M=11.39$ ,  $SD=1.71$ ), followed by empathic sensitivity ( $M=10.99$ ,  $SD=1.75$ ) and

positive regulation ( $M=10.77$ ,  $SD=1.93$ ). Two separate multiple linear regression analyses were conducted to explore how perceived self-efficacy measures were related to perceived emotional intelligence among teachers. Using the four components of perceived emotional intelligence as predictors of self-efficacy beliefs, positive regulation emerged as the significant predictor of general self-efficacy ( $F=3.70$ ,  $p<0.001$  (two tailed)), whereas empathic sensitivity emerged as the significant predictor in predicting self-efficacy toward helping others ( $F=4.89$ ,  $p<0.01$ ).

In summary, research indicates that emotional intelligence is essential to effective teaching. Evidence includes research about the personality traits of effective teachers as well as the actual influence of emotional intelligence on effective teaching (e.g., Drew, 2006; Mendes, 2003). Classroom management (Ryan & Deci, 2000) and balance of personal and professional lives (e.g., Nias, 1996) are other areas to which emotional intelligence contributes. It was also found that emotional intelligence's contribution to effectiveness can be componential. Chan's (2004) study suggests positive regulation and empathic sensitivity components of emotional intelligence are positively correlated with self-efficacy. Similar to Drew's study (2006), only intrapersonal, interpersonal, and general mood scales for emotional intelligence predict student teacher performance. This information highlights the second purpose of the proposed study, which is to identify the emotional intelligence characteristics of preservice teachers. The next section focuses on the relationship between emotional intelligence and beliefs in education.

#### *Emotional Intelligence and Beliefs in Education*

Emotional intelligence is an accepted influence on teacher effectiveness. Teachers possess varying levels of emotional intelligence (e.g., Drew, 2006). However, it is not clear how this mechanism works. The studies (e.g., Drew, 2006; O'Brienwood, 1999) regarding effective teachers' emotional intelligence characteristics are based on self-report measures, not ability

measures. In fact, Boyd (1999) claimed that emotionally intelligent teachers may not be perceived as such by students in the classroom. The emotional intelligence concept is based on the premise that emotions and cognitions shape each other (Mesquita, Frijda & Schreher, 1997). So rather than directly influence behaviors, teachers' emotions may also influence the way they think, problem-solve (Isen, 1993), and develop beliefs.

Self-efficacy is the predominant belief among teachers. By definition, teachers' self efficacy has to do with the extent of teaching capability (Gibbs, 2002). Teacher's self-efficacy has been consistently found to predict teacher effectiveness (Tschannen-Moran, Hoy, & Hoy, 1998). For this reason, it is also essential to identify antecedents of self-efficacy beliefs.

Emotional Intelligence is found to predict self-efficacy beliefs (Penrose, Perry & Ball, 2007). In this study, it was reported that the relationship between self-efficacy beliefs and effectiveness are significant regardless of age, gender, and length of teacher experience. Their study aimed to investigate the relationship between emotional intelligence and teachers' self-efficacy and the extent to which this relationship is moderated by gender, age, teaching experience, and status.

The participants were 211 Australian teachers. The study had three independent variables: age, gender, and teaching status. There were two dependent variables: emotional intelligence and self-efficacy scores. The participants were asked to complete the following scales: The Reactions to Teaching Situations (RTS), to measure the construct of emotional intelligence; and the Teaching Efficacy Scale (TES), to measure personal and teaching efficacy. The RTS consists of ten descriptions of school-based situations typically encountered by teachers. For each situation, there are four possible reaction responses, including one for each of the four branches of emotional intelligence. Participants are asked to consider the likelihood of

their immediate feeling and thinking in a particular way. Likelihood is measured on a five-point Likert scale ranging from 1 being never likely to 5 being always likely. The TES was designed to measure the construct of teacher self-efficacy. The scale consists of 30 statements. Respondents indicated their level of agreement with each statement using a 6-point Likert scale ranging from 1 being strongly disagree to 6 being strongly agree. In order to compare the emotional intelligence and personal teaching efficacy scores for males and females, two independent samples t-tests were conducted. There was a significant difference in emotional intelligence scores for males ( $M=138.19$ ,  $SD=14.83$ ) and females ( $M=144.48$ ,  $SD=12.33$ ;  $t(199) = -3.22$ ,  $p=.001$ ). The magnitude of the differences in the means was moderate ( $\eta^2 = .05$ ). However, there was no significant difference in personal teaching efficacy scores for males ( $M=70.34$ ,  $SD=9.90$ ), and females [ $M=72.33$ ,  $SD=10.08$ ;  $t(207) = -1.38$ ,  $p=.17$ ]. The magnitude of the differences in the means was minimal ( $\eta^2 = .01$ ). Age and emotional intelligence were also found to be highly correlated. The association between age and emotional intelligence was  $r=.17$  ( $p<.05$ ), and age and teacher self-efficacy  $r=.13$  (ns). The differences in emotional intelligence scores for the five status groups—graduate, accomplished, expert, and leading teachers and principals—were examined using a one-way between-groups analysis of variance (ANOVA). A statistically significant difference for the five status groups [ $F(4, 200)=3.21$ ,  $p=.01$ ] was indicated by the ANOVA. Post-hoc comparisons using the Tukey HSD test indicated that the mean for Accomplished Teachers ( $M=138.89$ ,  $SD=14.67$ ) was statistically different ( $p<.10$ ) from that for both Leading Teachers ( $M=147.57$ ,  $SD=12.77$ ) and Principals ( $M=149.12$ ,  $SD=10.95$ ). The means for Graduate Teachers ( $M=140.09$ ,  $SD=12.04$ ) and Expert Teachers ( $M=140.85$ ,  $SD=13.66$ ) did not differ significantly from those for any other status group. In other words, while gender and age influence emotional intelligence, they do not influence self-efficacy

beliefs. There was also a positive relationship between emotional intelligence and self-efficacy ( $r = .38, p < .01$ ), which also was indicated in Chan's (2004) study. In addition, gender, age, and teaching level can intervene in this relationship through their interaction with emotional intelligence.

Self-efficacy beliefs are not the only type of beliefs held by teachers regarding teaching and learning. However, they are the only ones examined in influencing emotional intelligence. This means that other beliefs that shape views of teaching and learning, such as those about teacher effectiveness proposed in this study, may be examined in terms of their relationship with emotional intelligence.

### *Chapter Summary*

Emotions are no less integral to teaching than knowledge and cognition (Hargreaves, 1998). Emotional intelligence holds strong promise for effective teaching. A review of the literature suggests an indirect influence between emotional intelligence and teacher effectiveness through beliefs, particularly the self-efficacy beliefs found to predict teacher effectiveness (Gencer & Cakiroglu, 2007). However, the preservice teachers who are tomorrow's educators holds varying beliefs about teaching and learning in addition to self-efficacy that will ultimately shape their understanding and application (Minor et al., 2000). In order to assure effective future teaching, it is essential to identify preservice teachers' emotional intelligence skills, beliefs about teacher effectiveness, and possible interplays between the two. These were the three main purposes of the present study. The next chapter presents the methodology for this study.

## **Chapter 3**

### **METHODS**

The main purpose of this study was to investigate the link between preservice elementary teachers' emotional intelligence and beliefs about teacher effectiveness. In the following sections of this chapter, methodology is discussed under the following sections: a) research design, b) participants, c) instruments, d) data collection; and e) treatment of data.

#### *Research Design*

Quantitative research methods were employed in this study to investigate the link between preservice elementary teachers' emotional intelligence and beliefs about teacher effectiveness. Crowl (1996) defines quantitative research as a method that is used to answer questions through collecting and analyzing numerical data. This study is based on multilinear correlational research using quantitative strategies (Graziano & Raulin, 2000). The data were gathered using the Teacher Effectiveness Beliefs Survey (TEBS) (Ganser, 1996) and the Bar-On Emotional Intelligence Scale Short Form (EQ-i:S) (Bar-On, 2000). The data collected were used to address the research questions identified in Table 3.1.

These surveys and scales were distributed to 295 pre-service teachers in the College of Education at The Pennsylvania State University, University Park Campus. Among these 69 of them who were in Elementary and Kindergarten Major were included in scoring. A pilot study with 30 students from Elementary and Kindergarten Major was conducted in the same location in order to assess validity of the TEBS (Ganser, 1996).

Table 3.1

*Study Variables*

<b>Research Question</b>	<b>Variable</b>
Research Question 1: What are the preservice teachers' beliefs about teacher effectiveness as identified by TEBS?	Variables are TEBS items grouped into teacher, student and other professionals items.
Research Question 2: Is there a relationship between preservice teachers' emotional intelligence as measured by Bar-On EQ-i:S and their beliefs as measured by TEBS?	Independent variable is the scores for the total and subscales of Bar-On EQ-i:S.  Dependent variable is points allocated to TEBS.
Research Question 3: Is there a relationship between preservice teachers' beliefs about teacher effectiveness as measured by TEBS and their: a) GPA, b) gender, and c) years in teacher education program?	Independent variables are: GPA, gender, and years in teacher education program.  Dependent variable is: points allocated to TEBS items.
Research Question 4: What are the emotional intelligence qualities of preservice teachers as measured by Bar-On EQ-i:S?	Variables are scores on EQ subscales and total EQ score.
Research Question 5: Is there a relationship between preservice teachers' emotional intelligence qualities as measured by Bar-On EQ-i:S and scores on their: a) years in teacher preparation program, b) GPA?	Independent variables are: GPA, gender and years in teacher education program.  Dependent variable is: the total and subscale scores on Bar-On EQ-i:S.

### *Participants*

The participants for this study were recruited from The Pennsylvania State University, College of Education, University Park Campus, in the Elementary and Kindergarten Education Major. There are approximately 450 students between the ages of 18 and 22 in this program. A total of 99 were accessed in this study.

### *Instrumentation*

Two instruments were given to the participants: the Emotional Quotient Inventory-Short Form (EQ-i:S) and Teacher Effectiveness Beliefs Survey (TEBS).

### *Emotional Intelligence Measure*

The Emotional Quotient Inventory Short Form (EQ-i: S) (Bar-On & Parker, 2002) is a 51-item inventory that reflects a measure of emotionally intelligent behavior for adult respondents. This instrument consists of 51 items with a five-point, Likert-type response scale ranging from one being very seldom or not true of me, to five being very often true of me or true of me.

There are five scales in this instrument. These are: 1) Intrapersonal scales—a. emotional self-awareness, b. assertiveness, c. self-regard, d. self actualization, e. independence; 2) Interpersonal scales—a. interpersonal relationship, b. social responsibility, c. empathy; 3) Adaptability scales—a. problem solving, b. reality testing, c. flexibility; 4) Stress management scales—a. stress tolerance, b. impulse control; and 5) General Mood—a. happiness b. optimism. Items are similar to the statements in the Appendix A.

For this study, an online version of EQ:i-S was used. This version has all of the same properties as the paper-and-pencil format. The only difference is that participants complete the inventory online.

The normative data for EQ-i:S scales consist of four age groups for males and females: 29 years and younger, 30 to 39 years, 40 to 49 years, and 50 years and older. This normative sample consists of 3,174 adults (1,543 males and 1,631 females) ranging in age from 16 to 93 years. In this study the participants' ages were between 18 and 22, so the normative data used in this age group was 29 years and younger.

There is information in the technical manual for the instrument about four different types of reliability on the Bar-On EQ-i:S: internal consistency reliability, mean inter-item correlations, test-retest reliability and standard error of measurement/ prediction (Bar-On, 2002). The internal consistency coefficients of the inventory and the subscales are satisfactory (Kline, 1998). They range from .76 to .93, with the exception of the Positive Impression Scale. This subscale has an internal consistency reliability of .51 to .76. Mean inter-item correlations for the scale range from .18 to .43. This is another indication of the internal consistency of the inventory. Test-retest reliability of the inventory and the subscales are excellent per Kline. The coefficients for this measure range from .46 to .80. Standard error of measurement scores are other determinants of reliability. These values for the 16 to 29 year normative group on the Bar-On EQ-i:S range from 1.58 to 3.75. Similarly standard error of prediction scores on the inventory for the 16–29 year age group range from 2.45 to 4.70. These values indicate that the Bar-On EQ-i:S and its subscales are stable and consistent in measuring the constructs they were developed to measure.

The validity of the Bar-On EQ-i:S is documented in the technical manual by three types of information: factorial validity, construct validity, and predictive validity. The factorial validity

of the instrument is indicated by the fact that the correlations among the subscales are in a low (.24) to moderate (.80) range.

The construct validity of the Bar-On EQ-i:S is based on following three measures: the correlation between the 51-item Bar-On EQ-i:S and the original 133-item Bar-On EQ-I; the correlation between the Bar-On EQ-i:S and other measures of emotional intelligence; and the correlation between the Bar-On EQ-i:S and different measures of personality. The correlation between the original Bar-On EQ-i and the Bar-On EQ-i:S is high. Accordingly, the overlapping scales in both of these measures (Interpersonal, Intrapersonal, Stress Management, Adaptability and General Mood) have correlations ranging from .73 to .97. This high correlation led the authors of the scale to utilize some of the studies employing the full-length 133-item Bar-On EQ-i to support the validity of the Bar-On EQ-i:S. In support of construct validity, the Bar-On EQ-i:S was found to be low to moderately correlated with the Mayer Salovey Caruso Emotional Intelligence Test (MSCEIT), another measure of emotional intelligence. The correlations between the two measures range from .03 to .40. The Bar-On EQ-i:S was also found to be highly correlated with alexithymia, which is related to emotional intelligence by focusing on similar constructs such as ability to identify, cognitively process, regulate, and express emotions (Taylor, Bagby, & Parker, 1997, pp. 27–29). The correlations between the two range from -.38 to -.71. Finally, the Bar-On EQ-i:S was also found to be low (.02) to moderately (-.68) correlated with personality factors measured using 16PF scales. This is an indication of the divergent validity of the Bar-On EQ-i:S, which basically refers to the fact that this scale measures something different than personality factors.

As an indication of convergent validity, the Bar-On EQ-i:S was also found to have moderate (.01) to high (-.65) negative correlations with hyperactivity as measured by the

Conners Adult ADHD Rating Scale (CAARS) (as cited in Bar-On, 2000; Conners, Erhardt, & Sparrow, 1999) and low negative (-.43) to moderate (.55) positive correlations with coping with occupational stress, as measured by the Coping Inventory for Stressful Situations (CISS) (as cited in Bar-On, 2000; Endler & Parker, 1990). The Bar-On EQ-i:S was also found to have solid predictive validity. Accordingly, there are moderate significant correlations ranging from .38 and .52 between the Bar-On EQ-i:S and job performance. The Bar-On EQ-i:S is also a predictor of academic success as is evident in a discriminant function analysis using EQ scores as a predictor of college return and abandonment with an overall correct classification rate of 78%.

Briefly, the Bar-On EQ-i:S provides sufficient basis for reliable and valid use of the instrument. Based on this information, it is judged to be an excellent tool to use in this study.

#### *Teacher Effectiveness Beliefs Survey*

In addition to requesting demographic information, this survey requires participants to distribute 100 points among ten factors that can be associated with the overall effectiveness of a teacher. These factors are teacher factors (F1, F2, F3, F4), the three factors associated with pupils which was called pupil factors (F5, F6, F7), and three factors associated with other persons (other teachers, principals and other professionals working in a school) (F8, F9, F10), which was called other person factors. The survey can be found in the Appendix B. Since each item is examined individually for the number of points assigned, it is not appropriate to calculate an internal measure of consistency, such as Cronbach alpha (Barrick et al., 1990). The content validity of the survey is explained in the following section.

#### *Data Collection*

Data collection consisted of two stages: the pilot study and the main study. There were several phases in each of these parts.

### *Content Validity Assessment and Pilot Study*

Prior to conducting the pilot test with the preservice teachers, the investigator examined content validity using a panel of experts. This panel of experts was composed of two experts with a Ph.D. in education and two experts who are Ph.D. candidates in early childhood education. Through email communication, they were asked to rate each of the ten items in the TEBS according to the appropriateness of each item for measuring teacher effectiveness. This rating was on a scale of 0 to 100. Ratings below 80 indicated an invalid item for the concept being measured. However, there were no ratings below 80 for any item. Accordingly, the content validity of this scale was found to be 100% according to the agreement among the expert panel, so no further revisions were made to the TEBS.

For the pilot study, the investigator contacted the chairperson of the Department of Curriculum and Instruction at The Pennsylvania State University, University Park Campus and explained the purpose of the study. After receiving his verbal approval, the investigator then contacted the instructors of courses in which students in the Elementary and Kindergarten Education Major were enrolled in the spring 2008 semester. The MTHED 400 instructor provided 20 minutes of class time for data collection for the pilot study. There were 30 participants in this pilot study. These participants had no difficulty in following directions and procedures on the instruments.

### *Main Study Data Collection*

The main study had two phases: a) selecting the participants and distributing the instruments, and b) collecting and scoring the data. The instrument distribution began on March 31, 2008, and all instruments were collected by April 4, 2008.

*Main Study, Phase One: Selection and Distribution*

The investigator contacted the instructors of Elementary and Kindergarten Education Emphasis Major program courses in the spring 2008 semester in University Park, Harrisburg and Altoona Campuses of the Penn State University. There were two instructors in Harrisburg Campus who offered their class time for data collection. However the number of the students in their courses was a total of 25. So the investigator focused on University Park Campus. The instructor for the introduction to educational psychology course in University Park provided class time for the recruitment of participants. During this class time of 10 minutes, the investigator provided information about the study (see Appendix C) and delivered informed consent forms (see Appendix D) and 295 surveys to the students. The students who were willing to participate in the study were asked to complete surveys and bring them back at the next class meeting. They were also asked to complete the online EQ:i-S. Each survey had a code that the students were supposed to use in place of their first and last names when completing the online EQ:i-S.

*Main Study Phase Two: Collection and Scoring*

The surveys were collected at the following class meeting. A total of 266 surveys were returned and Bar-On EQ-i:S were completed for a return rate of 90%. The scoring of the Bar-On EQ-i:S was done online. However, only 69 of these participants were from Elementary Education Major, so these scores were included in the study. The surveys and EQ scores from pilot study were also included. Because, these participants were also from Elementary Education Major. They were 3<sup>rd</sup> and 4<sup>th</sup> year students different from the main study participants who were in their 1<sup>st</sup> or 2<sup>nd</sup> years. So in total 99 completed surveys and emotional intelligence scales were

used in this study. After receiving these completed TEBS, online scored data sets for the Bar-On EQ-i:S, statistical analyses were conducted using SPSS Version 14.

### *Data Analyses*

Data resulting from the TEBS and the Bar-On EQ-i:S were analysed using SPSS Version 14. Both inferential and descriptive statistical procedures were completed. Descriptive statistics including mean and standard deviation, were used to facilitate statistical interpretations. Pearson Product Moment correlation coefficients were calculated to identify any statistically significant relationships among emotional intelligence and teacher effectiveness factors. Univariate analyses of variance (ANOVAs) and a multivariate analysis were employed to determine group differences.

For the analysis of factors in the Teacher Effectiveness Beliefs Survey, in addition to providing mean number of points and standard deviation for each of ten items, a sum of the four factors associated with teachers (F1 as teacher's intelligence, F2 as teacher's personality, F3 as teacher's background, F4 as teacher's teacher education program); the three factors associated with students (F5 as intelligence of students, F6 as personality of students, F7 as background of students); and three factors associated with other persons working in a school (F8 as other teachers in the school, F9 as principals, F10 as other professionals) were also calculated. In this study, "teacher factors: referred to the sum of factors F1, F2, F3, F4, "student factors" referred to the sum of factors F5, F6, F7, and "other person factors" referred to the sum of factors F8, F9, F10.

For the analysis of the Bar-On EQ-i:S scores, the standard scores provided for each scale and total score were used. Accordingly, the correlations between these scores and the point allocation on the TEBS and for GPA, gender, and years in college of education were calculated.

The next chapter provides more detailed information regarding data analyses. The results of the data analyses are discussed in relation to the focus of this study.

### *Chapter Summary*

This chapter presented information about the study methods. Accordingly, this study represented a multilinear correlational research. The independent variables were preservice teachers' emotional intelligence scores on the Bar-On EQ-I Short Form, and information on GPA and years in college of education. The dependent variables were the scores assigned by participants to each of the ten items in the Teacher Effectiveness Beliefs Survey. The participants were 99 students at The Pennsylvania State University, College of Education, University park Campus, Elementary and Kindergarten Education Major. Two instruments were used in this study: EQ-i:S and TEBS. Data Collection occurred in spring 2008. The results were analyzed using SPSS Version 14.

## **Chapter 4**

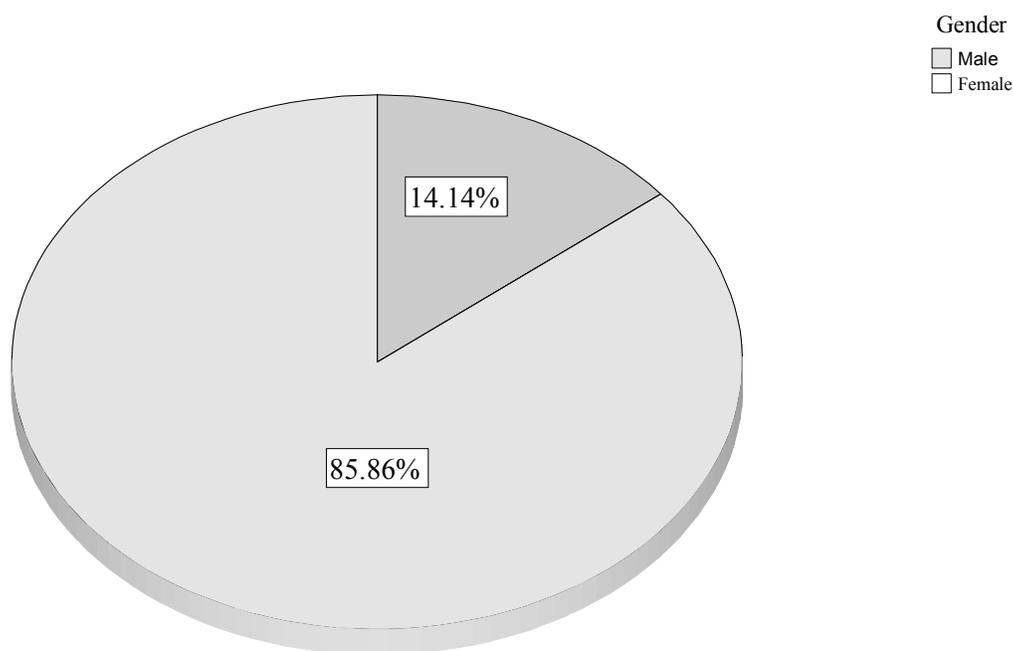
### **Results**

This chapter presents the results of data analyses regarding the relation between preservice teachers' emotional intelligence and beliefs about teacher effectiveness. This chapter is divided into six sections: demographic data on the participants, and results for each of the five research questions. In the first section, descriptive results provide information on the demographic characteristics of participating preservice teachers. The second section provides an explanation of the results of the responses to the TEBS at a large land-grant institution. The third section focuses on the relation between participating preservice teachers' emotional intelligence scores and their allocated points on TEBS items. The fourth section summarizes correlations between point allocation in the TEBS items and preservice teachers' GPA, years in college of education, and gender. The fifth section provides descriptive statistics of preservice teachers' scores on EQ-S. The final section focuses on correlations between Emotional Intelligence scores and years in college of education, gender, and GPA of preservice teachers.

#### *Demographic Profile of Participants*

This section contains a description of the demographic characteristics of preservice teachers. Demographic characteristics consist of: preservice teacher's gender, years in college of education, and most recent GPA. A total of 266 participants completed the instruments in the main study. However, only 69 were in the Elementary Education Emphasis area so only this group was included in the analysis. In addition, the scores for participants in the pilot study were also included in the data analysis because these participants were in their 3<sup>rd</sup> or 4<sup>th</sup> year in a college of education, as opposed to the main study group who were in their first or second year

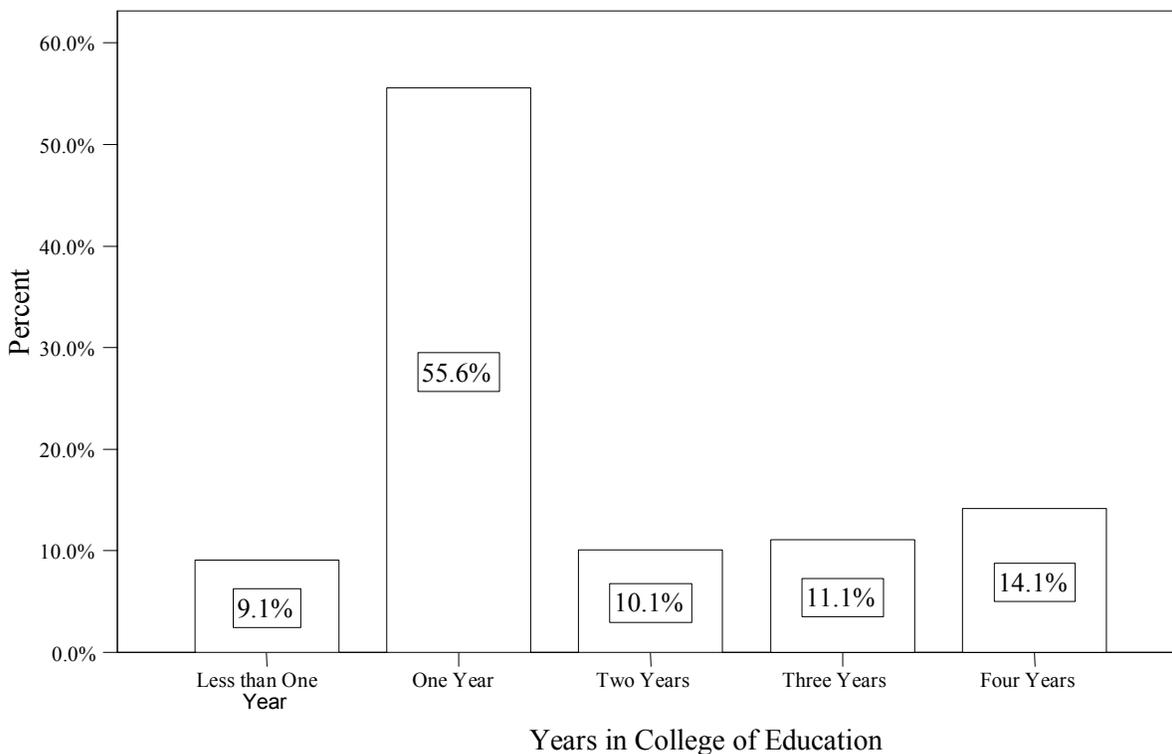
of college. Data on the gender of all participants are summarized in Figure 4.1. Of the 99 preservice teachers, 14 (14.14%) were males and 85 (85.86%) were females.



*Figure 4.1.* Gender Profile of Study Participants ( $n=99$ )

Figure 4.2 summarizes data on the participants' years in the College of Education. Years in the College of Education for preservice teachers ranged from 0–4. Of the 99 preservice teachers, 9.1% ( $n=9$ ) were in the College of Education for less than one year; 55.6% ( $n=55$ ) for

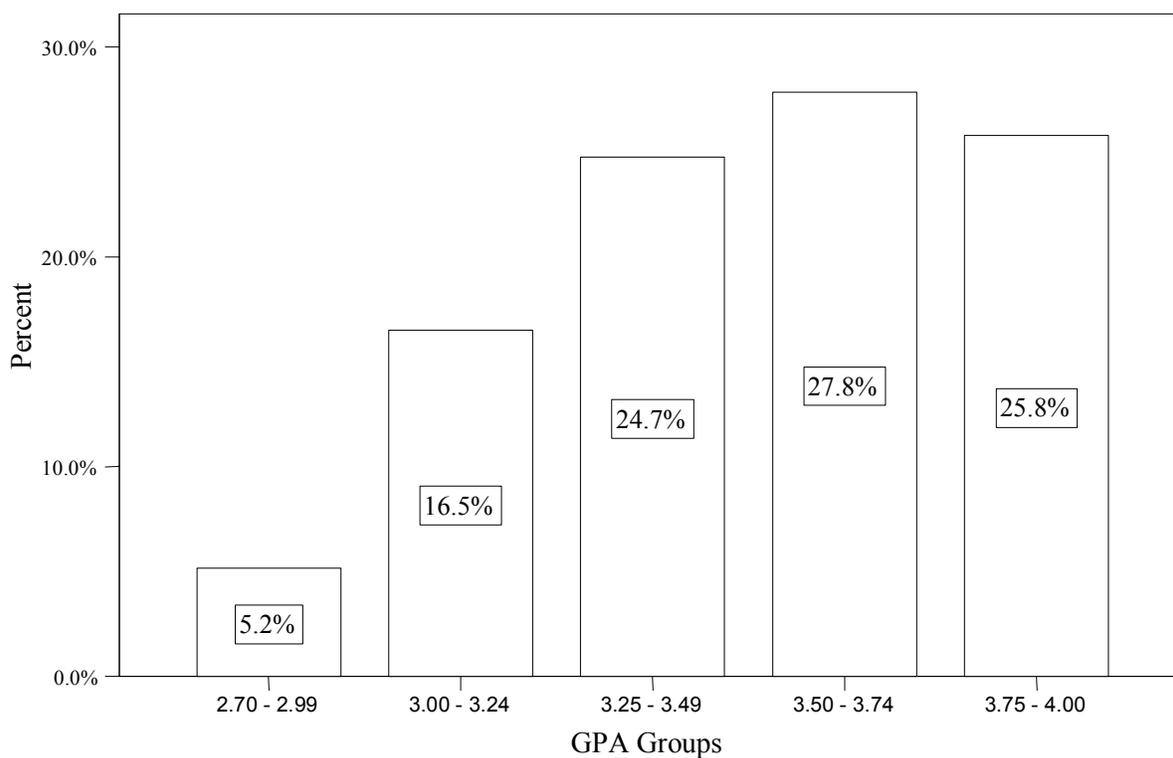
one year; 10.1% ( $n=10$ ) for two years; 11.1% ( $n=11$ ) for three years; and 14.1% ( $n=14$ ) for four years.



*Figure 4.2.* Participants ( $n=99$ ) years in College of Education

Figure 4.3 shows GPA levels of participants. Individual GPAs of the participants are also provided in the Appendix E. The participants' individual GPAs were grouped into five GPA levels. Two of the participants declined to provide information about their GPA. Of the 97 participants, 5.2% ( $n=5$ ) had GPAs between 2.70 and 2.99; 16.5% ( $n=16$ ) between 3 and 3.4;

24.7% ( $n=24$ ) between 3.25 and 3.49; 27.8% ( $n=27$ ) between 3.50 and 3.74; and 25.8% ( $n=25$ ) between 3.75 and 4.00.



*Figure 4.3. Current GPA of Participants ( $n=97$ )*

Overall, it appears that the sample had heterogeneous characteristics. There were more females than males. Most of the participants had been in the College of Education for one year, while the rest had either been in less than one year or from one to four years. The majority (78.3%) of the participants' GPAs were between 3.25 and 4.00, while the rest were between 2.70 and 3.24.

*Research Question One: Beliefs about Teacher Effectiveness*

This section presents the data analysis for research question one. Research question one was: What are the preservice teachers' beliefs about teacher effectiveness as identified by Teacher Effectiveness Beliefs Survey?

Data-gathering for research question one occurred through use of the Teacher Effectiveness Beliefs Survey. Pilot study participants ( $n=30$ ) completed this survey during class time, while main study participants ( $n=69$ ) were given the surveys during class time but completed them at home and brought them back for the next class meeting.

The data from the TEBS were analyzed by calculating mean percentage values for each item. Figure 4.4 presents mean percentage allocated to items about teachers. Accordingly, the mean percentage allocated to each teacher item was as follows: 16.04% to teacher intelligence, 17.76 % to teacher personality, 9.64% to teacher background, and 15.98% to teacher preparation. Table 4.1 summarizes descriptive information for each TEBS items. There was a fairly large range of percent allocation for the teacher items.

Table 4.1 *Summary Information for Individual Teacher Effectiveness Beliefs (TEBS) Items*

TEBS Item	N	Low % Allocated	High % Allocated	Mean %	Std. Deviation %
Teacher intelligence	99	5.00	40.00	16.04	7.45
Teacher personality	99	5.00	60.00	17.76	8.54
Teacher background	99	.00	30.00	9.64	4.75
Teacher preparation	99	2.00	50.00	15.98	7.73
Student intelligence	99	.00	20.00	7.19	3.95
Student personality	99	.00	20.00	7.55	3.52
Student background	99	.00	20.00	7.38	4.01
Other school teachers	99	.00	15.00	6.10	3.36
Principal at school	99	.00	16.00	6.52	3.36
Other school professionals	99	.00	20.00	5.49	3.44

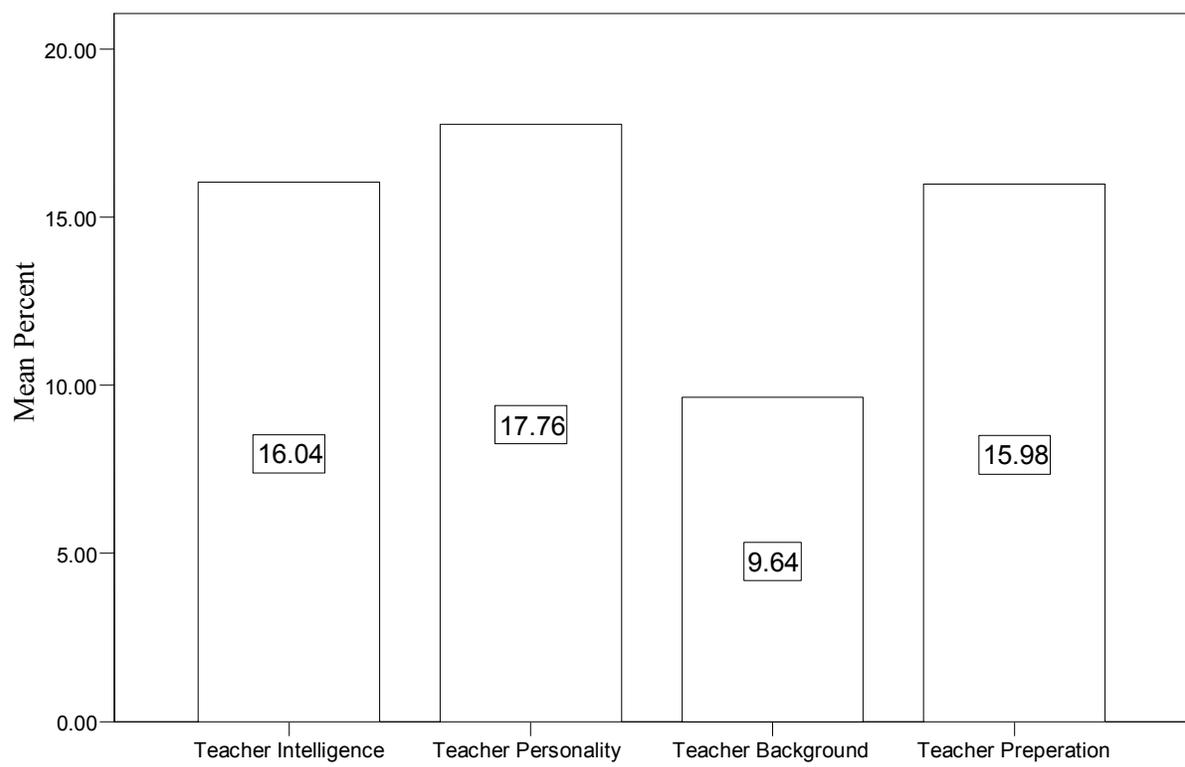


Figure 4.4. Mean Percent Allocated to Teacher Items

Figure 4.5 presents mean percentage allocated to TEBS items about students, namely items 4, 5, and 6. Accordingly, the mean percentage allocated to student intelligence is 7.19%; student personality, 7.54%; and student background, 7.38%. Data in Table 4.1 indicate a consistent pattern in the ranges for percent allocation for each student item on the TEBS.

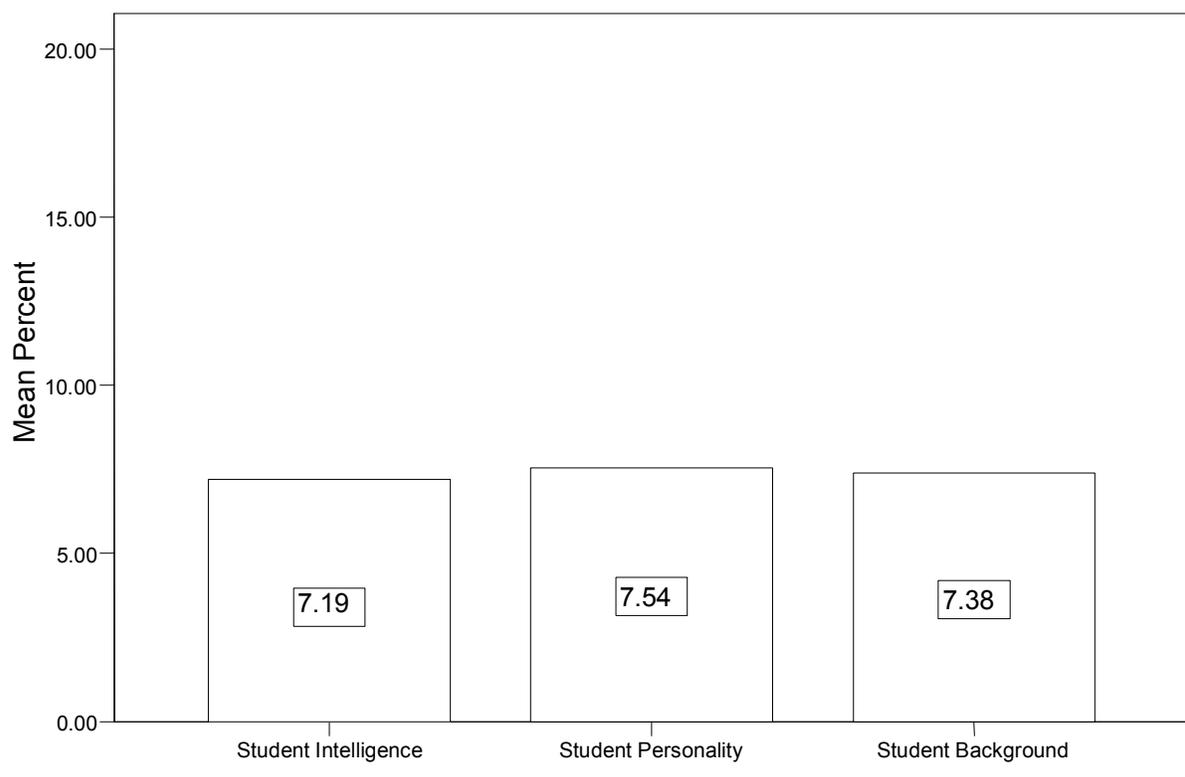


Figure 4.5. Mean Percent Allocated to Student Factors (n=99)

the school—items 8, 9, and 10. The mean percentage allocated to item 8, related to other school teachers, was 6.10%; item 9, related to principal at school, was 6.52%; and item 10, about other professionals in school, was 5.50%.

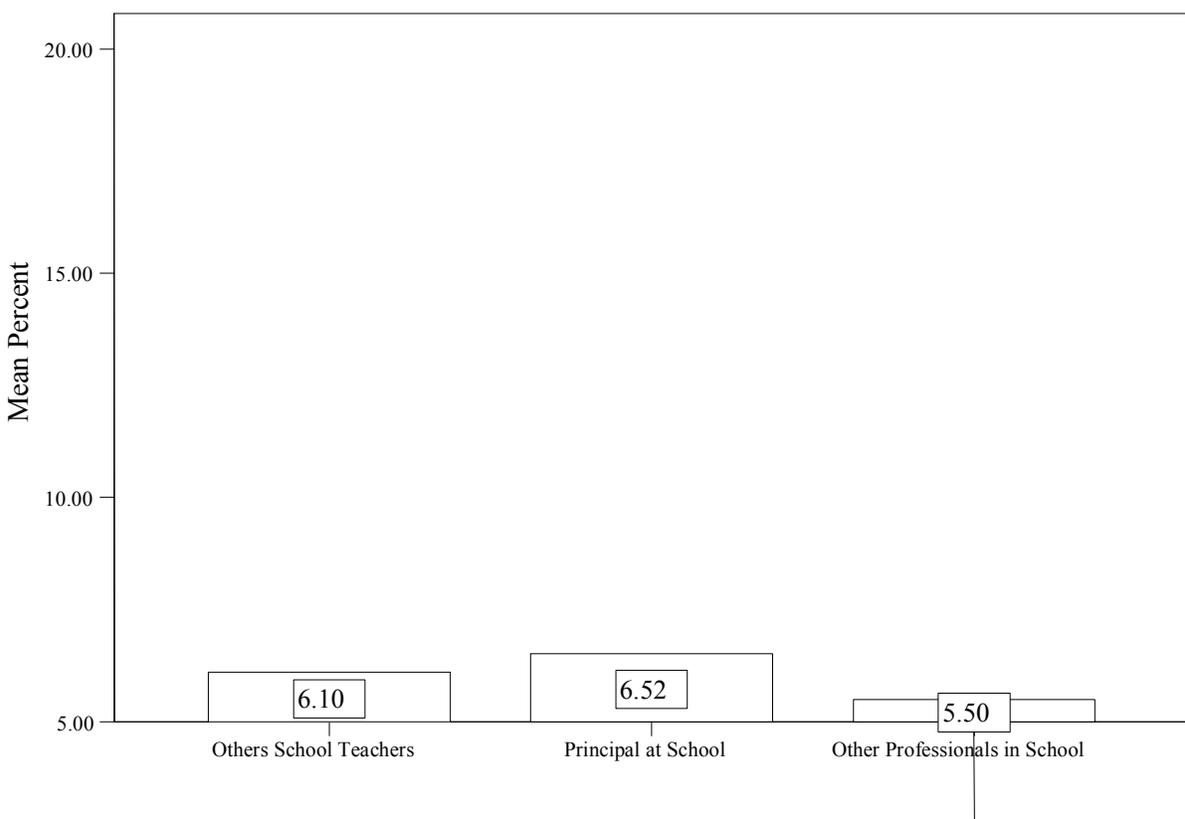


Figure 4.6. Mean Percent Allocated to Other Personnel Factors (n=99)

to items related to teachers, fewer points to items related to students, and the least points to items related to other professionals in the school.

*Research Question Two: Relationship of Emotional Intelligence and TEBS*

This section presents data analysis results for research question two. Research question two was: is there a relationship between preservice teachers' emotional intelligence as measured by Bar-On EQi:S and their beliefs as measured by TEBS?

To gather data for research question two, the researcher used the Bar-On EQi Short Form. The pilot study group completed the inventory using paper and pencil in their class time along with the TEBS. Then their answers were merged with the online form of the Bar-On EQi:S. The main study group completed the online form of the Bar-On EQi:S in addition to the TEBS.

The relationship between TEBS values and those for Bar-On EQi:S were analyzed using descriptive statistics and ANOVA. The relationship between TEBS values and individual Bar-On EQi:S items were analyzed using Pearson correlation.

Table 4.2 shows descriptive statistics for TEBS values examined by EQ groups. In this table, participants' total EQ scores are placed into three levels according to their total EQ scores: the average EQ scores group (between 90 and 109); below average scores group (less than 90); and the above average EQ scores group (more than 110). Scores on TEBS items are grouped into three factors: items 1, 2, 3, 4 as teacher factors; items 5, 6, 7 as student factors; and 8, 9, 10 as other personnel factors. Table 4.3 shows ANOVA results for TEBS scale values examined by EQ total score groups. There is a significant difference ( $F=3.84, p<0.05$ ) between groups in teacher factors. Table 4.2 data indicates that this difference is between the below average total EQ ( $M= 52.2, SD=11.01$ ) and average total EQ ( $M=61.81, SD=10.76$ ) groups. This analysis revealed no significant among- or between-group differences for student and other personnel factors at the 0.05 significance level.

Table 4.2

*Descriptive Statistics for TEBs Scale Values Examined by EQ Groups*

		<i>n</i>	Mean	Std. Deviation	Minimum	Maximum					
Teacher factors	Below Average	15	52.20	11.01	40.00	75.00					
	TotalEQ										
	Average EQ						59	61.81	10.76	40.00	92.00
	Above Average EQ						25	58.08	15.99	20.00	85.00
	Total						99	59.41	12.66	20.00	92.00
Student factors	Below Average	15	25.93	9.99	.00	40.00					
	TotalEQ										
	Average EQ						59	21.17	8.75	.00	39.00
	Above Average EQ						25	22.08	9.95	.00	43.00
	Total						99	22.12	9.30	.00	43.00
Other personnel factor	Below Average	15	22.53	7.07	15.00	35.00					
	TotalEQ										
	Average EQ						59	17.19	7.69	.00	30.00
	Above Average EQ						25	17.64	9.16	2.00	38.00
	Total						99	18.11	8.14	.00	38.00

Table 4.3

*Analysis of Variance Results for TEBS Values Examined by EQ Total Scale Groups*

		<b>Sum of Squares</b>	<b>df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
Teacher factors	Between Groups	1164.83	2	582.42	3.84	.025
	Within Groups	14551.19	96	151.58		
	Total	15716.02	98			
Student factors	Between Groups	271.47	2	135.73	1.59	.21
	Within Groups	8213.08	96	85.55		
	Total	8484.55	98			
Other personnel factor	Between Groups	349.34	2	174.67	2.73	.07
	Within Groups	6142.44	96	63.98		
	Total	6491.78	98			

The TEBS scale values were also examined by individual Bar-On EQi:S items using Pearson correlation. Accordingly, two items on the Bar-On EQi:S were found to be correlated with TEBS items. Item 14 about the ability to understand others peoples' feelings was negatively correlated with student factors,  $F=-.25, p<0.05$ . Also, item 40 about the self perceived bad temper was positively correlated with other personnel factors,  $F=.30, p<0.01$ .

Overall, analyses between TEBS scale values and Bar-On EQi:S scores revealed a significant difference for teacher factors but not other factors. Among 51 items, two were found

to be correlated with TEBS scale values: items 14 and 40, respectively, correlated with teacher factors and other personnel factors.

*Research Question Three: Relationships between TEBS and Background Factors*

This section presents the data analysis for research question three. Research question three was: Is there a relationship between preservice teachers' beliefs about teacher effectiveness as measured by TEBS and their GPA, gender, and their years in teacher preparation program?

The data were analyzed using Pearson correlation. Accordingly, there was no relationship between GPA and TEBS scores. However, the analysis revealed significant relationships between years in College of Education and percent allocation to teacher intelligence ( $r=-.24$ ,  $p<.05$ ), teacher personality ( $r=.22$ ,  $p<.05$ ), and teacher preparation program ( $r=-.31$ ,  $p<.01$ ). These relations appear in Figures 4.5, 4.6 and 4.7, respectively.

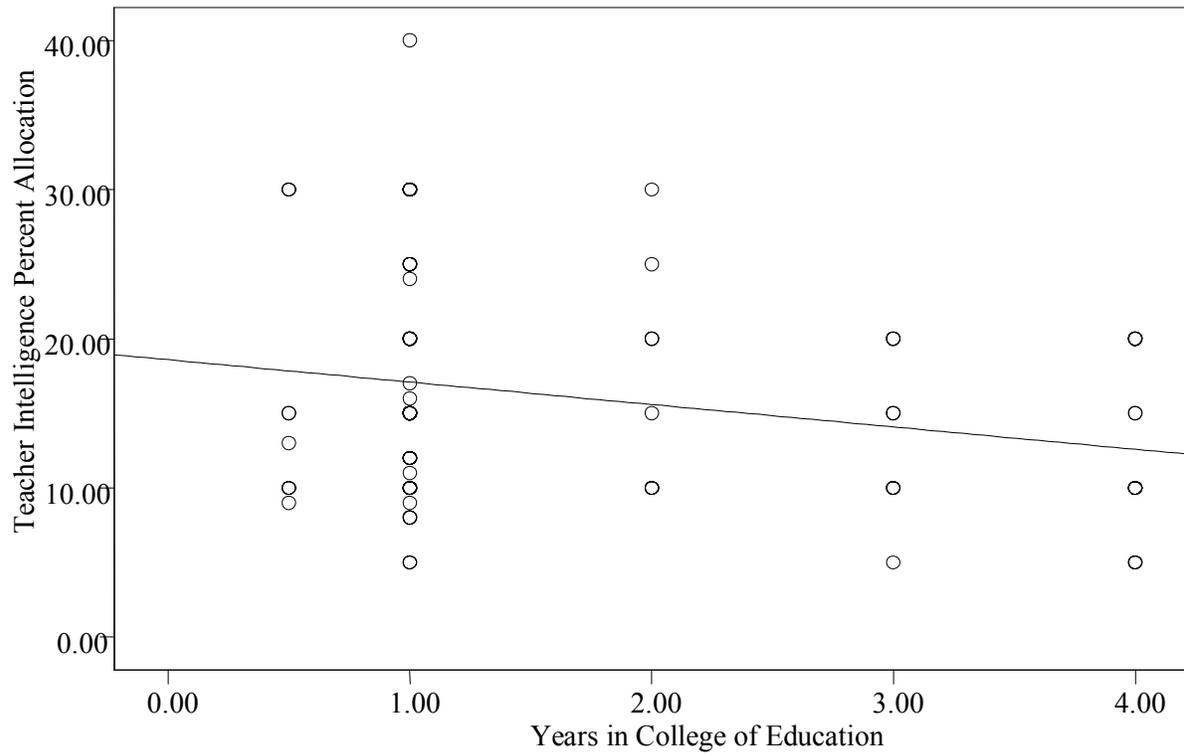


Figure 4.7. Relationship between years in college of education and percent allocation to teacher intelligence ( $n=99$ ,  $r = -.24$ ,  $p < .05$ )

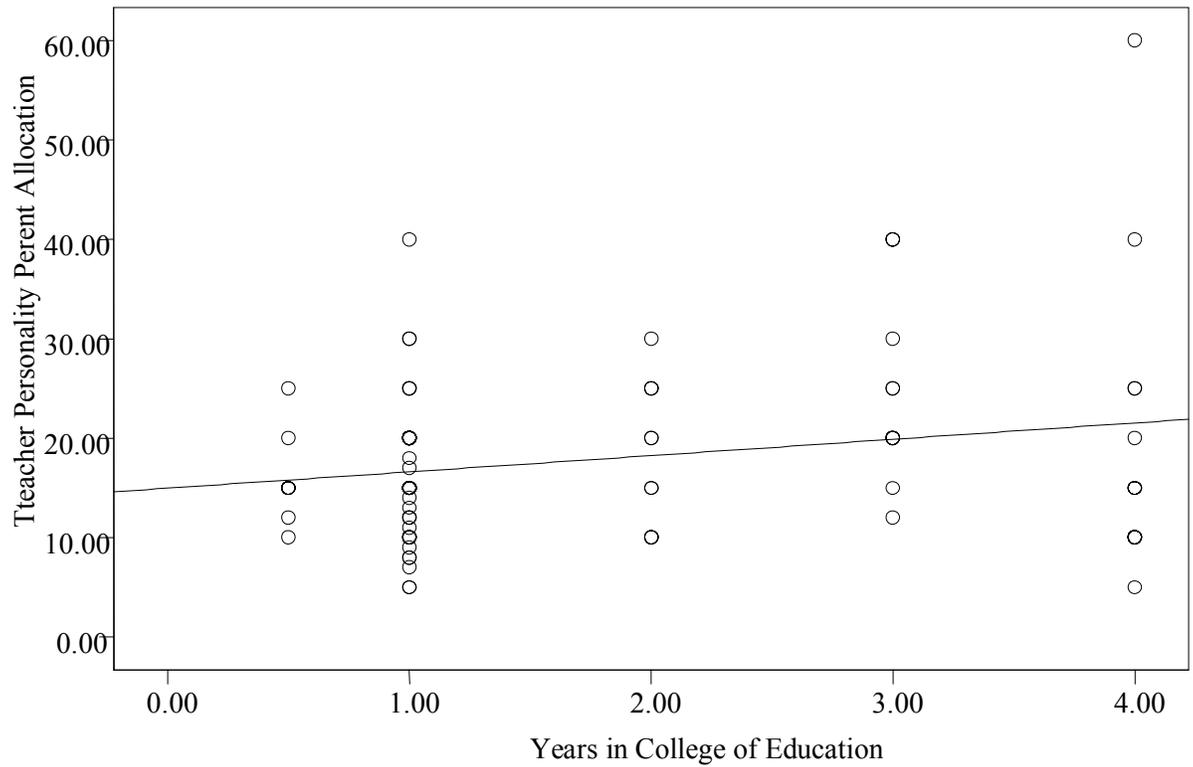


Figure 4.8. Relationship between years in college of education and percent allocation to teacher personality ( $n=99$ ,  $r = .22$   $p < .05$ )

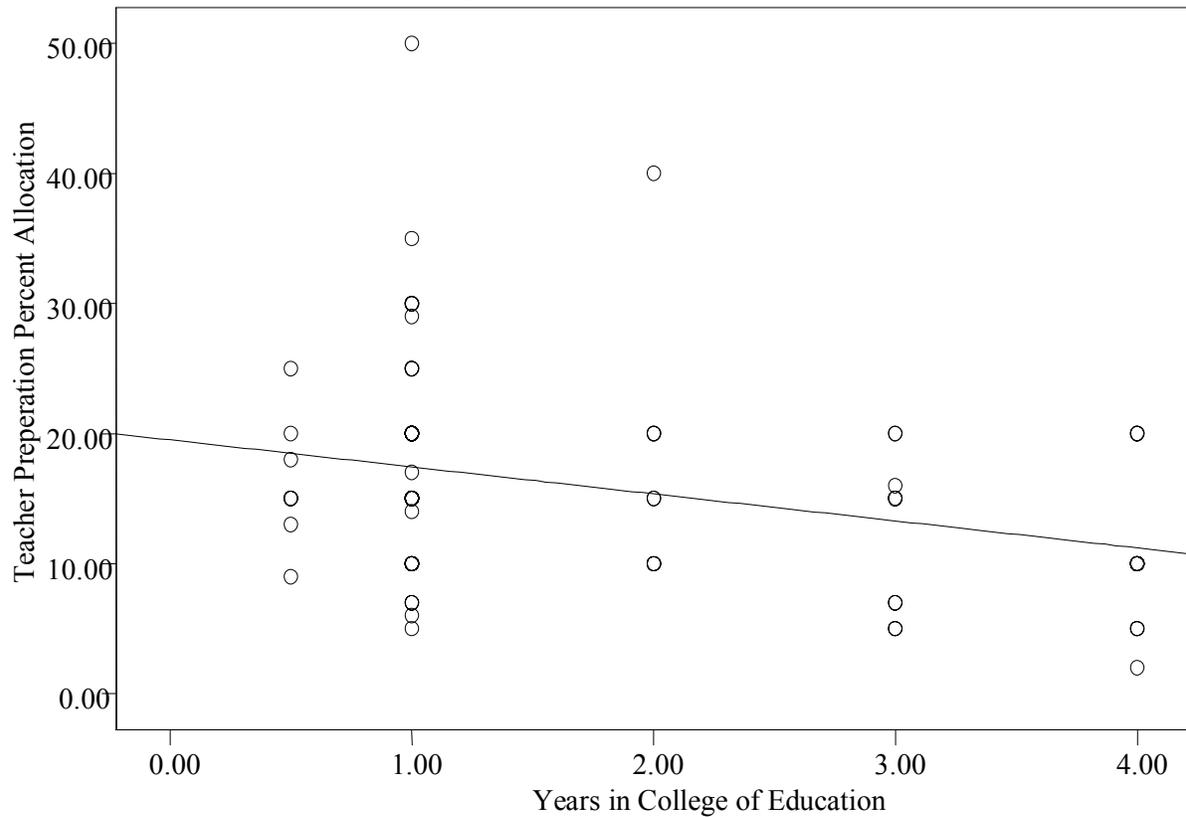


Figure 4.9. Relationship between years in College of Education and percent allocation to teacher preparation program ( $n=99$ ,  $r = -.31$ ,  $p < .01$ )

A small relationship also was found between gender and percent allocation to student personality items on the TEBS ( $point\ biserial = -.20$ ,  $p < .05$ ). Figure 4.10 reveals this pattern. Accordingly, females tended to allocate fewer points to the item related to student personality than did males.

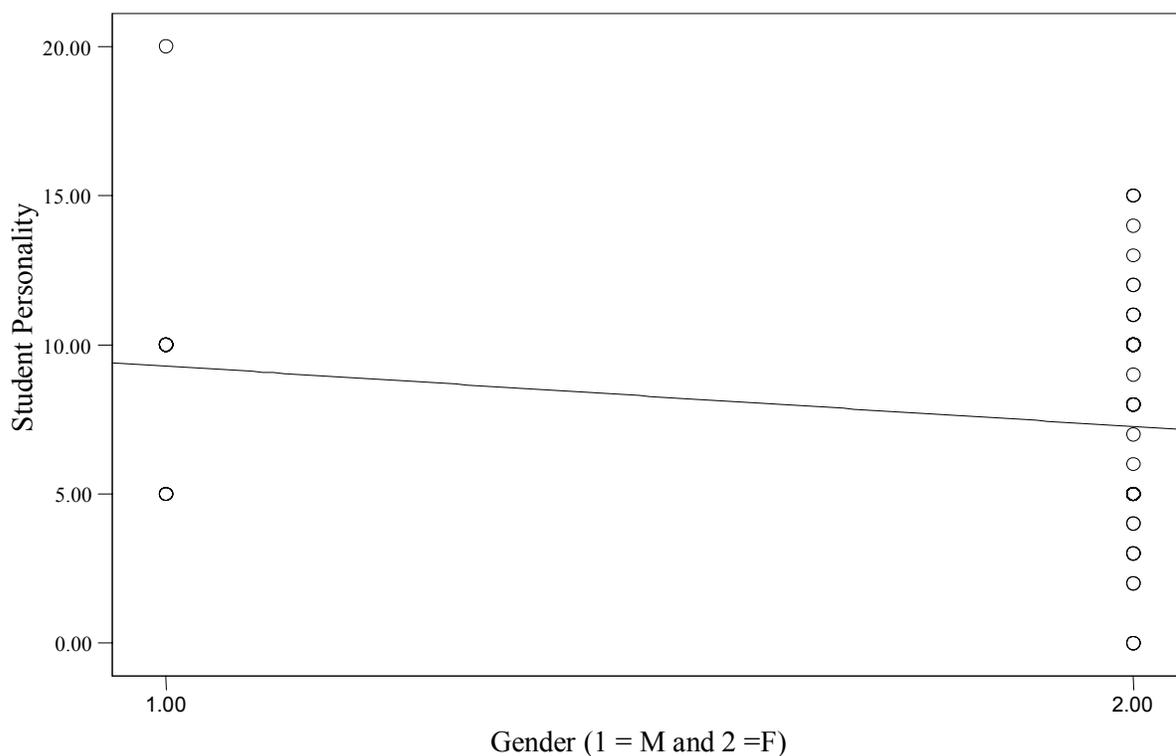


Figure 4.10. Relationship between gender and percent allocation to student personality ( $n=99$ ; point biserial =  $-.20$ ,  $p < .05$ )

#### Research Question Four

This section presents information about data analyses for research question four.

Research question four was: What are emotional intelligence qualities of preservice teachers as measured by Bar-on EQ-i:S?

The data were retrieved from the results for the online scoring of the Bar-On EQ-i:S scores for preservice teachers. Data were analyzed through descriptive statistics for the scores on each scale and total EQ score. Table 4.4 shows the mean, standard deviation, and minimum and maximum scores for each scale and total EQ score. Accordingly, the Intrapersonal EQ scale had

a mean of 100.46 with a standard deviation of 14.03, ranging from 59 to 129. The scores on the Interpersonal EQ scale had a mean of 104.58 with a standard deviation of 11.61, ranging from 72 to 123. The scores on the Stress Management EQ scale had a mean of 102.95 with a standard deviation of 12.81, ranging from 53 to 126. The scores on the Adaptability EQ scale had a mean of 94.41 with a standard deviation of 13.38, ranging from 66 to 124. The scores on the General Mood EQ scale had a mean of 102.89 with a standard deviation of 11.73, ranging from 45 to 128. The scores on the Positive Impression EQ scale had a mean of 102.36 with a standard deviation of 14.06, ranging from 78 to 141. Finally, the scores on Total EQ had a mean of 101.79 with a standard deviation of 12.20, ranging from 73 to 130.

Table 4.4

*Summary Statistics for Emotional Quotient Scales (n=99)*

	<b>Mean</b>	<b>Standard Deviation</b>	<b>Minimum</b>	<b>Maximum</b>
Intrapersonal EQ	100.46	14.03	59.00	129.00
Interpersonal EQ	104.58	11.61	72.00	123.00
Stress Management EQ	102.95	12.81	53.00	126.00
Adaptability EQ	94.41	13.38	66.00	124.00
General Mood EQ	102.89	11.73	45.00	128.00
Positive Impression EQ	102.36	14.06	78.00	141.00
Total EQ	101.79	12.20	73.00	130.00

The Bar-On EQ-i:S normative data were reported to have a mean of 100 with a standard deviation of 15. These results reveal a fairly normal pattern for this group of preservice teachers. These are similar to the norms provided by the instrument developer (Bar-On, 2002, Table 3.1).

### *Research Question Five*

This section presents information about research question five. Research question five was: Is there a relationship between preservice teachers' emotional intelligence qualities as measured by Bar-On EQ-i:S and their years in teacher preparation program and their GPAs?

In order to answer this question, the ANOVA was run among EQ-i:S scores, years in College of Education, and GPA groups. Analyses yielded differences on three scales of the Bar-On EQ-i:S: stress management, adaptability, and total scale score. For stress management, between-group differences involved the 2.70–2.99 group and the 3.00–3.24, 3.25–3.49, and 3.75–4.00 groups, with mean differences ranging from -17.12 to -15.93,  $p < .05$ . There were also group differences between the 3.00–3.24 group and 3.20–3.74 group, with a 8.62 mean difference,  $p < .05$ , and between the 3.25–3.49 group and 3.50–3.74 group with a 7.52 mean difference,  $p < .05$ . For adaptability, there were four group differences. There were significant group differences between the 2.70–2.99, 3.00–3.24, 3.25–3.49, and 3.75–4.00 groups with mean differences ranging from -16.04 to -13.78. There was also a difference between the 3.20–3.74 and 3.75–4.00 groups with a -8.38 difference,  $p < .05$ . For total scale, there were three total scale differences—2.70–2.99, 3.00–3.24, and 3.25–3.49 groups, and the 3.75–4.00 group, with mean differences ranging from -11.81 to -15.41,  $p < .05$ .

The data analysis also included Pearson correlations between individual items on the Bar-On EQ-i:S and GPA, and years in College of Education. Accordingly, three items were correlated with GPA and 3 items were correlated with years in College of Education. GPA was correlated with items 5 ( $r = .25$ ), 10 ( $r = -.24$ ), and 19 ( $r = .23$ ),  $p < .05$ . Years in College of Education were correlated with items 33 ( $r = .24$ ), 42 ( $r = .24$ ),  $p < .05$  and, 49 ( $r = -.28$ ),  $p < .01$ .

These results show some relationship between participants' EQ and GPA, and years in College of Education. This is demonstrated by mean EQ differences between some GPA groups and correlations among six items on the Bar-On EQ-i:S and GPA and years in College of Education.

### *Chapter Summary*

Results analysis involved descriptive statistics, ANOVA, and Pearson Correlation. Descriptive statistics showed that the study involved more females than males, and that there were four levels of GPA and years in College of Education.

Results for research question one were analyzed using mean scores for point allocation in TEBS. Mean score estimates revealed that preservice teachers allocated more points to teacher-related factors, fewer to student-related factors, and least to other personnel factors.

For research question two, the relationship between TEBS values and scores on the Bar-On EQ-i:S were analyzed using descriptive statistics and ANOVA. The relationship between TEBS values and individual Bar-On EQ-i:S items were analyzed through Pearson Correlation. Accordingly, a significant difference was found for teacher factors but not other factors. Among the 51 items on the Bar-On EQ-i:S, two were found to be correlated with TEBS scale values: items 14 and 40, respectively, were correlated with teacher factors.

For research question three, the data were analyzed using Pearson Correlation. Accordingly, there was no relationship between GPA and TEBS scores. However, the analysis revealed significant relationships between years in College of Education and percent allocation to teacher intelligence ( $r=-.24, p<.05$ ), teacher personality ( $r=.22, p<.05$ ), and teacher preparation program ( $r=-.31, p<.01$ ). There was also a small relationship between gender and percent allocation to student personality items on the TEBS.

Results for research question four were based on descriptive statistics for the Bar On EQ-i:S scores. Participants presented a fairly normal pattern of EQ scores on this instrument.

For research question five, ANOVA was run among EQ-i:S scores, years in College of Education, and GPA groups. Analyses yielded differences on three scales of the Bar-On EQ-i:S: stress management, adaptability, and total scale score. Data analysis also included Pearson Correlations among individual items on the Bar-On EQ-i:S and GPA, and years in College of Education. Accordingly, three items correlated with GPA and three correlated with years in College of Education.

## Chapter 5

### Discussion and Recommendations

The purposes of this chapter are to restate the research problems, research questions, and research methods, discuss the implications of the data results, and make recommendations for future study. This chapter is organized as follows: (1) overview of the research design, (2) discussion, (3) summary of discussion, (4) recommendations for practice, and (5) chapter summary.

#### *Overview of the Research Design*

The overview of the research design includes: (1) research problem, (2) research questions, and (3) research procedures.

#### *Research Problem*

Emotional intelligence has been found to predict different aspects of teaching (Chan, 2004; Drew, 2006). However, there is no adequate explanation for how this effect occurs. One possible way may be through beliefs (Penrose et al., 2007). In other words, emotional intelligence can influence beliefs about teaching, which in turn determines effective and ineffective teaching. Currently, in this writer's knowledge there appear to be no studies of preservice teachers' emotional intelligence and its relationship with beliefs about teacher effectiveness. In light of the theoretical importance of the construct of effective teaching (Chan, 2004; Drew, 2006; Ryan & Deci, 2000), there is a need for documentation of preservice teacher's emotional intelligence and its relationship to beliefs about teacher effectiveness

### *Research Questions for the Study*

To accomplish the purpose of this study, several research questions were addressed. The five research questions were as follows:

1. What are the preservice teachers' beliefs about teacher effectiveness as identified by Teacher Effectiveness Beliefs Scale?
2. Is there a relationship between preservice teachers' emotional intelligence as measured by Bar-On Emotional Quotient Inventory Short form and their beliefs as measured by Beliefs about Teacher Effectiveness Scale?
3. Is there a relationship between preservice teachers' beliefs about teacher effectiveness as measured by Beliefs about Teacher Effectiveness Scale and their: a) GPA, b)years in teacher preparation program, and c)gender?
4. What are the emotional intelligence qualities as measured by Bar-On Emotional Quotient Inventory Short form of preservice teachers?
5. Is there a relationship between preservice teachers' emotional intelligence qualities as measured by Bar-On Emotional Quotient Inventory Short form and scores and their: a)years in teacher preparation program, b)GPA?

### *Research Procedures*

This study investigated the relationship between preservice teachers' emotional intelligence and teachers' effectiveness beliefs. An examination of preservice teachers' effectiveness beliefs and gender, GPA, and years in College of Education, and emotional intelligence qualities with respect to GPA and years in College of Education was also conducted for this study.

The sample for this study included 99 preservice teachers who were enrolled in the Elementary and Kindergarten Education Major in the Penn State College of Education, University Park Campus. The study began with a content validity and pilot study. The content validity of the Teacher Effectiveness Beliefs Survey (TEBS) was found to be excellent, with 100% agreement among a panel of experts. A pilot study was conducted with 30 preservice teachers who completed the TEBS, which includes demographic questions and 10 items among which 100 points were distributed in relation to their perceived importance to teacher effectiveness. They also completed the Bar-On EQ-i:S in paper-and-pencil form. The Bar-On EQ-i:S is a 51-item Likert-type scale that measures participants' emotional intelligence qualities. The pilot study ensured that the survey instructions were understandable and followable. For the main study, 295 preservice teachers were assessed. Among these, 266 participants completed the instruments. However, since 69 of these participants were in the Elementary Education Emphasis Area, only this group was included in the analysis. In addition all 30 respondents in the pilot study who were also in Elementary and Kindergarten Education Major were also included.

The data analysis involved the use of SPSS 13.0, statistical software for Windows. Each research question was subject to different analytical methods. Data analysis involved descriptive statistics, one-way ANOVA, and Pearson Correlation.

### *Discussion*

The following findings highlight this study's results. The discussion includes the importance of the findings for each research question, and involves research findings from other studies that examined similar questions. The major findings from this study are described below.

### *Research Question One*

Research question one was: What are the preservice teachers' beliefs about teacher effectiveness as identified by Teacher Effectiveness Beliefs Survey?

Data for research question one were the participants' point allocation on the Teacher Effectiveness Beliefs Survey. For the analysis, a mean percent allocation for each item was calculated. Findings from the analysis are discussed here.

Overall, on the items related to teacher factors, items 1, 2, 3, and 4 received the most points among all items. Total mean percent allocated to teacher factors was 59.42. Accordingly, the mean percent allocated to each teacher item was as follows: 16.04% to teacher intelligence, 17.76 % to teacher personality, 9.64% to teacher background, and 15.98% to teacher preparation. Items related to students received the second most points, with a total mean percent of 22.12. Accordingly, items about students, namely items 4, 5, and 6, received a point allocation of 7.2% for student intelligence, 7.54% for student personality, and 7.38% for student background. On the other hand, items related to other school personnel received the fewest points, with a total mean percent allocation of 18.12. The mean percent allocated to item 8 related to other school teachers was 6.10%, item 9 related to principal at school was 6.52%, and item 10 about other professionals in school was 5.50%.

These figures presented a declining spread of allocated points. This was observed with the allocation of more points to items related to teachers, fewer points to items related to students, and the least points to items related to other professionals in the school. These results indicated that preservice teachers believed, first, in the importance of teacher-related factors; second, student related factors; and third, other school personnel-related factors when determining teacher effectiveness.

These results were very similar to those from the original study that used the TEBS to identify the teacher effectiveness beliefs of preservice and inservice teachers (Ganser, 1996). The same declining trend in point allocation was also found in that study. Preservice teachers' prioritization of teacher-related factors for teacher effectiveness may indicate a high sense of self-efficacy. Teacher personality and teacher intelligence received the most points among all items. In most of the literature reviewed, preservice teachers first consider teacher personality when asked about teacher effectiveness (Lin et al., 1999a; Minor et al., 2000). Teacher intelligence was also the second most important factor in Ganser's (1996) study. It should be noted that these two factors are ones in which teacher preparation programs rarely intervene. This may mean that preservice teachers emphasize controlling classroom effectiveness through their own personality and intelligence above and beyond all other factors. Also, if this perception is valid, doing so requires more emphasis on teacher candidate selection than on training and education. This explanation may be similar to that offered in Ganser's (1996) study, since similar results were revealed.

The study also indicated that preservice teachers believe that other school personnel, including teachers, the principal, and guidance counselors, play little role in teacher effectiveness. Ganser (1996) also found this result in a study with preservice and inservice teachers. However, in Ganser's (1996) study, there was an upward trend for items 8 and 9, that is, other teachers and principals, respectively, depend on the level of preservice teachers. He found that as preservice teachers advance in their exposure to the school environment, they tend to give more points to the factors related to other school personnel. This may mean that preservice teachers develop an understanding of teacher effectiveness. This finding may be influenced by multiple factors, as suggested by Cheng and Tsui (2002), due to greater

involvement in teaching. The significance of school personnel including relationships (Ma et al, 2007), and administrators (Anderson, 1991) were also supported in previous studies. However there is no estimated correlation as to how much all these factors contribute to teacher effectiveness. So at this point it is not possible to measure how accurate these preservice teachers are in their beliefs.

### *Research Question Two*

This section presents data analysis for research question two. Research question two was: is there a relationship between preservice teachers' emotional intelligence as measured by Bar-On EQi:S and their beliefs as measured by TEBS?

The relationship between TEBS values and the Bar-On EQi:S were analyzed through descriptive statistics and ANOVA. Also, the relationship between TEBS values and individual Bar-On EQi:S items were analyzed through Pearson correlation.

First, participants' total EQ scores were grouped into three areas according to their total EQ scores: the average EQ scores group, which are between 90 and 109; the below average scores group, less than 90; and the above average EQ scores group, more than 110. Similarly, scores on TEBS items were grouped into three areas: items 1, 2, 3, 4 as teacher factors; 5, 6, 7 as student factors; and 8, 9, 10 as other personnel factors. Accordingly, there was a significant difference between the below average total EQ and average total EQ groups for teacher factors. In other words, preservice teachers with average total EQ believed more strongly in the importance of teacher factors for teacher effectiveness than did preservice teachers with below average EQ. In most of the literature reviewed, emotional intelligence scores were positively correlated with self-efficacy beliefs (beliefs about the ability to teach) (Chan, 2004; Penrose et al., 2007). One possible explanation may be that EQ also indicates a sense of motivation; thus,

preservice teachers with average total EQ were more motivated and believed in their ability to be effective more so than did preservice teachers with below average total EQ scores.

Second, two items on the Bar-On EQ-i:S were found to be correlated with TEBS items. The first item was about the ability to understand how other people feel and was negatively correlated with student factors. This meant that as the ability of preservice teachers to understand how other people feel increased, their belief in the importance of student factors in teacher effectiveness decreased. This may be explained in two ways. First, preservice teachers who had a better sense of others' feelings felt in better control, so tended to give less importance to other factors in effectiveness. Second, preservice teachers with a better sense of others' feelings were also aware of others' circumstances, so took more responsibility for effectiveness.

The second item had to do with having a bad temper and was positively correlated with other personnel factors. In other words, the worse a preservice teacher's temper, the more he or she tended to believe in the importance of other personnel factors. This can be explained by the placement of greater weight on other personnel factors, indicating a lack of self-efficacy—the belief in one's capacity to control behavior, thinking and emotions (Gibbs, 2002). People with a bad temper may also have less self-efficacy because of their inability to control emotions, and they may tend to blame others for this inability.

### *Research Question Three*

This section presents the data analysis for research question three. Research question three was: Is there a relationship between preservice teachers' beliefs about teacher effectiveness as measured by TEBS and their GPA, gender, and years in teacher preparation program?

The results showed no difference in preservice teachers' point allocation on the TEBS with regard to GPA. This may mean that GPA as an indicator of academic success does not

necessarily reveal a belief in teacher effectiveness. However, the analysis revealed significant relationships between years in College of Education and percent allocation to teacher intelligence, teacher personality, and teacher preparation program. First, there was a negative correlation between years in College of Education and points allocated to teacher intelligence and teacher preparation program. This may mean that as preservice teachers progress in their programs, through their coursework, they tend to learn the importance of other factors in teacher effectiveness. Thus, they are less likely to believe in the importance of these than before.

This finding differs from that in Ganser (1996), who found that as years in college and experience increased, the points allocated to teacher factors increased. This difference may be due to the fact that Ganser's (1996) groups of preservice teachers were arranged according to experiences in observation and participation, field study, and student teaching, in rank order. Therefore, these groups were increasingly exposed to the actual school environment, which is not necessarily the case with the study sample. As a result, greater exposure to the school environment may provide views of teacher effectiveness that places more emphasis on teacher-related factors. Second, there was a positive correlation between years in College of Education and teacher personality. One explanation may be that belief in teacher personality as an indicator of effectiveness also reflects high self-efficacy. As preservice teachers spend more years in a College of Education, their self-efficacy increases thorough classroom learning. This is similar to Lin et al.'s (1999b) finding that self-efficacy was correlated with years of study in college.

A significant negative correlation was found between gender and percent allocation to student personality items on the TEBS. Accordingly, females tend to allocate fewer points to items on student personality than do males. In other words, females believe student personality is a less important factor than do males in teacher effectiveness. One possible explanation may be

male preservice teachers' motivation for entering teaching. Due to limited financial gains compared to those for other professions such as engineering or business, fewer males are engaged in teaching compared to females (Banas, 1992; Cohen, 1992). According to Stroud et al. (2000), male preservice teachers in early childhood and elementary education chose this field to serve as a role model for students. In other words, male preservice teachers perceive their roles in education as relevant to character education, which is also very influential in student personality.

#### *Research Question Four*

This section presents information on the data analyses for research question four. Research question four was: What are emotional intelligence qualities of preservice teachers as measured by Bar-on EQ-i:S?

The results showed that preservice teachers' mean for total emotional intelligence scores was 101.79 compared to 100 in the norms (Bar-On, 2002, Table 3.1). On subscales, preservice teachers' scores ranged from 94.41–104.58, which were again in the average range compared to norms. In other words there is no difference between preservice teachers' elementary education program and their peers in general population. This finding is similar to Drew's (2006) study with student teachers who completed Bar-On EQ-i, the original version of the instrument used in current study. One explanation may be that some teachers may enhance their emotional intelligence skills during their inservice experiences. As a result, these teachers may be those who make a difference in their effectiveness through their emotional intelligence skills. This advancement of emotional intelligence skills among teachers through experience was observed in studies (e.g., O'Brienwood, 1999).

### *Research Question Five*

This section presents information on research question five. The research question five was: Is there a relationship between preservice teachers' emotional intelligence qualities as measured by Bar-On EQ-i:S and their years in teacher preparation program, and their GPAs?

The results showed differences on three scales of the Bar-On EQ-i:S: stress management, adaptability, and total scale scores. There were also itemwise differences in regard to GPA and years in College of Education at The Pennsylvania State University, University Park Campus.

On stress management, there were between-group differences between the 2.70–2.99 group and the 3.00–3.24, 3.25–3.49, and 3.75–4.00 groups. There were also group differences between the 3.00–3.24 group and the 3.20–3.74 group, and between the 3.25–3.49 group and the 3.50–3.74 group. It was significant that these differences in stress management were more common for the lowest GPA group. One possible explanation may be that these preservice teachers who had good stress management skills may be more likely to have a GPA over 3.00. Skills that help to reduce and handle stress are associated with academic success among college students (Dziegielewski et al., 2004; Lumley & Provenzano, 2003). The finding that there were only two group differences in groups with a GPA over 3.00 may be explained by the need for other factors or skills in addition to stress management. Studies show that different factors contribute to college students' academic success, such as learning styles (Reese, & Dunn, 2007/2008), and social support and self-beliefs (Rayle, Curpious, & Arredondo, 2006/2007).

On adaptability, there were four group differences. There were significant group differences between the 2.70–2.99 group and the 3.00–3.24, 3.25–3.49, and 3.75–4.00 groups. There was also a difference between the 3.20–3.74 and 3.75–4.00 groups. These differences in adaptability were very similar to differences in stress management by being more common in the

2.70–2.99 group. A similar explanation may be provided for these differences. While adaptability might be a strong factor in contributing to the academic success of those with a GPA below 3.00, there is a need for other skills like those mentioned for stress management to advance GPAs over 3.00 (Rayle, Curpious, & Arredondo, 2006/2007; Reese, & Dunn, 2007/2008).

On total scale, there were three differences between the 2.70–2.99 group and the 3.00–3.24, 3.25–3.49, and 3.75–4.00 groups. These differences were again similar to those for stress management and adaptability, occurring commonly between the 2.70–2.99 and other GPA groups. One possible explanation for this similarity may be repeated. Accordingly, these college students need other skills or conditions for advancement to grades over 3.00, once they have achieved a 3.00 or better GPA (Rayle, Curpious, & Arredondo, 2006/2007; Reese, & Dunn, 2007/2008). This also supports the previous finding that probationary college students reported having motivational and stress-related problems compared to regularly matriculated students (Isaak, Graves, & Mayers, 2006/2007). In other words, as students become better able to handle stress and stay motivated, they tend to stay in college. However, there is one more possible explanation for total scale score differences—better learning in coursework is reflected by GPA, leading to higher emotional intelligence skills. Studies reveal that course content and classroom experiences (Pascarella, & Terenzini, 2005), learning activities (Laird, Shoup, & Kuh, 2005), faculty expectations, writing multiple drafts of papers, and community service as course work (Zhao & Kuh, 2004) may also shape social and personal skills such as emotional intelligence.

Itemwise analysis revealed differences for three items for GPA and three items for years in College of Education. The first item correlated with GPA had to do with overcoming difficulties step by step. In other words, the more these preservice teachers utilize an approach

that involves overcoming difficulties step by step, the more successful they are academically. This finding supports previous studies that emphasize the importance of organizational abilities, such as time management, prioritization and study skills for academic achievement (Anday-Porter, Henne, & Horan, 2000). The second item correlated GPA and impulsiveness. Accordingly, the more impulsive these preservice teachers are, the lower their GPA. This finding may support studies mentioned on stress management (Dziegielewski et al., 2004; Lumley & Provenzano, 2003); as these preservice teachers better manage their emotions, which is the reverse of being impulsive, they perform better academically. The third item correlated with GPA was optimism. Accordingly, the more optimistic these preservice teachers are, the better they do academically. This also supports the findings of previous studies which emphasize the importance of positive attitudes to academic success (Gerardi, 2006), positive beliefs to self and motivation (Robbins et al., 2004), and negative attitudes to failure (Lebedina-Manzoni, 2004).

Years in College of Education also correlated with three items. The first had to do with the ability to express emotions. Accordingly, as these preservice teachers spend more years in College of Education, at The Pennsylvania State University, University Park Campus, the more difficulty they have in expressing their feelings. This finding is contrary to a previous finding in which higher educational attainment was found to increase assertiveness, and ability to express emotions and thoughts (Onyeizugbo, 2003). One explanation may be that the specific major of these preservice teachers is elementary education. In other words, this decrease in ability to express emotions as years in education increase may be particular to this group. However, there appear to be no studies of the relationship between education and emotional expression. Therefore, it is not possible to come up with a more solid explanation.

The second item correlated with years in College of Education had to do with positive expectations despite difficulties. Accordingly, the preservice teachers with more years in College of Education also possessed more positive expectations. This may be explained by maturity and experience during the college education. In other words, as these preservice teachers go through the college education process, and face adversities and overcome them, they may tend to develop more positive expectations. However, there appear to be no studies that support this interpretation. This may be an area for future research. The third item that correlated with years in college had to do with the reverse of optimism—failure expectancy. Accordingly, as these preservice teachers spend more years in College of Education, at The Pennsylvania State University, University Park Campus, the less likely they are to expect failure before initiating something new. Again, a similar explanation may be provided here; as preservice teachers go through the college education process, and achieve, they are less likely to expect failure in their actions.

#### *Chapter Summary*

In sum, there are five statements. These summary items follow.

First, preservice teachers believe most in the importance of teacher-related factors, then in student-related factors, and least in other personnel-related factors. Among teacher-related factors, teacher intelligence and personality received the most points for teacher effectiveness.

Second, preservice teachers with average EQ believe in the importance of teacher factors more than did preservice teachers with a below average EQ. It was also found that as the ability of preservice teachers to understand how other people feel increased, their belief in the influence of student factors on teacher effectiveness decreased. In addition, the worse a preservice

teacher's temper, the more he or she tends to believe in the importance of other personnel factors.

Third, when looking at the relationship between preservice teachers' beliefs about teacher effectiveness as measured by the TEBS, and their GPA, gender, and years in College of Education, results revealed no difference in point allocation to TEBS items related to GPA, but some differences relating to gender and years in College of Education. As years in College of Education increase, preservice teachers' tendency to believe in the importance of teacher-related factors as a group decreased. However, years in College of Education increased the tendency to believe in the importance of teacher personality for teacher effectiveness. In terms of gender, female preservice teachers tended to believe in the importance of student personality less than did males preservice teachers.

Fourth, preservice teachers were found to possess emotional intelligence in the average range (Bar-On, 2002, Table 3.1). This average EQ scores were observed for all subscales and the total scale.

Fifth, there were differences on three scales of the Bar-On EQ-i:S: stress management, adaptability, and total scale scores with regard to GPA, especially between the lowest GPA group (2.70–2.99) and others. There were also itemwise differences with regard to GPA and years in College of Education. The responses associated with increments in GPA focused on preservice teachers' utilization of an approach to overcome difficulties step by step, less impulsiveness, and optimism. The years in College of Education variable was associated with difficulty in expressing feelings, optimism, and decreased expectancy of failure.

### *Recommendations for Practice and Research*

The purpose of this section is to provide some recommendations to teacher preparation programs and future researchers. The recommendations are offered as follows: (1) recommendations for teacher preparation programs, and (2) recommendations for future researchers.

#### *Recommendations for Practices in Teacher Preparation Programs*

According to the National Council for the Accreditation of Teacher Education (2002), it is essential that teacher candidates reflect, confront, and change beliefs about education as necessary in the context of research and practice. In other words, it is crucial to involve preservice teachers' predispositions when designing teacher education programs.

Based on study findings, preservice teachers find teacher factors to be the most important contributor to teacher effectiveness. Among these, teacher personality and teacher intelligence receive the most emphasis. Studies support the validity of this belief in the importance of teachers above and beyond other factors associated with effectiveness (ETS, 1997; Rivkin et al., 1998; Wubbels, et.al., 1997). However, the research also suggests the importance of external factors for teacher effectiveness, such as students' backgrounds and intelligence, ability, and socioeconomic status (Stroot et al., 1998); the school climate, including the resources provided by the school (Ma et al., 2007); and goals set by administrators, community, and teachers themselves (Anderson, 1991; Pratt 1993). There is no exact information on the proportion of each of these possible factors associated with teacher effectiveness. So, heavy emphasis on teacher-related factors may lead to a lack of emphasis on non-teacher-related factors in effectiveness. From this point of view, teacher education programs have a role in increasing awareness of multiple factors contributing to effectiveness in teaching as well as teachers'

themselves through coursework and reflective experiences. Another finding is that as years in College of Education increase, preservice teachers tend to believe in fewer contributions of personality and intelligence to teacher effectiveness. This may mean that the particular teacher education program investigated in this study achieves the importance of the other.

The finding that preservice teachers with above average EQs assign more importance to teacher-related factors compared to preservice teachers with below average EQs also has implications for teacher education programs. Preservice teachers with higher emotional intelligence believe in the importance of teachers and their own effectiveness. This finding is a possible reflection of the relationship between emotional intelligence and self-efficacy (Chan, 2004; Penrose et al., 2007). However, this study also found that these preservice teachers possess emotional intelligence skills in the average range. These findings together call for an increased emphasis on emotional intelligence skills in teacher education programs.

The final recommendation for teacher education programs is relevant to the finding about GPA groups and Bar-On EQ-i:S stress management, adaptability, and total scale scores. Accordingly, there were differences, especially between the lowest GPA group and other GPA groups in these scales. However, there were few differences among higher GPA groups. One possible explanation was the need for other advancement skills among higher GPA groups. In other words, while these skills are crucial to academic achievement, other factors also contribute to this area. Teacher education programs should embrace a comprehensive approach to teacher training that assures the development of teacher candidates along multiple aspects.

#### *Recommendations for Future Research*

Three recommendations for future research are offered here, based on the limitations of this study.

First, due to funding source limitations, the sample for this study were preservice teachers in the Penn State College of Education, Elementary and Kindergarten Education Major only; the results can only be generalized to Penn State. They may not be generalized broadly to all preservice teachers in other teacher training programs. However, an understanding of the beliefs and emotional intelligence skills of preservice teachers is an essential component in the development of teacher training programs; therefore, similar studies may be required in other colleges to ensure broadly improved teacher training programs.

Second, study results only focused on differences among preservice teachers' GPA, gender, years in College of Education, teacher effectiveness beliefs, and emotional intelligence skills. Therefore, this study cannot fully explain the actual reasons for the differences among them. For example, this study found a difference in point allocation among teacher factors on the TEBS and emotional intelligence total scores. The researcher found that this difference may be attributable to the fact that those with higher emotional intelligence have better self-efficacy as reflected in their point allocation on the importance of teachers' and their own effectiveness. However, this assumption is the researcher's based on previous research. It may also be possible that preservice teachers are simply not aware of the essential nature of other TEBS factors. Therefore, the issue of the reasons for the differences may require the use of other methods, such as qualitative research, to identify more accurate information for the difference.

Third, the factors contributing to teacher effectiveness included on the TEBS used in this study were not comprehensive. Because, teacher effectiveness is defined differently in literature (e.g., Collinson, Killeavy, & Stephenson, 1999, Sanders & Horn, 1998; Stronge, Tucker, & Ward, 2003). The investigator of this study didn't predefine teacher effectiveness. Research also indicated that factors such as material resources (Tsui, & Cheng, 1999) and parent involvement

(Dunlap, & Alva, 1999) were relevant to teacher effectiveness. Therefore, studies of preservice teachers' beliefs on factors related to teacher effectiveness may provide better information.

### *Chapter Summary*

In summary, the purpose of this study was to examine the relationship between preservice teachers' beliefs about teacher effectiveness and emotional intelligence skills. This study found that preservice teachers tend to believe primarily in the importance of teacher factors, and then student-related factors, and the least in other personnel-related factors. Also, there were some significant differences in preservice teachers' teacher effectiveness beliefs associated with emotional intelligence skills. In addition, this study found that years in College of Education and gender account for some differences in beliefs about teacher effectiveness. Finally, preservice teachers were found to possess emotional intelligence skills in average range, while their emotional intelligence, stress management, and adaptability account for some differences in GPA. Based on these findings, the researcher provided some recommendations for teacher education programs and future research that are intended to improve the quality of teacher education in U.S. colleges.

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## Appendix A

Sample Statements Similar to the Items for Bar-On EQ-i:S

Sample statements similar to items from Bar-On EQ-i:S

1. I take one step at a time when dealing with difficulties.
2. I am impulsive that causes problems.
3. I can understand other peoples' feelings I am good at understanding the way other people feel.
4. I think positive most of the time. I'm optimistic about most things I do.
5. I have difficulty in telling how I feel. It's hard to express my intimate feelings.
6. I have difficulty in managing my anger.

Appendix B

Teacher Effectiveness Beliefs Survey

## Teacher Effectiveness Beliefs Survey

**Directions:** This questionnaire is designed to gather information about your beliefs about teacher effectiveness. The survey is comprised of three parts: (1)personal data, (2) survey directions and items. All of your answers will remain confidential individual data will not be reported. It will take about 5 minutes to complete the questionnaire. Thank you for your cooperation.

### Part 1: Personal Data

**Directions:** This is an anonymous survey. Your name will not appear on the questionnaire.

1. Your age: .
2. Total years in College of Education:
3. Major: .
4. GPA

### Survey Directions and Items

Directions: Please distribute 100 points among the following ten factors according to how important you believe each factor is in accounting for the overall effectiveness of a teacher. The more points you assign to a factor, the more important you believe that factor is. Be sure that total number of points you assign equals 100.

<u>Factor</u>	<u>Assigned Points</u>
F1. The teacher's own intelligence	1. ....
F2. The teacher's own personality	2. ....
F3. The teacher's own background (parent's, previous schooling, socioeconomic status etc.)	3.....
F4. The teacher's teacher preparation program (education courses, field experiences etc.)	4. ....
F5. The intelligence of the teacher's pupils/students.	5.....
F6. The personality of the teacher's pupils, students.	6.....
F7. The background of the teacher's pupils/ students.	7.....
F8. The other teacher's working in the teacher's school.	8.....
F9. The principal of the teacher's school.	9.....
F10. Other professionals working in the teacher's school (e.g., guidance counselor)	10.....

Ganser, T. (1996). Teacher Effectiveness: Views of Preservice and Inservice Teachers. Paper presented at the Annual Meeting of the Mid-Western Educational Research Association.

Appendix C.

Verbal Information about the Study Provided to Study Participants

Hello,

My name is Burcin Ogrenir. I am a graduate student in the Department of Curriculum & Instruction at The Pennsylvania State University, University Park, Pennsylvania and am working on my doctoral study entitled: "Investigating the Relationship between Emotional Intelligence and Preservice Teachers' Beliefs about Teacher Effectiveness".

I am looking for research volunteers for my project. I need volunteers specifically from PSU teacher education program as my focus population for this project. I am asking that you take and complete a survey and a test of emotional intelligence. These are to be completed out of class time. I will come back 20 minutes before your next class time to this classroom and collect the completed materials. You will receive 3 bonus points for this course by participating in this study. If you choose not to participate, your instructor will arrange with you to do an additional written class activity. Alternative extra credit activities involve students writing brief papers (2pgs) relating a specific aspect of the course content to their field of study. The paper is simply an application activity where they apply what they learn in class to their professional course work. Each assignment is worked out individually with the student in an attempt to make it useful and informative as well as extra credit.

The purpose of this study is to understand the relationship between emotional intelligence and teachers' effectiveness. Anticipated benefits to society include a better understanding of preservice teachers' beliefs and their emotional intelligence skills in teacher preparation programs.

You must be 18 years or older to participate. Your decision to be in this research is voluntary. You can stop at anytime. You do not have to answer any questions you do not want to answer. These are confidential surveys; the information/results will only be used for research purposes. Your answers to these questionnaires are completely confidential; individual data will not be reported.

If you have any questions, please let me know. Completion and return of the survey is considered consent to participate in this research. Thank you for your consideration.

Appendix D

Informed Consent Form for Main Study

**Informed Consent Form**

The Pennsylvania State University

**Title of Project:** **Investigating the Relationship between Emotional intelligence and Preservice Teachers' Beliefs about Effectiveness.**

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**Other Investigator(s):** Prof. Daniel Hade, Dr. Senel Poyrazli, Prof. Edgar Yoder

1. **Purpose of the Study:** The purpose of this research is to investigate the relationship between emotional intelligence and preservice teachers' beliefs about teacher effectiveness, years in college, and gpa in a sample of preservice teachers in Pennsylvania State University School of Education.
2. **Procedures to be followed:** You will be asked to complete Emotional Intelligence Quotient Inventory- Short form and Teacher Effectiveness Beliefs Survey. These are to be completed out of class time. They will be collected back before classtime in the following week.
3. **Duration/Time:** These surveys will take 20 minutes to complete.
4. **Statement of Confidentiality:** Your participation in this research is confidential. The survey does not ask for any information that would identify who the responses belong to. In the

event of any publication or presentation resulting from the research, no personally identifiable information will be shared because your name is in no way linked to your responses.

5. **Right to Ask Questions:** Please contact Burcin Ogrenir at (814) 777 3679 with questions or concerns about this study.
  
6. **Voluntary Participation:** Your decision to be in this research is voluntary. You will receive 3 bonus points for participating in his research. However if you choose not to participate, your instructor will arrange an additional written classroom activity for the same number of points. Alternative extra credit activities involve students writing brief papers (2 pgs) relating a specific aspect of the course content to their field of study. The paper is simply an application activity where they apply what they learn in class to their professional course work. Each assignment is worked out individually with the student in an attempt to make it useful and informative as well as extra credit.  
During the completion of the survey and emotional intelligence inventory you can stop at any time. You do not have to answer any question you do not want to answer.

You must be 18 years of age or older to take part in this research study.

Completion and return of the survey implies that you have read the information in this form and consent to take part in the research. Please keep this form for your records or future reference.

Appendix E

Table for Individual GPA of the Participants

**Table E.1. Current GPA of study participants.**

GPA	Frequency	Valid Percent	Cumulative Percent
2.70	2	2.1	2.1
2.80	2	2.1	4.1
2.97	1	1.0	5.2
3.00	3	3.1	8.2
3.01	1	1.0	9.3
3.09	1	1.0	10.3
3.10	2	2.1	12.4
3.19	1	1.0	13.4
3.20	7	7.2	20.6
3.25	1	1.0	21.6
3.27	1	1.0	22.7
3.28	2	2.1	24.7
3.30	4	4.1	28.9
3.33	2	2.1	30.9
3.37	1	1.0	32.0
3.39	1	1.0	33.0
3.40	7	7.2	40.2
3.42	1	1.0	41.2
3.43	1	1.0	42.3
3.45	2	2.1	44.3
3.47	1	1.0	45.4
3.48	1	1.0	46.4
3.50	5	5.2	51.5
3.52	1	1.0	52.6

3.53	1	1.0	53.6
3.54	2	2.1	55.7
3.55	1	1.0	56.7
3.56	1	1.0	57.7
3.59	1	1.0	58.8
3.60	3	3.1	61.9
3.61	1	1.0	62.9
3.62	1	1.0	63.9
3.63	2	2.1	66.0
3.67	4	4.1	70.1
3.70	3	3.1	73.2
3.73	1	1.0	74.2
3.75	1	1.0	75.3
3.77	2	2.1	77.3
3.80	6	6.2	83.5
3.86	1	1.0	84.5
3.87	5	5.2	89.7
3.90	2	2.1	91.8
3.91	1	1.0	92.8
3.92	1	1.0	93.8
3.93	1	1.0	94.8
3.94	2	2.1	96.9
3.97	1	1.0	97.9
3.99	1	1.0	99.0
4.00	1	1.0	100.0
Total	97	100.0	

## Vitae

### BURCIN OGRENIR

Tel: 814 777 3679

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#### EDUCATION

##### **PhD in Curriculum and Instruction,**

Pennsylvania State University, University Park Campus, Expected graduation: August 2008

##### **MA in Applied Clinical Psychology**

Pennsylvania State University, Capital Campus, Expected graduation: December 2008

##### **MEd in Early Childhood Education**

University of Pittsburgh, Pittsburgh-PA, July 2003

##### **BS in Psychology**

Middle East Technical University (METU), Ankara-Turkey, 2001

#### EXPERIENCE

**Young Scholars of Central PA Charter School (2005-2006), *Founder Member*, and *After School***

***Program Director***

**Penn State World Campus (2004), *Co-Author of Family Literacy Course***

**Odyoloji Merkezi (Audiology Center), Ankara, Turkey (2001), *Director* , and *Educator***

**21 Haziran İlkogretim Okulu (Elementary school), Adapazari, Turkey (2001), *English Teacher***

**METU, Department of Psychology, Ankara, Turkey (1999-2000), *Research Assistant***

#### PRESENTATIONS

Ogrenir, B. (September 2006). "Preparing Global Citizens for Tomorrow's World." *Pennsylvania Council for International Education Conference*. Pittsburgh, PA

#### SPECIAL SKILLS

Knowledge and utilization of SPSS  
Intelligence testing using WISC-R and WAIS