1-1-2019

Development and Validation of the Family-School Partnering and Collaboration Scale

Carly Anne Sorenson
University of Denver

Development and Validation of the Family-School Partnering and Collaboration Scale

Abstract

There are many positive effects that family, school, and community partnerships (FSP) have on student achievement, behavior, and social-emotional development (Desforges & Abouchaar, 2003; Epstein, 1994, 2011; Graham, 2011; Henderson & Mapp, 2002; Jeynes, 2005, 2007; Ulugag, 2008). Due to the many benefits FSP have on student educational outcomes, current education reform efforts and legislation have mandated the implementation of FSP practices in schools. Additionally, legislation has called for increased accountability efforts to ensure that educators have appropriate levels of FSP skills and competencies (U.S. Department of Health and Human Services and the U.S. Department of Education, 2016). As such, the Family-School Partnering and Collaboration Scale (FSPCS) was developed to assess preservice educators' self-reported perceptions of roles, responsibilities, and barriers to implementing FSP; attitudes about the importance of collaborating with families; and self-efficacy beliefs related to FSP.

The purpose of this study was to develop and initially validate the FSPCS. After an extensive review of the literature related to FSP and an expert panel review, a pilot version of the FSPCS was administered to preservice educators taking a course on FSP practices. Following the pilot study, a supplemental literature review was conducted along with a second expert panel review and cognitive interviews with preservice educators before the final version of the FSPCS was administered to 155 preservice educators from different education training programs throughout the state of Colorado. Descriptive statistics, exploratory factor analysis, Rasch modeling, reliability analysis, and comparison tests were performed on the scale data. The results indicated that the items factored into a 4-factor solution appropriately with the three most pronounced domains being Perceptions, Attitudes, and Beliefs and the fourth factor, Perceptions of Barriers being viewed as a sub-class of Perceptions. The scale was found to be reliable: the domains of *Perceptions of Roles and Responsibilities* (Cronbach's alpha: .92), *Attitudes about the Importance of Collaborating with Families* (Cronbach's *a*: .73), and *Self-efficacy Beliefs Related to FSP* (Cronbach's a: .94) had high internal consistency values. The sub-class factor of *Perceptions of Barriers to Implementing FSP* was low (Cronbach's *a*: .58). Study findings, limitations, and recommendations for future research are discussed.

Document Type

Dissertation

Degree Name

Ph.D.

Department

Child, Family and School Psychology

First Advisor

Gloria E. Miller, Ph.D.

Keywords

Family involvement, Family-school partnership, Preservice educators, Scale development

Subject Categories

Psychology | School Psychology

DEVELOPMENT AND VALIDATION OF THE FAMILY-SCHOOL PARTNERING AND COLLABORATION SCALE

A Dissertation

Presented to

the Faculty of the Morgridge College of Education

University of Denver

In Partial Fulfillment

of the Requirements for the Degree

Doctor of Philosophy

---

by

Carly A. Sorenson

June 2019

Advisor: Gloria Miller, Ph.D.

Author: Carly A. Sorenson
Title: DEVELOPMENT AND VALIDATION OF THE FAMILY-SCHOOL PARTNERING AND COLLABORATION SCALE
Advisor: Gloria Miller, Ph.D.
Degree Date: June 2019

ABSTRACT

There are many positive effects that family, school, and community partnerships (FSP) have on student achievement, behavior, and social-emotional development (Desforges & Abouchaar, 2003; Epstein, 1994, 2011; Graham, 2011; Henderson & Mapp, 2002; Jeynes, 2005, 2007; Ulugag, 2008). Due to the many benefits FSP have on student educational outcomes, current education reform efforts and legislation have mandated the implementation of FSP practices in schools. Additionally, legislation has called for increased accountability efforts to ensure that educators have appropriate levels of FSP skills and competencies (U.S. Department of Health and Human Services and the U.S. Department of Education, 2016). As such, the Family-School Partnering and Collaboration Scale (FSPCS) was developed to assess preservice educators' self-reported perceptions of roles, responsibilities, and barriers to implementing FSP; attitudes about the importance of collaborating with families; and self-efficacy beliefs related to FSP.

The purpose of this study was to develop and initially validate the FSPCS. After an extensive review of the literature related to FSP and an expert panel review, a pilot version of the FSPCS was administered to preservice educators taking a course on FSP practices. Following the pilot study, a supplemental literature review was conducted along with a second expert panel review and cognitive interviews with preservice educators before the final version of the FSPCS was administered to 155 preservice educators from different education training programs throughout the state of Colorado.

Descriptive statistics, exploratory factor analysis, Rasch modeling, reliability analysis, and comparison tests were performed on the scale data. The results indicated that the items factored into a 4-factor solution appropriately with the three most pronounced domains being Perceptions, Attitudes, and Beliefs and the fourth factor, Perceptions of Barriers being viewed as a sub-class of Perceptions. The scale was found to be reliable: the domains of *Perceptions of Roles and Responsibilities* (Cronbach's α: .92)*, Attitudes about the Importance of Collaborating with Families* (Cronbach's α: .73), and *Self-efficacy Beliefs Related to FSP* (Cronbach's α: .94) had high internal consistency values. The sub-class factor of *Perceptions of Barriers to Implementing FSP* was low (Cronbach's α: .58). Study findings, limitations, and recommendations for future research are discussed.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

Chapter 1: Introduction to the Study

Students' academic achievement, attendance, high school graduation rates, behavior, and self-worth increase when family involvement and family-school partnerships are effectively utilized (Cox, 2005; Emmerson, Fear, Fox, & Sanders., 2012; Epstein, 1994; Sheldon, 2007; Watkins, 1997). Family-school partnerships are considered instrumental in increasing student achievement and parent engagement. According to the National Association of School Psychologists (NASP, 2012) family-school partnerships (FSP):

> involve families and educators working together as active, equal partners who share responsibility for the learning and success of all students. Families and educators are broadly defined to include all caregivers and a variety of school staff, such as administrators, teachers, and paraprofessionals […]. The focus of partnerships is coordination, consistency, and continuity across families and educators through effective communication, joint problem-solving, active involvement, and shared decision-making. (p. 1)

Schools, districts, and states have recognized the many positive effects that family, school, and community partnerships have on student achievement, behavior, and social-emotional development and have made FSP a key component of education reform efforts (Desforges & Abouchaar, 2003; Epstein, 1994, 2011; Graham, 2011; Henderson & Mapp, 2002; Jeynes, 2005, 2007; Ulugag, 2008). State legislatures understand that schools cannot operate in a vacuum and

> the challenges that students in America's public schools face cannot be solved by educators alone; nor can these problems be solved by parents or families alone. Students in schools across this nation are confronted by critical social, emotional,

> and environmental problems. More collaboration between the school and home will need to be focused on dealing with these problems. (Drake, 2000, p. 34)

By collaborating effectively with families, schools can improve student outcomes and better support student learning. As such, thirty-nine states have enacted laws promoting the collaboration of educators and families in supporting student learning and social-emotional development (Belway, Durán, & Spielberg, 2010).

Although the legislation related to FSP differs amongst states, many of the laws require accountability through evaluations of FSP practices by educators, schools, and school districts. As such, the National Parent Teacher Association (NPTA) has recommended that family engagement-based credentialing requirements for educators be established (Belway et al., 2010). Furthermore, the U.S. Department of Health and Human Services and the U.S. Department of Education's Policy Statement on Family Engagement (2016), stated that policies, procedures, and practices that support family engagement need to be established and one way to do this is by:

> providing valid assessment tools to measure family engagement […and by] evaluating and continuously improving family engagement strategies and activities to identify and scale up best practices. (p. 11-12)

Due to the increased recognition of the value of strong family-school partnerships and the emphasis on accountability, there is a need to create a measure of preservice educators' perceptions of roles, responsibilities, and barriers to implementing FSP; attitudes about the importance of collaborating with families; and beliefs about their efficacy related to FSP, in order to better understand which FSP areas preservice educators need more training on, and to gain insight into background experiences that may influence how they interact with and view families in a school setting.

Despite the FSP mandates, no measure has been developed examining preservice educators' perceptions, attitudes, and beliefs regarding FSP. Measures that focus on one or two of the areas have been developed, but no current measure is comprised of all of the domains, and no study has included preservice educators from multiple education programs (e.g., teacher, special education, school counselor, school psychology, school administrators) (Baum & McMurray-Schwarz, 2004; Garcia, 2004; Graue & Brown, 2003). Models on the process of educator change often highlight how educators' perceptions, attitudes, and beliefs affect student learning and changing those factors improves student outcomes (Avalos, 2011; Clarke & Hollingsworth, 2002; Guskey, 1986, 2002). Furthermore, examining each of those factors is important because each greatly influences an educator's ability to create strong and lasting partnerships with families (Epstein, 2013; Evans, 2013). In addition, with the information ascertained from the instrument, faculty can use constructivist, social learning, and adult learning theory and practices to collaborate with their students on how to best support their professional development regarding FSP (Kroeger & Lash, 2011; LaFromboise, Coleman, & Hernandez, 1991). Since the key tenets of social constructivist theory include: reflection, questioning, collaboration, meaning making, and building on prior experiences (Wells, 2002), the measure data will provide valuable information to students, which may aid them in becoming reflective, critical thinkers who understand the various perceptions, attitudes, and beliefs they have that influence their ability to form strong FSP. Thus, if faculty and preservice educators are aware of their perceptions, attitudes, and beliefs meaningful cognitive changes can occur and students will be

> developing the capacity for self-awareness, the ability to effectively communicate with families, and the desire to work with multiple stakeholders, [all of which are] essential for the preparation of effective [educators]. (Evans, 2013, p. 130)

Furthermore, there is a need for a comprehensive instrument measuring these vital cognitive domains because without one, training program faculty have limited information on whether or not their preservice educators are developing key perceptions, attitudes, and beliefs critical for effective communication and collaborations with families. Creating such a psychometrically sound instrument could assist training program faculty in research on educator preparation in this area. A comprehensive measure could provide training program faculty with information to determine if graduate students need further support to develop confidence and behaviors that can increase their effectiveness with families. In addition, the results from the measure may promote interprofessional collaboration among faculty colleagues in different education programs who want to work together to enhance the training and FSP experiences their students have in their respective programs (Lam, 2005; Williams, Brown, & Boyle, 2012; Zwarenstein, Reeves, & Perrier, 2005).

Statement of the Problem

The primary purpose of this study was to 1) develop a reliable, valid, and comprehensive measure assessing preservice educators' perceptions of roles, responsibilities, and barriers to implementing FSP; attitudes about the importance of collaborating with families; and self-efficacy beliefs related to FSP; and 2) examine what differences, if any, exist within those domains among preservice educators who have distinct demographic characteristics, and in particular those from different education

training programs. By determining if differences between preservice educators from different programs exist, faculty teaching future educators may determine that collaborating with faculty in different education programs on how to better prepare preservice educators in FSP would be advantageous.

This study fills a gap in the research by providing empirical data on preservice educators' thinking surrounding FSP and provides educator training faculty with a new tool to assist them in evaluating their students' perceptions, attitudes, and beliefs related to FSP. By considering the perceptions, attitudes, and beliefs on FSP by preservice educators, educator training programs may make changes in their programs to enhance FSP skills and competencies in their students through new course content and field experiences. Furthermore, educator training programs could use this tool as a pre/post measure of FSP perceptions, attitudes, and beliefs to determine if preservice educators are increasing their understanding of FSP practices through greater self-awareness about their perceptions, attitudes, and beliefs about working with families.

By understanding the perceptions, attitudes, and beliefs that preservice educators have regarding FSP, educator training program faculty can make positive changes in their programs to facilitate the development of FSP skills in their students. Additionally, the information ascertained can be used by faculty who use social constructivist learning theory to help future educators become reflective, critical thinkers who are aware of their thoughts regarding FSP and working with families. By providing a valid and reliable assessment measuring preservice educators' perceptions, attitudes, and beliefs regarding

FSP, this study will provide a foundation for future research concerning the predictors and variables that influence the implementation of FSP strategies by preservice educators.

Research Questions and Hypotheses

A new instrument, entitled the Family-School Partnering and Collaboration Scale (FSPCS), was developed to comprehensively assess preservice educators self-reported perceptions of roles, responsibilities, and barriers to implementing FSP; attitudes about the importance of collaborating with families; and self-efficacy beliefs related to FSP. The research questions that were addressed are:

1) What is the measured construct?

a) Do items factor appropriately into three distinct domains (i.e., Perceptions, Attitudes, and Beliefs) regarding FSP? Is the factor structure confirmed?

b) Do the items in the FSPCS adhere to the Rasch model?

c) Is there adequate reliability and validity for each of the factors?

2) Do preservice educators respond differently to items based on demographic differences (i.e., training program, age, gender, race/ethnicity, time in graduate program, FSP activities previously engaged in, if they are a parent, if they have a close relative or child with special needs)?

Two primary hypotheses were proposed regarding the FSPCS:

Hypothesis 1: There are three distinct factors that operationally define what influences the development of strong family school partnerships: perceptions, attitudes, and beliefs.

Hypothesis 2: Participants with distinct demographic characteristics who are enrolled in different education training programs rate items significantly different on the FSPCS.

Previous research on preservice teacher's perceptions, attitudes, and beliefs related to FSP and their competencies in collaborating with families have been primarily mixed method and qualitative (Bingham & Abernathy, 2007; de Bruïne, Willemse, D'Haem, Griswold, Vloeberghs, & VanEynde, 2014; D'Haem & Griswold, 2016; Epstein, 1995; Epstein, Sanders, & Clark, 1999; Ferrara, 2011; Graue & Brown, 2003; Patte, 2011; Sutterby, Rubin, & Abrego, 2007; Zygmunt-Fillwalk, 2006). The findings from these studies support the need for a comprehensive measure examining perceptions, attitudes, and beliefs related to FSP because of the benefits strong family-school partnerships have on student achievement and social-emotional development.

Definitions of Terms

Many terms have been introduced in this Chapter, which will be used in subsequent chapters. In addition, some terms will be used throughout the study, but have not been mentioned in this Chapter. Thus, to prevent any confusion about the definition of these terms, the author defined the following terms.

Attitude: A feeling or orientation that is affective and is a "learned predisposition to respond to an object or class of objects in a certain way" (Fishbein, 1967, p. 257). Educators "bring to the melting pot of [family-school partnerships] personal attitudes that are deeply rooted within their own historical, economic, educational, ethnic, class and gendered experiences" (Hornby & Lafaele, 2011, p. 45). In addition, according to Christenson and Sheridan (2001) attitudes as they relate to FSP are the underlying values and emotions, educators and families have regarding the roles and responsibilities of schools and families in promoting student learning and social-emotional development.

For example, an educator may have a positive or negative attitude towards inclusive classrooms.

Belief: A personal conviction or implicit assumption that influences an individual's thoughts and actions. According to Pajares (1992), beliefs: tend to be formed early in life and continue into adulthood, are influenced by culture, help individuals understand the world around them, are connected with knowledge, strongly influence perception, and are "instrumental in defining tasks and selecting the cognitive tools with which to interpret, plan, and make decisions regarding such tasks" (p. 325). For example, an educator may believe that a quiet classroom is necessary for optimal student learning.

Educators: For the purpose of this study educators will refer to any school professional or school support staff who works either directly or indirectly with students and families, such as teachers, paraprofessionals, school psychologists, principals, deans, school counselors, librarians, information technology support staff, and school social workers.

Family engagement-based credentialing: A qualification of educator competence in understanding and implementing FSP practices. A requirement documenting that preservice educators have ascertained a minimum degree of competence in understanding and implementing FSP practices.

Family-school partnership (FSP): For the purpose of this study FSP will be used to describe all forms of collaborative relationships between families and schools that are goal-oriented and focused on student achievement and social-emotional development.

Family-school partnerships are child-focused "wherein families and professionals, cooperate, coordinate, and collaborate to enhance opportunities and success for children and adolescents across social, emotional, behavioral, and academic domains" (Kim, Coutts, Holmes, Sheridan, Ransom, Sjuts, & Rispoli, 2012, p. 3).

Perceptions: Perceptions are different from attitudes in that they are an individual's recognition and interpretation of sensory information. Unlike attitudes, perceptions do not necessarily include an evaluation component and are more of a general awareness about a certain thing. Whereas, an attitude is the perception in addition to the evaluation (Pickens, 2005). For instance, an educator may perceive that their school administration does not want inclusive classrooms, and he or she may form an attitude that the school administrators are uncaring.

Preservice: Time during an education preparation program (e.g., teacher, school psychology, school counselor, education leadership, etc.) prior to graduation, certification and licensure.

Self-efficacy beliefs: Self efficacy beliefs are about one's capabilities to achieve a particular goal. These beliefs also can be viewed as one's confidence in having control over motivation, environment, and social capacities (Bandura, 1977). For example, an educator may believe that they are skilled and capable of working with families from diverse backgrounds or alternatively may not have such efficacy. These beliefs in turn, then impact the likelihood one would seek out opportunities to work with this population. Educators who have a high self-efficacy belief about their teaching are less likely to suffer "burn-out" and report higher levels of job satisfaction (Klieme & Vieluf, 2009).

Chapter 2: Review of the Literature

A review of relevant literature is provided pertaining to legislation related to FSP, components of effective FSP practices, the advantages of FSP, and critical foundational models of FSP. After this review, current measures are described that have been used in the past to assess educator FSP competencies and practices. These measures will be reviewed for their psychometric properties and also in regards to their comprehensive coverage of critical perceptions, attitudes, and beliefs educators have towards collaborating with families. The literature review will end with a critique of prior measures and a rationale for creating a new educator self-report measure to capture such domains.

Legislation Related to Family-School Partnerships

Due to the numerous benefits that FSP has on student achievement and social-emotional development, many state and federal guidelines require schools to incorporate FSP in their school communities.

The Elementary and Secondary Education Act (ESEA) of 1965, was the first legislation to promote parental involvement in schools by requiring parents to serve on school advisory boards and supporting parent participation in classroom activities. A component of the ESEA of 1965 was the Title I provision, which provided funding for schools with a high percentage of students from low-SES backgrounds. In 1975, with the passage of the Education for All Handicapped Children Act (EAHCA) parent

involvement was mandated in every decision regarding their child, and parental consent was required for any special education evaluation, assessment, or placement decision. Amendments to the ESEA were passed in 1978 (P.L. 95-561), mandating that parent advisory councils (PACs) be composed of parents who were representative of the school demographics and requiring schools to provide information to parents in their native language. Additionally, evaluations of parent and instructional programs were to be conducted; school districts were asked to provide funding for PACs; and schools were also told to consider providing parent resources for learning at home. In 1994, the GOALS 2000: Educate America Act was passed and in it eight National Education Goals were listed with one being: "Every school will promote partnerships that will increase parental involvement and participation in promoting the social, emotional, and academic growth of children" (National Education Goals Panel, 1995).

In 2001, ESEA was renamed the No Child Left Behind (NCLB) Act and in it, parent involvement was defined as

> the participation of parents in regular, two-way, and meaningful communication involving student academic learning and other school activities; including ensuring that parents (1) play an integral role in assisting their child's learning; (2) are encouraged to be actively involved in their child's education at school; and (3) are full partners in their child's education and are included, as appropriate, in decision making and on advisory committees to assist in the education of their child. (P.L. 107-110, 2002, p. 1962)

NCLB also required that Title I schools have written parent-involvement policies and school-parent compacts, which were to describe how parents should be involved in schools and how parents could support their child's learning at school and home. Additionally, the policies were required to address how ongoing communication between

home and school was to occur. Lastly, both the policies and compacts were to be developed with parental input and required approval by parents. The provisions in NCLB mandating FSP emphasized the importance of creating strong FSP to promote student learning.

Further legislation was passed promoting FSP through the Individuals with Disabilities Education Act (IDEA) of 1997 and the reauthorization of IDEA in 2004, which gave families procedural safeguards, increased parental involvement in Individualized Education Program (IEP) planning, and gave parents who have a child with a disability more decision-making opportunities regarding their child's evaluation, placement, and service implementation.

Many state legislatures have also recognized the importance of FSP and have made policies that require schools and educators to implement FSP practices. For instance, in Colorado, Senate Bill 10-191 was passed in 2010, which required school districts to implement new evaluation measures to assess educator effectiveness (Colorado Department of Education (CDE), 2014). In the CDE rubric for evaluating educators, in order for teachers to be effective they must be able to advocate and partner with families (CDE, n.d.). Colorado's rubric is just one example of states understanding the benefits of strong FSP.

More recently, through the passage of the Every Student Succeeds Act (ESSA, 2015) the federal government placed new FSP mandates on state and local educational agencies (LEA). LEAs were required to conduct outreach to all parents and family members, establish expectations and objectives for meaningful FSP, and build school

capacity through connections with the community. Additional mandates for Title I schools included: 1% of their funding must be used for FSP, and those funds were to be used for professional development, home-based programs, disseminating information, or collaborating with community-based organizations. Title I schools were also required to

> Educate teachers, specialized instructional support personnel, principals, and other school leaders, and other staff, with the assistance of parents in the value and utility of contributions of parents, and in how to reach out to, communicate with, and work with parents as equal partners, implement and coordinate parent programs, and build ties between parents and the school. (P.L. 114-95, 2015, p. 78)

The inclusion of all educators into the bill, highlights how all staff play a role in FSP and in student outcomes. Due to the passage of numerous federal and state laws mandating FSP, educators need to be competent and able to collaborate with families in meaningful ways.

Components of Effective Family-School Partnerships

While legislation has been passed, inconsistencies exist in regard to defining FSP and outlining its components and the practices involved (Epstein, 1994, 2011; Graham, 2011; Henderson & Mapp, 2002; Jeynes, 2005, 2007).

Researchers have attempted to succinctly identify critical components of effective family-school partnerships and have concluded that effective family-school partnerships are: collaborative and mutually respectfully, multi-dimensional and dynamic; regularly reviewed; goal-oriented and focused on learning; and recognize the importance of timely two-way communication between home and school (Bull, Brooking, & Campbell, 2008). In addition, Emerson, Fear, Fox, and Sanders (2012), discussed the importance of

understanding the interplay between families, schools, and the communities in effective family-school partnerships. Emerson et al. (2012) synthesized from research:

> The evidence reviewed in this report suggests interventions have the greatest impact when they are focused on linking behaviors of families, teachers and students to learning and learning outcomes, when there is a clear understanding of the roles of parents and teachers in learning, when family behaviors are conducive to learning, and when there are consistent, positive relations between the school and parents. The evidence also indicates that successful parental engagement strategies focus on local needs and contexts, incorporate a variety of communication channels, and are flexible in how engagement is defined – so long as the core principles of academic socialization, appropriate parental role construction, and positive parenting style are used as the basis for action. (p. 12)

Although there are many components of effective family-school partnerships the foundation for many of the components of effective FSP is comprised of just three foundational elements: (1) student academic achievement and social-emotional development is the center of FSP; (2) education is a shared responsibility between families, schools, and communities; and (3) families and educators contribute to FSP by bringing their own unique expertise and cultures (Lines, Miller, & Arthur-Stanley, 2011). Schools that have employed effective FSP practices have adopted those tenets and have used those three foundational elements as the basis for creating strong FSP.

Advantages of FSP

Schools that implement the essential components necessary in creating strong FSP, have seen an increase in student academic achievement, educational attainment, social-emotional development, and increased parental and teacher self-efficacy (Cox, 2005; Epstein, 2008; Fan & Chen, 2001; Henderson & Mapp, 2002; Jeynes, 2005, 2010; Redding, Langdon, Meyer, & Sheley, 2004). Jeynes (2005) conducted a meta-analysis on 41 studies related to FSP and academic achievement and found a significant positive

relationship between academic achievement (e.g., GPA, standardized test scores, and other academic achievement measures) and FSP in urban elementary school students regardless of race or gender. More recently, Jeynes (2016, 2017) conducted meta-analyses examining the relationship between parental involvement and African American and Latino student outcomes and found that there was a significant positive relationship between parent involvement and student academic achievement and overall educational outcomes. In addition, Jeynes (2016, 2017) concluded that school-based FSP programs increased academic achievement in African American students, but they did not have a statistically significant effect on Latino students' academic achievement. Jeynes (2017) found that Latino parents used subtle parental involvement practices (e.g., parental expectations, the quality of parent–child communication, and parental style) to engage students. These subtle parental involvement practices are frequently overlooked by educators; however, they heavily influence the involvement practices of CLD families (Jeynes, 2010). As such, Jeynes (2010) stated that it was important to

> educate school leaders, teachers, and staff to understand that raising parental participation may be more a function of subtle but important demonstrations of love and respect than a matter of instructing parents to apply particular methods of helping children. (p. 748)

Thus, according to Jeynes (2010) involving families is critically important to improving academic achievement and educators need to understand the multiple ways families can be involved in order to foster the FSP relationship. In addition to Jeynes' meta-analyses, Fan and Chen (2001) examined 25 studies related to parent involvement and academic achievement and concluded that there was a positive correlation between parental involvement and academic achievement. Parental expectations were most strongly

associated with academic achievement, whereas home rules regarding school and non-academic activities (i.e., watching television) had the weakest association. Ingraham, Wolfe, and Lieberman (2007) reported a positive association between academic achievement and schools that provided parenting strategies to parents and when parents encouraged learning at home. In addition, when schools made a concerted effort to promote FSP, students scored significantly better than their peers on state standardized assessments (Redding, Langdon, Meyers, & Sheley, 2004). Researchers have concluded that there is a positive association between academic achievement and FSP.

Many researchers have shown the positive association between attendance rates, high school graduation rates, and parental involvement (Barnard, 2004; Epstein, 2008; Henderson & Mapp, 2002; Jeynes, 2005; Reynolds & Clements, 2005). Barnard (2004) and Reynolds and Clements (2005) conducted longitudinal studies on the association between the degree of parental involvement and student educational attainment and both concluded that students whose parents were actively involved in their schooling had greater on-time high school graduation rates, lower drop-out rates, and had higher levels of educational attainment than peers whose parents were not actively involved in their schooling. Patrikakou's (2008) determined that students whose parents had high expectations related to their schooling; who encouraged their children to work hard in school; and were well-informed of school activities, policies, and expectations had higher grades, earned more academic credits and were more likely to attend college.

Furthermore, FSP have been linked to students' social-emotional learning and development. Social emotional learning has been defined as

> the ability to understand, manage, and express the social and emotional aspects of one's life in ways that enable the successful management of life tasks such as learning, forming relationships, solving everyday problems, and adapting to the complex demands of growth and development. It includes self-awareness, control of impulsivity, working cooperatively, and caring about oneself and others. (Elias, Zins, Weissberg, Frey, Greenberg, & Haynes, 1997, p. 2)

Amato and Rivera (1999) reported that children of all ages had less school disciplinary issues and were less likely to need treatment for social-emotional disorders when their fathers and/or mothers spent time with them, offered praise and affection, and were actively involved in their lives.

El Nokali, Bachman, and Votruba-Drzal (2010) examined the data from the National Institute of Child Health and Human Development's Early Child Care and Youth Development longitudinal study and found that students whose families were actively involved in their schooling (e.g., communicating with school personnel, attending school functions, and having positive attitudes towards school and learning) had less behavior problems and more advanced social skills than peers with less engaged parents. In addition, El Nokali et al. (2010) found that subtle forms of family involvement (e.g., attitudes towards school, expectations and aspirations for their students, and their thoughts and feelings about education) helped to decrease behavior problems and increase academic achievement and pro-social behaviors in students. Albright, Weissberg, and Dusenbery (2011) concluded that positive, caring home and school climates were associated with children having increased social awareness, empathy, self-awareness, and problem-solving skills. In addition, FSP facilitated a child's social emotional learning, led to higher self-esteem, and fewer behavior problems (Albright et al., 2011). By working together to promote social-emotional competencies

in their students, families and schools can aid students in developing the necessary social skills to succeed in school and life.

Parents and teachers also benefit when there are strong family-school partnerships. Gestwicki (2015) reported that parents benefit from family-school partnerships because: (1) they will feel supported in their parenting; (2) they are able to learn new knowledge and skills related to parenting; and (3) have enhanced self-esteem related to their parenting actions and because they feel they are an important part of their child's life at home and at school. In addition, teachers benefit when FSP strategies are implemented in their schools. Gestwicki (2015) found that teachers who worked with families benefited because: (1) teachers would have increased knowledge and understanding of the child, which would aid them in teaching their students; (2) they would receive positive feedback from parents, which would increase their feelings of self-efficacy and give them greater confidence in advocating for themselves; and (3) educational resources they provide to parents can supplement and reinforce what they are teaching in the classroom.

Researchers have documented the positive effects of family-school partnerships on student academic achievement, attendance rates, graduation rates, social-emotional learning and development, as well as benefiting parents and teachers. They have also noted that subtle and salient forms of family involvement can influence the FSP relationship and that educators need to be cognizant of the various ways families can contribute to the FSP relationship and aid in improving students' academic achievement and social emotional development. Thus, researchers have documented that having

strong FSP is essential in supporting the development of the whole child and increasing self-efficacy in parents and teachers.

Models of FSP

Even though many researchers have reported the numerous advantages of having strong FSP, they have not uniformly agreed on one set definition of FSP. This is likely due to the broad nature of FSP and the complex interactions between home, school, and the community, which has led to different interpretations and models being developed in an attempt to better conceptualize FSP. Three FSP models highlight the different perspectives researchers have regarding FSP and its components: Epstein's (1995) theory of overlapping spheres of influence, Hoover-Dempsey and Sandler's (1995, revised in 2005) model of the parental involvement process, and Christenson and Sheridan's (2001) 5 A's framework. Each model has been used by researchers who have developed assessments that have sought to better understand educators' perspectives and knowledge of FSP.

Epstein's theory of overlapping spheres of influence was derived from Bronfenbrenner's (1986) ecological systems theory of human development. In Bronfenbrenner (1986)'s theory, a child's development and maturation are affected by the interplay and interactions he or she has with the surrounding environment, through social interactions, and societal norms. Individual, family, and community interactions simultaneously influence and affect a child's development. Epstein's theory differs from Brofenbrenner's in that a child's family, school, and community are overlapping spheres of influence on his or her learning and development. A child's family life, their

neighborhood, and the school they attend all interact to either promote or impede learning. Epstein (1994, 1995, 1999, 2003) used the overlapping spheres of influence theory to develop a framework of six major behavioral types of parental involvement: Parenting, Communicating, Volunteering, Learning at Home, Decision-making, and Collaborating with the Community. In the (1) Parenting category, schools support parents by providing parents with educational opportunities and by teaching parents effective parenting strategies. Parents provide schools with information about their family background, values, goals, and home environment. In the (2) Communicating category, schools facilitate two-way communication with parents and notify parents about their child's progress, and upcoming events and programs that may be beneficial for their child or family. Parents should communicate with the school about any questions or concerns they have and be proactive in initiating contact with the school regarding any concerns. In the (3) Volunteering category, schools recruit parents and promote parent involvement in a wide range of school and extracurricular activities and create a school climate that is welcoming and inviting for parents. Parents, in turn, try to volunteer at the school and understand the teacher's job and the importance of carrying-over school activities at home. In the (4) Learning at Home category, schools provide information to parents to assist their child in learning at home and provide tools to parents to assist them in helping their child with homework. Parents are encouraged to discuss homework, school rules and values with their child, and understand the instructional program their child is being taught. In the (5) Decision-making category, families are considered equal members of the school community and they are included in

school decisions and are members of school committees and organizations. In the (6) Collaborating with the Community category, schools provide relevant community resource information and integrate community resources and services into the school. Parents are aware of the school's role in the community and have knowledge and use local resources to foster their child's growth and development (Epstein, 1994). Epstein's framework posited that the interactions between schools, families, and communities are dynamic processes that continually shift depending on interpersonal relationships and external forces (e.g., time and experiences) (Epstein, 2011). Those interactions between schools, families, and communities can lead to shared interests and investments that promote and enhance the academic and social-emotional development of children (Epstein, 1994, 2011). As such, Epstein's typologies were used in the creation of the National PTA standards for FSP (2007). By using Epstein's framework as a guide, schools can develop a comprehensive FSP program that is sustainable, meaningful, and effective in increasing student outcomes.

Hoover-Dempsey and Sandler (1995) developed a theoretical framework describing more processes involved in influencing a parent's level of involvement in their child's education and learning. They concluded that there were three main factors that affected parents' level of involvement in their child's schooling: their role construction (what parents believe about how involved they should be in their child's education), self-efficacy (how parents perceive their ability to positively make a difference in their child's academic and social development), and the contextual invitation (the degree to which parents perceive the school welcoming and valuing their involvement). The framework

was revised in 2005, and in the revised model an emphasis on the dynamic and fluid nature of the parent involvement was included, as well as a new understanding of the psychological and contextual factors that influence FSP.

I. Parents' initial decision to become involved in school is influenced by:
  a. Sense of responsibility for schooling.
  b. Belief in their capacity to contribute to the academic success of their child.
  c. Perception of invitations to participate in their child's education by the school.
  d. Perception of life contexts.

II. Parents' choice of involvement:
  a. Location (home or school).

III. Mechanisms of involvement that influence student outcomes:
  a. Modeling behavior.
  b. Reinforcement.
  c. Instructions.

IV. Tempering/mediating variables:
  a. Use of developmentally appropriate strategies to encourage learning.
  b. The fit between the parent's behaviors and school expectations for involvement.

V. Student outcomes:
  a. Skills, knowledge, academic achievement, social-emotional competencies.
  b. Self-efficacy for school success and a motivation to learn.

Adapted from Walker, J. M. T., Wilkins, A. S., Dallaire, J. R., Sandler, H. M., & Hoover- Dempsey, K. V. (2005). Parental involvement: Model revision through scale development. The Elementary School Journal, *106*, 85–105.

Figure 1. Theoretical model for the parent involvement process.

The revised model focused on a parent's motivation for school involvement, their behaviors, and the student's active role in their own learning. Educators who are aware of parents' motivations and behaviors related to school involvement and actively seek to encourage parents to participate in their child's schooling may foster stronger FSP (Walker, Shenker, & Hoover-Dempsey, 2010; See Figure 1).

Christenson and Sheridan (2001) developed a theoretical framework that focused on five A's: *Approach, Attitude, Atmosphere, Actions,* and *Achievement* to explain the conditions involved in FSP. The *Approach* category refers to how the school on a systems-level *approaches* working with families. Educators should support a school-wide, student-centered approach to FSP that cultivates shared responsibilities and decision-making, promotes an open two-way communication between home and school, and provides parents with educational resources to help parents encourage learning at home. The *Attitude* condition refers to the underlying beliefs, values, and emotions, educators and families have regarding the roles and responsibilities of schools and families in promoting student learning and social-emotional development. A strengths-based attitude that acknowledges that both educators and families are essential and valued members of the school community is crucial. In the *Atmosphere* domain, consideration is given to the school's physical and affective environment and its impact on FSP. Schools that provide information to parents in their native language, have family-nights, provide parent outreach services, and outwardly recognize the various cultures of the student body through bulletin boards, pictures, and/or activities are some examples of how schools can create a positive physical atmosphere. Schools that have positive affective climates support families by creating an environment that recognizes, respects, and values all families. In addition, schools that create a climate that is accepting of differences, are open to ideas and input from families, and foster feelings of trust between educators and families are promoting a positive affective environment in their schools. The *Actions* condition involves the strategies to promote family engagement and develop

meaningful connections between home and school. Lastly, the *Achievement* condition is met when the *Approach, Attitude, Atmosphere,* and *Actions* conditions are in place, supported, and emphasized. Christenson and Sheridan (2001) concluded that in order to *achieve* a high degree of collaboration between home and school there needed to be a student-focused philosophy where educators, support staff, and families work together to enhance student learning, document educational progress, and improve academic, social, emotional, and behavioral competence. The *Achievement* condition is met when there is a shared-responsibility for educating and supporting students between school and home. Additionally, *Achievement* occurs when a preventive, solution-oriented focus is emphasized whereby families and schools create the optimal conditions to promote student learning, social-emotional development, and school engagement (Christenson & Sheridan, 2001; Sheridan, Clarke, & Christenson, 2014).

Overall, these three conceptual frameworks have been instrumental in understanding the various aspects involved in family-school partnerships and help to better conceptualize FSP. Epstein's model (1995, 2011) emphasized the shared responsibilities that schools, families, and communities have on student achievement. Epstein's model stressed the importance of building relationships between home, school, and the community. Whereas, Hoover-Dempsey and Sandler's (1995, 2005) model posited that parents are the most influential people in a child's academic and social development, and their model examined the roles, perspectives, and behaviors that parents have regarding their child's learning. Lastly, Christenson and Sheridan's (2001) model highlighted how school climate can either enhance or hinder the development of

FSP. The differences in each model demonstrate the complexities of FSP and how cognitive and behavioral factors affect the development of strong FSP. Although each model delved into different aspects of FSP and prioritized various actions, the end goal for each was to improve student outcomes. Thus, creating an instrument that examines preservice educators' perceptions, attitudes, and beliefs related to FSP is crucial in gaining insight into their mindset about FSP and will enable faculty to better assist students in gaining the skills necessary to conduct FSP practices effectively.

Current Assessments Used to Measure FSP Competencies in Educators

A comprehensive search was next conducted to determine if and how these theoretical frameworks were used in the development of assessment measures during the last three decades. An initial literature search was conducted to find all studies published between 1988 to 2018 that included English language books and articles from peer-reviewed journals. The following search terms were employed: instruments on FSP, measures developed to assess family-school partnerships, educators' views on family involvement, preservice educators' perceptions, attitudes, and beliefs about FSP, preservice educators' self-efficacy, and teacher candidates and family involvement. Databases searched included: Educational Resources Information Center (ERIC) database, Academic Search Complete, and EBSCOHost. In addition, the university's library search tool, Compass, was utilized to winnow through the university library's collection. A snowball method of using references found within the articles to find additional articles also was employed to find additional studies of measures that examined educators' perceptions, attitudes, and beliefs about FSP.

The identified list of 82 studies was further reduced by eliminating qualitative studies that did not include a formal measure. This reduced the number of studies to 21. These remaining studies were examined and kept for further review if the measure employed in the experimental study: 1) was a self-report instrument designed for preservice or in-service training of teachers, administrators, or special education or mental health support staff; 2) was designed to examine FSP perceptions, attitudes, self-efficacy beliefs, or culturally and linguistically diverse (CLD) competencies for work with diverse families; 3) had an explanation of the theoretical dimensions and item categories; and 4) was focused on working with families or with CLD populations. Studies were excluded if the measure was 1) not a self-report instrument, 2) if it had weak psychometric properties, or 3) if the authors did not include the full set of items contained within the scale.

Fifteen studies met all of the above criteria. However, an additional three instruments were included despite not including information about the psychometric properties of the scales. These three instruments found in three additional studies (Katz & Bauch, 1999; Morris & Taylor, 1998; Pelco et al., 2000) were included for specific reasons. The studies by Morris and Taylor (1998) and Katz and Bauch (1999) were each included because the FSP measures employed in the studies were pre/post assessments of preservice educators' perceptions and beliefs about FSP after taking a course on FSP practices. Pelco et al.'s (2000) scale was included because it was a self-report instrument on school psychologists' views towards FSP, which was the first of its kind developed to specifically address school psychologists' perceptions and practices related to FSP and

FSP communication and intervention practices. For the above-mentioned reasons, the FSP measures developed by Morris and Taylor (1998), Katz and Bauch (1999), and Pelco et al. (2000) were included in the review despite not having reported clear statistical analyses.

The final 18 studies with identified FSP measures are reviewed next. Each scale will be described in terms of 1) its overall expressed purpose and theoretical framework from which it was developed, 2) the subscales or domains that were included, 3) the response format, 4) the total number of items, 5) the reported psychometric properties, and 6) the strengths and limitations of the instrument, including if any of the items dealt with CLD content or issues for working with CLD populations. The list of measures, brief descriptions of each of these issues and example items from the included scales can be found in Appendix A. A comparison chart of each measure can be found in Appendix B contrasting participants who completed the assessment, whether the measure was administered pre/post, if the measure had satisfactory psychometric properties, and if CLD questions were included. The measures reviewed below are in chronological order because doing so shows the evolution of FSP measures and the changes and additions that have been made since the development of the first FSP scale. Following this review, is a summary that captures critical differences and omissions across the measures. This review forms the basis of the rationale for the need to develop a new more comprehensive measure, which was the goal of this study.

Gibson and Dembo (1984) created *The Teacher Efficacy* Scale, one of the first measures of teachers perceived self-efficacy in the classroom and their attitudes and

perceptions on the role of a family has on student learning based on Bandura's (1977) construct of self-efficacy and Rotter's (1966) locus of control theory. The 30-item measure was distributed to 208 elementary school teachers and examined the teachers' sense of teaching efficacy (e.g., the amount a student can learn is directly related to family background; the time students spend in my classroom have compared to the influence of their home environment), and personal teacher efficacy (e.g., when a student is struggling with an assignment, I am usually able to adjust it to his/her level; when I really try, I can teach even the most difficult students). The strength of the measure was it had satisfactory reliability with a Cronbach's α of .75 for the general *Teaching Efficacy* factor and .78 for the *Personal Teacher Efficacy* factor, and the combined Cronbach's α was .79, and it used a two-factor structure to examine teacher perceptions of efficacy and their perceptions of the impact they and students' families had on student learning. In addition, the scale was at the forefront of measures of teacher efficacy and was used by other researchers who have developed similar measures of different dimensions of teacher self-efficacy. The weakness of the Gibson and Dembo (1984) measure was that it only examined self-efficacy beliefs that teachers and families had in influencing student outcomes and did not consider other FSP dimensions that may contribute to student achievement. Another weakness is that it failed to consider CLD factors related to FSP. Also, it was also only administered to teachers and not preservice educators. Lastly, the wording of the instrument was problematic and led Deemer and Minke (1999) to conclude that the scale was only measuring a unidimensional construct of teacher efficacy.

Epstein and Salinas (1993) developed *School and Family Partnerships: Questionnaires for Teachers and Parents in the Elementary and Middle Grades* that assessed teachers' attitude about parent teacher relationships. The teacher measure was administered to 243 teachers in a low-income neighborhood in Baltimore, Maryland. The instrument included 125 questions separated into 12 sections. Questions related to professional judgment were rating scale (1=Strongly Disagree to 4=Strongly Agree) and included questions such as, "Every family has some strengths that could be tapped to increase student success in school," and "All parents could learn ways to assist their children on schoolwork at home, if shown how." Teachers also answered items (1=Not Important to 4=Very Important) about their beliefs about the importance of them implementing certain FSP activities (e.g., Inform parents when their children do something well or improve; Involve some parents as volunteers in my classroom) and parents' responsibilities related to FSP (e.g., Check daily that homework is done; Send children to school ready to learn). In addition, there were demographic information questions, teaching experience questions, and questions that asked what methods of communication they used to engage parents (e.g., letter, telephone, meeting at school) and what percent of the time they chose a particular method to communicate with parents. According to the authors, the measure had Cronbach's α values ranging from .69 to .91 (Epstein, Salinas, & Horsey, 1994) and 16 factors were considered: *Family Strengths* (Cronbach's α .69), *Attitudes about Family and Community Involvement* (Cronbach's α .72), *Type 1 Activities- Parenting* (Cronbach's α .85), *Type 2 Activities- Communicating* (Cronbach's α .78), *Type 3 Activities- Volunteering* (Cronbach's α: .79),

Type 4 Activities- Learning at Home (Cronbach's α: .86), S*chool Programs to Involve Families* (.91), *Importance of All Practices to Involve Families* (Cronbach's α: .89), *Importance of Type 4 Activities- Learning at Home* (Cronbach's α: .77), *Importance of Type 6 Activities- Collaborating with Community* (Cronbach's α: .82), *Parent Responsibilities* (Cronbach's α: .84), *Support for Partnerships* (Cronbach's α: .91), *Ways Teachers Contact Families* (Cronbach's α: .69), *Importance of Type 2 Activities- Communicating* (Cronbach's α: .75), *Teacher Estimates of Parent Involvement* (Cronbach's α: .89), and *Teacher Estimates of Parents' Type 4 Activities- Learning at Home* (Cronbach's α: .90). The strength of the scale was its theoretical framework and that it attempted to gather information about the level of parent involvement at a school as well as teachers' attitudes towards FSP. Also, the majority of the measure domains had satisfactory psychometric properties. A weakness of the scale was that it was only distributed to teachers who worked in low-income schools, which may make the reliability and validity information not generalizable to the overall population. Furthermore, the instrument focused on attitudes, activities they participated in, and school climate, but did not examine teachers' self-efficacy beliefs in relation to FSP, nor did the survey include any questions about working with CLD families.

Vickers and Minke (1995) created the *Parent-Teacher Relationship Scale-II* to assess interpersonal connections and the quality of communication between teachers and parents. The measure was based on Brofenbrenner's (1986) ecological systems theory and was developed to increase understanding of family-school mesosystems in regards to parent-teacher relationships. The 35-item self-rating scale was based on a 5-point scale

(1= Almost Never to 5= Almost Always) and was distributed to 213 teachers and 212 parents in Delaware. Two factors were examined: *Joining* (Cronbach's α: .95) and *Communication-to-Other* (Cronbach's α: .86). The 19-item *Joining* factor included questions about parent-teacher affiliation, support, dependability, availability, shared expectations, and beliefs; whereas, the *Communication-to-Other* factor included items that asked about the need to express oneself to the other (e.g., "This parent/teacher tells me when s/he is pleased."). The strengths of the measure were that it was a self-report instrument that assessed teachers' perceptions of the interpersonal aspects of the parent-teacher relationship; it had a strong theoretical background; and it had a high degree of reliability. The weaknesses of the instrument were that it was only distributed to in-service teachers; participants stated that some of the items had confusing wording; it had no cross-validation support; and it only examined two FSP factors and neglected to consider other factors, in particular self-efficacy beliefs and perceptions of roles, responsibilities, and barriers to that affect the FSP relationship between teachers and parents. Furthermore, the measure did not include any items about working with CLD families.

Marshall (1996) created the *Multicultural Teaching Concerns Survey* (MTCS), a self-report instrument developed specifically to measure preservice and in-service teachers' concerns related to working the CLD students and their families. The 64-item 5-point self-rating scale (1= An Extremely Unimportant Concern at This Time to 5= An Extremely Important Concern for Me at This Time) was based on Locke's (1988) multicultural awareness model and in Fuller and Brown's (1975) three-tier model on

concerns and was administered to 146 preservice education majors. Four factors were examined: *Cross-Cultural Competence*, *Strategies and Techniques*, *School Bureaucracy*, and *Familial/Group Knowledge*. Examples of items included in the instrument were: "Do diverse students have appropriate role models at home?" and "Do parents of diverse students possess high expectations for their children?" The strengths of the measure were that it explored multicultural concerns teachers may have when working with parents, which had been neglected to be considered in other instruments. Also, a factor analysis was conducted to determine prominent factors that teachers were concerned with when working with CLD families. The weaknesses of the measure were no validity or reliability statistics were provided and it had a small sample size.

Morris and Taylor (1998) created the *Teacher Efficacy Scale*, a pre/post self-report instrument to assess undergraduate preservice teachers' perceptions of their ability to work with families. The 11-item scale (1= Low to 5= High) was based on based on de Acosta's (1996) themes of FSP that should be woven into teacher coursework: family and school, community and schools, and the context of teaching. The measure was administered to 105 early education preservice teachers and asked about their knowledge and comfort level in: conducting parent-teacher conferences (e.g., how knowledgeable are you about the elements needed to conduct an effective parent-teachers conference?), finding and utilizing resources needed to develop parent programs (e.g., how comfortable are you with accessing the necessary resources to develop a one-year parent education/involvement plan for a K-6 school?), planning and implementing parent workshops (e.g., how comfortable are you in your abilities to plan and implement

effective and relevant workshops for parents?), identifying and implementing effective FSP strategies (e.g., how knowledgeable are you about success FSP strategies for involving families in school activities?), and developing positive relationships with families (e.g., how knowledgeable are you about the advantages and disadvantages of family involvement in school activities?). The measure was used as a pre/post measure of preservice educators' beliefs about their ability to engage in FSP activities. A strength of the instrument was that it was used as a pre/post measure of preservice teachers who took a course specifically focused on FSP. A weakness of the study was that Morris and Taylor (1998) did not include any validity or reliability statistics related to the measure, and the measure was short and only examined preservice teachers' perceptions and knowledge related to certain FSP activities, and did not include CLD-specific questions.

Ponterotto, Baluch, Greig, and Rivera (1998) created the *Teacher Multicultural Attitude Survey (TMAS)* to assess teachers' general multicultural awareness, appreciation, and tolerance. The 20-item 5-point self-report measure (1= Strongly Disagree to 5= Strongly Agree) was based on Ponterotto and Pedersen's (1993) construct of multicultural awareness, which was defined as a teachers' awareness of, comfort with, and sensitivity to cultural pluralism in school settings. The measure examined one factor: *Multicultural Awareness and Sensitivity* (Cronbach's α: .86) and was administered to 227 graduate students in teacher education programs in New York City. Items such as, "Teachers have the responsibility to be aware of their students' cultural backgrounds," and "I frequently invite extended family members (e.g., cousins, grandparents, godparents) to attend parent-teacher conferences," were included. The strengths of the

survey were that it had good reliability (Cronbach's α: .86) and criterion-related validity. The weakness was that it was not focused on teachers' perceptions, attitudes, or beliefs about FSP and working with CLD families. Also, the sample size was small and homogenous, which may limit generalizability.

Katz and Bauch (1999) developed the *Peabody Family Involvement Initiative* (PFII) measure that assessed the effects a course on FSP had on undergraduate preservice teachers' understanding of and ability to conduct FSP activities. The pre/post self-report measure was based on Epstein's (1995) six types of family involvement: *Parenting*, *Communicating*, *Volunteering*, *Learning at Home*, *Decision-making*, and *Collaborating with the Community.* The measure was administered to 133 preservice teachers and 69 practicing teachers and in it the instrument listed a number of FSP activities (e.g., written communication, telephone calls, home visits, parent/teacher conferences). The participants were asked two questions related to each of the FSP activities: (1) their attitude and perceptions of the feasibility of implementing the FSP practice (used a 4-point response scale, 1= Strongly Disagree to 4= Strongly Agree); and (2) their preparation towards implementing the FSP activity (used a 3-point scale, 1= No Preparation to 3= Very Prepared). A strength of the measure was that it was used by the researchers as a pre/post measure of FSP perceptions and attitudes of students who took a course related to FSP. A limitation of the study was that no reliability or validity information was provided regarding the measure. In addition, the instrument measured undergraduate students (some of whom did not intend to become teachers), had a small overall sample size, and did not include CLD-specific items.

Pelco, Ries, Jacobson, and Melka (2000) developed the *Family-School Partnership Survey for School Psychologists*, which was adapted from Epstein and Salinas's (1993) *School and Family Partnerships: Survey for Teachers in Elementary and Middle Grades*. The measure was created to assess the perspectives and practices of school psychologists regarding FSP practices. The self-report instrument was based on a 4-point and 5-point scale (1= Strongly Disagree to 4= Strongly Agree; 1= Not Important to 5= Most Important). The measure was administered to 417 practicing school psychologists and was divided into four sections: *Demographic Information*, *General Perspectives about FSP*, *Ratings of the Importance of Partnership Activities to the School Psychologist Respondent*, and *Reported Participation in FSP Activities*. *Demographic Information* asked for information about the respondent's level of education, years of experience, gender, and where they spent the most time working at an elementary, middle, or high school. The *General Perspectives about FSP* contained five statements asking about the participant's general opinions about FSP and included questions such as, "Parent involvement can help increase student success in school," and "School psychologists do not have time to help educators involve families." The *Ratings of the Importance of Partnership Activities to the School Psychologist Respondent* contained 12-items about specific FSP activities and the respondent was asked to rate the importance of them. For example, respondents were asked how important, "Consulting with families about specific ways that they can support their child's learning or behavior at school," and "Facilitating conferences to create more cooperation between parents and educators." The *Reported Participation in FSP Activities* asked participants if they had

engaged in the past 12-months in the specific FSP activities listed in the previous section. The strengths of the instrument were that it was the first measure developed that sought to gain insight into school psychologists' views and practices related to FSP and had a relatively large sample size. The weaknesses of the study were that Pelco et al. (2000) did not include reliability or validity statistics, and the *Reported Participation in FSP Activities* domain did not ask respondents about quality or frequency in participating in an FSP activity only whether or not they had done it in the last year. In addition, the measure's definition of FSP was narrow and focused only on the practices involved in promoting effective communication between schools and families and no CLD-specific items were included.

Tschannen-Moran and Woolfolk Hoy (2001) created the *Ohio State Teacher Efficacy Scale*, a self-report instrument that assessed preservice and in-service teachers' perceptions of personal competence and their analysis of resources/constraints involved in teaching contexts/tasks. The measure was based on Bandura's self-efficacy theory and Tschannen-Moran, Woolfolk Hoy, and Hoy's (1998) model of teacher efficacy. The 24-item response scale (1=Not at All to 9=A Great Deal) was administered to 410 preservice and practicing teachers and measured three efficacy factors: *Efficacy for Instructional Strategies* (e.g., How well can you respond to difficult questions from your students?), *Efficacy for Classroom Management* (e.g., How much can you do to control disruptive behavior?), and *Efficacy for Student Engagement* (e.g., How much can you assist families in helping their children do well in school?). The instrument was developed to measure teachers' beliefs about their competence in a wide array of tasks and roles related to their

profession, including FSP practices. A strength of the measure was that it had a high degree of reliability with a Cronbach's α of .94 for the entire survey, .91 for *Efficacy for Instructional Strategies*, .90 for *Efficacy for Classroom Management*, and .87 for *Efficacy for Student Engagement* and good construct validity. A weakness of the measure was that it was primarily focused only on teachers' sense of efficacy in classroom tasks and activities and was not specifically focused on FSP practices. The measure did not assess teachers' attitudes about FSP and their perceptions of what roles they have in creating strong FSP and did not include CLD-specific items.

Hoover-Dempsey, Walker, Jones, and Reed (2002) developed a pre/post self-report 6-point scale instrument (1= Disagree Very Strongly to 6=Agree Very Strongly) that measured the effects an FSP training program had on teachers' understanding of FSP and their sense of efficacy in working with families. The measure was based on Hoover-Dempsey and Sandler's (1995, 1997) model on the parent involvement process. Dempsey et al. (2002) administered the measure to 30 teachers who participated in a six-session (3 two-hour sessions over 2 weeks) FSP in-service program, and 22 teachers who did not. The researchers used questions from *The Teacher Efficacy Questionnaire* (Hoover-Dempsey, Bassler, & Brissie, 1987), a 12-item scale that asked questions such as "I feel that I am making a significant educational difference in the lives of my students" (p. 851). Questions about teacher beliefs surrounding parental involvement were derived from Epstein, Salinas, and Horsey (1994) and included items like, "Parent involvement is good for schools" (p. 851). In the domain of *Teacher beliefs about the importance of specific involvement practices,* 16 items were listed (e.g., giving parents

ideas to help them become advocates for their children). Also, included in the measure were questions asking for the teachers' perceptions of the importance of teacher invitations to engage parents and teachers' reports of parental involvement. A strength of the measure was that it was used to assess teachers' FSP competencies and beliefs pre/post participating in a program that focused on FSP. The weaknesses in the measure included having a small sample size, respondents only included in-service teachers, and it did not contain any CLD-specific items.

Graue and Brown (2003) created the *Family Involvement Teacher Efficacy Scale*, a 90-item 4-point scale (0=Never to 3=Always), based on Epstein's model of FSP. The measure was administered to 130 undergraduate teacher education students, who had recently entered a teacher training program, and was used to assess their beliefs, memories, and intended practices related to FSP. The measure examined several areas: *Demographics* (e.g., Were you raised in an urban, suburban, rural community?), *Memories* (e.g., Did your parents show respect for school, supervise homework, or attend school events*?), Parent Knowledge* (e.g., Parents have unique expertise rate the knowledge parents have in curriculum, disposition, developmental history, or way child learns best), *Teacher Knowledge (*e.g., Teachers have unique expertise rate the knowledge teachers have in learning, goals, social relationships, academic strengths, and best strategies to support learning), *Expectations* (e.g., Rate expectations for father, gay/lesbian parents, working parents, or parents with disabilities), and *Involvement* (e.g., Do you anticipate that you will call home, engage parents in homework, ask parents to describe student, et cetera when you are in the field?). A strength of the measure was that

it had good reliability within the domains and addressed factors (e.g., memories and beliefs related to FSP) that were not seen in previous FSP scales. The Cronbach's α values were .87 for *Memories*, .81 for *Parent Knowledge*, .82 for *Teacher Knowledge*, .92 for *Expectations*, and .78 for *Involvement*. In addition, the measure included CLD-specific items. The weaknesses of the instrument were that it lacked questions on self-efficacy related to FSP practices and it was only administered to undergraduate preservice teachers prior to teacher coursework, and it was not used as a post measure to assess the changes in student understanding of FSP.

Bryan and Holcomb-McCoy (2004) created *The School Counselor Involvement in Partnership Survey (SCIPS)*, a 111-item scale (1=Never to 5=Always; 1=Strongly Disagree to 5=Strongly Agree) that assessed school counselors' perceptions about FSP activities and their involvement and roles in FSP. The measure was developed based on Epstein's typologies of parent involvement, Swap's (1993) four models of partnerships, and Nettles (1991) four types of involvement. The measure was administered to 72 practicing school counselors. Bryan and Holcomb-McCoy (2004) examined eight FSP Factors: *Involvement in School-Family-Community Partnerships* (Cronbach's α: .90), *School Norms* (Cronbach's α: .95), *Role Perceptions* (Cronbach's α: .90), *Confidence in Ability to Build Partnerships* (Cronbach's α: .84*), Commitment to Advocacy* (Cronbach's α: .75), *Perceived Barriers* (Cronbach's α: .82), *Attitudes about Partnerships* (Cronbach's α: .93), and *Attitudes about Families and Communities* (Cronbach's α: .74). Included in the measure were questions about school counselors' perceptions about involvement in FSP (e.g., how involved are you in providing parent education

workshops; conducting home visits to families), their perceptions about the school environment and partnerships (e.g., families feel welcome in our school, parents visit our classrooms only when invited), and their perceptions about self and families (e.g., I am capable of implementing FSP practices; most parents are interested in their children's education; school counselor involvement in partnerships with families is important). The strengths of the measure were that it had a high degree of internal consistency (Cronbach's α) of .95 for the domains and total scale and the survey was administered to school counselors, a demographic that had not been previously surveyed on FSP practices and perceptions. A weakness of the survey was that it was only administered to American School Counselor Association (ASCA) members in one state, had a relatively small sample size, a low response rate of 24%, and did not include CLD-specific items.

Garcia (2004) developed the *Family Involvement Teacher Efficacy Scale*, a 35-item scale (1=Strongly Agree to 6= Strongly Disagree) self-report instrument to assess teachers' perceived levels of efficacy related to specific FSP practices. The measure was based on Epstein's typologies of parent involvement and was administered to 110 teachers who were taking graduate teaching courses. Questions were developed using Epstein's typologies: *Parenting*, *Communicating*, *Volunteering*, *Learning at Home*, *Decision-making*, and *Collaborating with the Community.* Measure questions included:

> Parents' attitudes towards school are mostly determined by their background and demographic characteristics; I am capable of working with language minority parents and teach them strategies to help their children at home; teachers play a crucial role in providing parents with the needed skills to support their children in school. (Garcia, 2004, p. 301)

A strength of the measure was that it had good reliability. The Cronbach's α for the scale was .85, thus its internal consistency was satisfactory. In addition, the measure focused on perceptions of roles and beliefs about their efficacy in working with families. A weakness of the measure was that Garcia (2004) used a convenience sample of teachers, the majority of whom were near the completion of their master's degree program. The participants were enrolled in graduate courses (not FSP-specific courses) and they may have perceptions and beliefs that differ from practicing teachers who have not taken graduate-level courses. In addition, only a few items sought to capture the teachers' attitudes towards FSP and their perception of roles and barriers and CLD-specific items were not included.

Wong and Hughes (2006) created the *Teacher Reported Involvement Measure* that assessed teachers' perceptions about FSP and their attitudes towards working with CLD families. The measure was based on Epstein's typologies of parent involvement and was developed to investigate ethnic group differences and SES on teacher-reported parent involvement in FSP activities. The 28-item self-rating scale was based on a 5-point scale (0= No Involvement to 4= High Involvement; 1= Almost Never to 5= Almost Always) and was distributed to 179 teachers. Three factors were examined: *Alliance* (e.g., "Teacher can talk to and feel heard by parent."; Cronbach's α: .90), *General Parent Involvement* (e.g., "Teacher has called parent."; Cronbach's α: .85), and *Teacher Initiation of Involvement* (e.g., "How often teacher tells parent when worried."; Cronbach's α: .71). The strengths of the measure were that it had a high degree of reliability and it examined racial and ethnic differences related FSP. The weaknesses of

the measure were that it only examined three factors related to FSP, respondents only included first-grade teachers from one of three ethnically diverse elementary schools, and the measure was taken in conjunction to a parent survey and not used as a standalone instrument.

Denessen, Bakker, Kloppenberg, and Kerkhof (2009) created a self-report measure that assessed the effect that Dutch preservice teachers' biographies and their teacher training had on their ability to conduct FSP activities. The measure was based on Beijaard, Verloop, and Vermunt's (2000) model of teachers' professional identity formation. The measure used a 4-point rating scale (1=Strongly Disagree to 4= Strongly Agree) and was administered to 545 preservice teachers. In the *Competences* domain (Cronbach's α: .90) preservice teachers were asked questions like, "I know how to ask parents for advice on how to get along with their child." The participants were asked to answer twelve questions related to their *Attitudes* (Cronbach's α: .72) about FSP. For example, participants were asked how important it was for them to utilize the parents' advice to approach and work with the child in the classroom. In the *Biography* section (Cronbach's α: .83), preservice teachers were asked to respond to questions about the level of involvement that their parents showed during their schooling (e.g., My parents were regularly in contact with my teachers; My parents asked me almost daily how my day at school was). A strength of the measure was that results indicated it had satisfactory face and content validity, as well as satisfactory internal reliability. In addition, the measure asked specific questions related to background and FSP attitudes, which is an anomaly among the current FSP scales. A weakness of the instrument was

that it was administered to Dutch preservice teachers and some of the items may not be appropriate or applicable for U.S. educator programs, and only one CLD-specific item was included.

Manz, Mautone, and Martin (2009) developed the *Perceptions of Capacity for Family Collaboration Rating Scale* (PCFC), a 17-item, 4-point scale (1= Strongly Disagree to 4= Strongly Agree) that was administered to 544 NASP members and measured their perceptions of professional efficacy and school climate related to FSP. The items were derived from Bandura's work (1997) on self-efficacy and the authors' research on efficacy and school climate. The measure examined two dimensions of school psychologists' perceptions of FSP: *Professional Efficacy* (Cronbach's α: .76) and *School Climate* (Cronbach's α: .75). Items within the *Professional Efficacy* domain included: "I am successful in formulating and maintaining relationships with families" and "I feel adequately trained to work with families." Questions in the *School Climate* domain included: "Families are comfortable approaching and working with school personnel" and "School administrators value family involvement" (Manz et al., 2009, p. 55). A strength of the measure was that it had satisfactory internal consistency and had a relatively large sample size. The weaknesses of the measure were that only two areas pertaining to FSP were examined and it was only administered to school psychologists who were NASP members, and no CLD-specific items were included.

Spanierman et al. (2010) created the *Multicultural Teaching Competency Scale* (MTCS), a self-report instrument to comprehensively assess preservice and in-service teachers' multicultural teaching competence. The 56-item 6-point self-rating scale (1=

Strongly Disagree to 6= Strongly Agree) was based on the authors definition of multicultural teaching competency:

> an iterative process in which teachers continuously (a) explore their attitudes and beliefs about multicultural issues, (b) increase their understanding of specific populations, and (c) examine the impact this awareness and knowledge has on what and how they teach as well as how they interact with students and their families. (Spanierman et al., 2010, p. 44)

The instrument was administered to 506 preservice and in-service teachers and two factors were examined: *Multicultural Teaching Skill* (Cronbach's α: .83) and *Multicultural Teaching Knowledge* (Cronbach's α: .80). Items included: "I establish strong, supportive relationships with racial and ethnic minority parents," and "I am knowledgeable of how historical experiences of various racial and ethnic minority groups may affect students' learning." The strength of the measure was that it had a high degree of reliability with a Cronbach's α of .88 for the total scale and it had a relatively large sample size. The weakness was that it only had a few questions related to FSP and working with CLD families, because FSP was not the primary focus of the measure. Also, preservice and in-service respondents' data was aggregated, which prevented an examination of differences amongst groups.

Amatea, Cholewa, and Mixon (2013) created the *Teacher Family Role Expectations Scale* (TFRES) to be used as a pre/post course measure that assessed preservice teachers' perceptions of the roles, teachers, families, and caregivers have in a student's education. The measure was based on Ponterotto and Pedersen's (1993) construct of multicultural awareness, which was defined as a teachers' awareness of, comfort with, and sensitivity to cultural pluralism in school settings. The 29-item self-

rating scale used a 4-point scale (1= Strongly Disagree to 4= Strongly Agree) and was distributed to 138 preservice elementary education majors. One factor was examined: *Attitude* (Cronbach's α: .84) and in it, items such as, "It would take too much effort to involve non–English-speaking parents/caregivers in their child's education," were included. The strengths of the measure were that it examined preservice teachers' attitudes towards working with CLD families, was used as a pre/post measure, and had a high degree of reliability. Additionally, it was designed to specifically assess teachers' perceptions of engaging in FSP with CLD families. CLD. The weaknesses were that it was only administered to elementary education majors from one university, and respondents may have been susceptible to social evaluative concerns.

Amatea et al. (2013) created the *Teacher Efficacy in Engaging Families Scale* (TEEFS), self-report instrument that was used as a pre/post course measure that assessed preservice teachers' perceived levels of efficacy in conducting FSP activities. The 22-item 4-point self-rating scale (1= Not Confident to 4= Highly Confident) was based on Bandura's (1977) self-efficacy theory. The measure was distributed to 138 preservice elementary education majors. One factor was examined: *Self-efficacy* (Cronbach's α: .93) and in it, items such as, "Use the unique funds of knowledge of my students' families and community members in developing lesson plans," were included. The strengths of the measures were that it examined preservice teachers' perceptions of self-efficacy, was used as a pre/post measure, and had a high degree of reliability. In addition, the instrument was designed to examine teachers' self-efficacy related to FSP and working with families, including CLD families. The weaknesses were that it was

only administered to elementary education majors from one university, and respondents may have been susceptible to social evaluative concerns. In addition, preservice teachers were asked to estimate their capabilities in implementing certain FSP practices, whereas most FSP scales asked respondents about their actual capabilities, which may have promoted response bias.

Summary of the Limitations of Current Measures Designed to Assess FSP Competencies

The 18 measures reviewed each attempted to capture educators' views and understanding of FSP and the various factors that affect the FSP relationship. A summary of limitations across all of the reviewed measures is provided next. The summary will be organized into issues concerning: the limited scope of the measures, how they focused primarily on in-service teachers, how they neglected to consider recent legislation involving FSP and CLD populations due to the age of the instruments, and the lack of information regarding psychometric properties.

Scales were limited in scope. First, the majority of the instruments examined either perceptions, attitudes, and beliefs related not just to FSP, but to other aspects of teaching, classroom management, and school climate as well (e.g., "How well can you control disruptive behavior in your classroom?" and "How well does your school administrators support parent involvement?") (Amatea et al., 2013, 2013; Denessen et al., 2009; Gibson & Dembo, 1984; Katz & Bauch, 1999; Manz et al., 2009; Morris & Taylor, 1998; Pelco et al., 2000; Ponterotto et al., 1998; Spanierman et al., 2010; Tschannen-Moran & Woolfolk Hoy, 2001; Vickers & Minke, 1995; Wong & Hughes, 2006).

Additionally, the majority of the measures included items on perceptions, attitudes, and beliefs related to FSP, but did not include items from each area (see Appendix B). For instance, self-efficacy beliefs were the primary focus of some of the measures (Amatea et al., 2013; Garcia, 2004; Gibson & Dembo, 1984; Manz et al., 2009) and those instruments neglected to consider educator attitudes or perceptions of roles, responsibilities and barriers to FSP. For example, Manz et al. (2009) included items asking about how successful the respondents were in conducting FSP activities, but did not include items asking if they felt FSP was important in improving student outcomes and that including families was an essential part of their role. Thus, creating a comprehensive measure that examined preservice educators' perceptions of roles, responsibilities, and barriers to implementing FSP; attitudes about the importance of collaborating with families; and beliefs about their efficacy related to FSP to fill this gap, seemed warranted.

Scales were primarily focused on in-service teachers. Second, the measures primarily focused on practicing teachers (Epstein & Salinas, 1993; Garcia, 2004; Gibson & Dembo, 1984; Ponterotto et al., 1998; Spanierman et al., 2010; Vickers & Minke, 1995; Wong & Hughes, 2006) although some were aimed at preservice teachers (Amatea et al., 2013; Denessen et al., 2009; Graue & Brown, 2003; Hoover-Dempsey et al., 2002; Katz & Bauch, 1999; Tschannen-Moran & Woolfolk Hoy, 2001; Marshall, 1996; Morris & Taylor, 1998), school psychologists (Manz et al., 2009; Pelco et al., 2000), and school counselors (Bryan & Holcomb-McCoy, 2004). Since, the majority of the measures were created to exclusively examine teachers' perceptions, attitudes, and beliefs towards FSP,

this limited the usefulness and generalizability of the instruments because they were not distributed to all educators. In addition, the ESSA (2015) explicitly stated all educators need to learn the skills necessary and have a strong understanding of FSP in order to engage in meaningful FSP with families. Thus, all of the measures described above did not meet this mandate because none of them included respondents from multiple education professions. Furthermore, none of the measures examined preservice educators, defined earlier as those in education preparation programs, prior to graduate, certification, or licensure, which is a distinct demographic and different from educators working in the field. As such, creating an instrument that measured preservice educators' perceptions, attitudes, and beliefs about FSP and aligned with ESSA (2015) mandates, seemed to fill a void in the literature.

Instruments were Developed Prior to FSP Legislation and Shifting U.S. Demographics. Third, all of the measures identified were developed prior to the enactment of the ESSA (2015) and the U.S. Department of Health and Human Services and the U.S. Department of Education's Policy Statement on Family Engagement (2016), which emphasized accountability and the need to evaluate and measure FSP practices. In addition, because the measures were not recently developed they did not consider the changing demographics in the U.S. public school system. The demographics in the United States public school system has changed dramatically over the last 30 years from a student enrollment that was 71% white, 15% black, and 10% Latino in 1988, to an enrollment in 2012 that was 51% white, 16% black, and 24% Latino, thus there is a need to develop a measure that takes into consideration these demographic changes (Rivkin,

2016). Since, the majority of the measures were created over ten years ago and neglected to include items that considered CLD populations there was a need to include educator measures that explicitly examined CLD issues into this review, although FSP were not the primary focus (Marshall, 1996; Ponterotto et al., 1998; Spanierman et al., 2010). In order to address the shifting demographic in the U.S. public school system and consider preservice educators' perceptions, attitudes, and beliefs about working with CLD populations creating a measure that included CLD-specific questions seemed warranted.

An Absence in Reporting Psychometric Properties. Fourth, three of the measures did not have any information about psychometric properties (Katz & Bauch, 1999; Morris & Taylor, 1998; Pelco et al., 2000). In addition, only 4 of the 18 instruments were used as pre/post measures (Amatea et al., 2013; Hoover-Dempsey et al., 2002; Katz & Bauch, 1999; Morris & Taylor, 1998). Creating a measure with sound psychometric properties that could be used as a pre/post measure of preservice educators' perceptions, attitudes, and beliefs about FSP would address an unmet need that educator training program faculty have in understanding and increasing their graduates' competence to engage and successfully partner with families in the education of students.

Preservice Educators' Perceptions, Attitudes, and Beliefs Towards FSP

In the following sections, a more in-depth critique is presented that specifically evaluates the coverage of preservice educators' perceptions, attitudes, and beliefs. As previously stated, models on the process of educator change often emphasize how educators' perceptions, attitudes, and beliefs affect student learning (Avalos, 2011; Clarke & Hollingsworth, 2002; Guskey, 1986, 2002). As such, changing and bringing

awareness to educators about those factors can improve student outcomes (Epstein, 2013; Evans, 2013; Kendall, Straw, Jones, Springate, & Grayson, 2008). Thus, this critique will focus on how well prior studies captured preservice educators': a) perceptions of professional roles, responsibilities and barriers regarding FSP; b) attitudes about the importance of collaborating with families; c) self-efficacy beliefs about their ability to effectively engage in FSP practice and collaborate with culturally and linguistically diverse (CLD) families.

Perceptions of Professional FSP Roles, Responsibilities, and Barriers

Nine of the measures reviewed had specific questions regarding the professional roles educators have in the formation of FSP. However, the last instrument created to examine educators' perceptions was developed 8 years ago and was designed to assess teachers' perceptions, not all educators. This is problematic because teachers, school psychologists, school counselors, school administrators, school social workers, and others who work in schools all have professional responsibilities related to creating effective family-school-community partnerships, and those roles have been defined and updated since the surveys reviewed were created. Policy statements by the National PTA (2007), NASP (2012), and American School Counselor Association (ASCA) (2016) each described the roles teachers and SMH professionals have regarding FSP (see Appendices C, D, and E).

Although teachers, school counselors, and school psychologists may have slightly different roles related to FSP, collaboration, communication, promoting shared responsibility in the academic and social emotional development of students, and

advocating for families seem to be common denominators. Moreover, it is essential that preservice educators value their partnerships with families and understand that each family can contribute in their student's education (Amatea et al., 2013). By understanding what roles they have in creating FSP, preservice educators can develop the skills required to meet the needs of families and incorporate best practices related to FSP. As such, creating a measure that incorporates the professional roles outlined by the respective organizations can provide more meaningful data based on current policy statements. Educator training program faculty who understand the perceptions of their students can assist preservice educators in learning the essential professional roles they have in FSP and support them in developing the appropriate mindset that enables students to become committed to building strong FSP relationships when working in schools (Brown, Harris, Jacobson, & Trotti, 2014).

Another issue with the instruments previously identified was that few addressed preservice educators' perceptions of the barriers that may prevent them from forming FSP. This is problematic because if preservice educators are unaware of the potential barriers they will likely not have the skills to address them if the barriers arise when they are working in the field (de Bruïne et al., 2014; Gestwicki, 2015). If educator training faculty understand preservice educators' perceptions of barriers they can make students cognizant of the potential barriers and help them learn the skills and strategies to address these concerns. Researchers have documented the barriers to forming strong FSP and have described the potential barriers in-depth. Bull et al. (2008), deduced from the available research that: "parental experience of education; parental lack of skills;

practical issues such as work commitments; perceived teacher attitude; attitude of the child; parents not being interested; and the school itself" (p. 25) were potential barriers to creating successful FSP. Moles (1993) identified three barriers to creating meaningful FSP: (1) limited skills and knowledge of teachers and parents, (2) restricted opportunities for interaction, and (3) psychological and cultural barriers. Appleseed (2006) conducted a 2-year study interviewing educators, school administrators and community leaders in 18 school districts in six states, organized two dozen focus groups with parents, and reviewed the current literature on FSP. According to Appleseed (2006) despite federal legislation requiring FSP, some schools and districts struggle to implement FSP practices because of a preoccupation with the accountability components in NCLB; a lack of training on how to collaborate and engage parents; and an absence of meaningful benchmarks to evaluate the implementation of FSP practices in schools. Appleseed's (2006) report on family-school partnerships highlighted the obstacles in creating and implementing effective FSP policies, especially on a systems-level. Although laws require FSP, school districts struggle to incorporate FSP practices in their schools. Furthermore, low-socio-economic status (SES) families and families from culturally and linguistically diverse (CLD) backgrounds are most likely to suffer when FSP practices are not implemented in their children's schools (Moles, 1993).

Barriers involving teachers and educators can also prevent strong FSP from developing. Christenson (2004) and Gestwicki (2015) synthesized from extensive research on family-school partnerships structural, psychological, emotional, and attitudinal barriers to forming meaningful family-school partnerships. Appendix F

summarizes the barriers Christenson (2004) and Gestwicki (2015) discussed. Christenson (2004) and Gestwicki (2015) delineated many similar potential barriers to family-school partnerships. These barriers can hinder or prevent the development of family-school partnerships and are not mutually exclusive to just parents or educators. Both sides have an important role in FSP and educators and parents need to work together to overcome potential barriers. By understanding these challenges, preservice educators can learn strategies to combat these potential conflicts and form meaningful partnerships with the families they work with in the school setting.

Researchers have documented the challenges to creating strong family-school partnerships on a systems-level as well as on an individual level. Most of the measures reviewed failed to ask questions related to potential barriers to FSP. As such, developing items that examine preservice educators' perceptions of barriers would be wise because educator training faculty can then help their students become aware of the potential barriers. Subsequently, faculty can teach preservice educators strategies to counteract these barriers and potentially limit the negative effects of them on student achievement and social-emotional development.

Preservice Educators' Attitudes and Background Experiences Related to FSP

Many of the measures identified had questions related to educator attitudes towards FSP; however, only Graue and Brown (2003) and Denessen (2009) surveyed preservice teachers about their backgrounds and previous experiences with FSP. By failing to ask questions related to background experiences, the majority of the FSP instrument developers neglected to consider the effects background experiences have on

attitude formation. In order to better understand preservice educators' perceptions of professional roles and potential barriers, it is important to realize the impact that attitudes and background have on creating FSP (Graue & Brown, 2003; Hornby & Lafaele, 2011; Klieme & Vieluf, 2009). As such, it is essential for preservice educators and the faculty who teach them to be aware of the influences an individual's background has on shaping the attitudes of preservice educators.

The majority of preservice educators are white, single, in their early twenties, and from middle-class backgrounds (de Bruïne et al. 2014; Garmon, 2005). Recent demographic reports indicate that 82% of teachers are white and only 7.4% of public school teachers are black (Ford & Stassi, 2014). School psychology practitioners and graduate students also tend to be white and overwhelmingly female. Curtis, Grier, and Hunley (2004) surveyed school psychologists and found that 80% of school psychology graduate students were female, 70% of practicing school psychologists were female, only 10% of practicing school psychologists spoke a language other than English, and 91% of practicing school psychologists were white. These statistics did not change substantially in a more recent follow-up survey by Curtis, Castillo, and Gelley (2012). In fact, these researchers reported that 53% of school psychologists served a student population that was 25% or more CLD students and that 36% of respondents served a student population that was 50% or more CLD students. In a similar survey, Bryan and Griffin (2010) reported that over 80% of school counselors were white and female.

Even though U.S. society is becoming more diverse, and in 2014, CLD students became the majority population in U.S. public schools (Hussar & Bailey, 2014), the

background characteristics of the majority of preservice educators has continued to be overwhelmingly white, middle-class, and female. The cultural and racial differences between preservice educators and the families and students with whom they work point to the essential and critical need to prepare culturally responsive preservice educators who are self-aware and understand how attitudes towards FSP are shaped by their own backgrounds.

Preservice educators enter training programs with personal knowledge, attitudes, values, norms, and past experiences that influence their understanding of what roles educators, families, and schools should have in educating children (Beijaard, Meijer, & Verloop, 2004). In addition, Graue and Brown (2003) have noted that preservice teachers "come into their professional education with cultural scripts that shape interaction and meaning making […and that these beliefs] are quite stable and form the foundation for the emerging professional identity" (Graue & Brown, 2003, p. 721). Without specific training on how to work and collaborate with families, preservice teachers rely on their past experiences to guide their thinking of FSP and how to interact with families (Morris & Taylor, 1998). Since, the majority of preservice teachers are white and middle-class this can be problematic because many have limited exposure to individuals from CLD backgrounds. Because of this limited exposure or experience with CLD families, individuals may revert back to cultural and racial stereotypes they were exposed to when they were younger, leading to less positive views of CLD families (Lightfoot, 2003).

> Graue and Brown (2003) surveyed preservice teachers and concluded that
>
> prospective teachers come to their professional education with well-developed notions of the interactions that families should have with schools. Even before

> they experience coursework in a teacher education program or work in supervised field placements, they have lived a life that included family interactions with education and have developing conceptualization of how home and school might productively interact. (pp. 730-731)

Based on a survey that included items asking about their memories related to schooling, the authors concluded that preservice teachers viewed family involvement as more passive in regards to who should take the first step in initiating contact. In addition, preservice teachers' beliefs about the degree of family involvement were stereotypical. Preservice teachers thought that stay-at-home parents, college educated parents, homosexual parents, and parents of color would be actively involved in their child's schooling. They also found that respondents believed families living in poverty, grandparents raising their grandchildren, non-native English speakers, single parents, and parents under 25 years of age would be less involved (Graue & Brown, 2003). Moreover, preservice teachers held the opinion that families should support the school and educators by showing interest in their child's schooling, model a good attitude towards the school, and complement the work of teachers (Graue & Brown, 2003). Graue and Brown's (2003) research highlighted how background beliefs and experiences influence preservice teachers' notions of family involvement.

Baum and McMurray-Schwarz (2004) examined preservice teachers' backgrounds and beliefs surrounding FSP and found that preservice teachers recognized the value of family involvement, but tended to view parents volunteering in the classroom as the main way for parents to be involved in their child's schooling. Most of the respondents recalled instances when their parents were classroom volunteers, field trip chaperones, and when their parents attended school functions. Due to their background

experiences, preservice teachers viewed parents more like teachers' aids, rather than essential partners in promoting student learning and development (Baum & McMurray-Schwarz, 2004).

Preservice educators enter their training programs with well-established attitudes, which influence their ability to create strong FSP. Many of the measures identified had items related to personal attitudes, but most of the FSP instruments identified failed to include questions on background and background experiences. In addition, because the majority of educators are white and from middle-class backgrounds, there is a need to create a measure that asks about background and attitudes in order to gain insight into how preservice educators view families, especially CLD families. Doing so, can enable educator training faculty to challenge preservice educators to confront their personal attitudes and biases about FSP and families, which may enable preservice educators to be better able to collaborate effectively with families. Therefore, it is important to develop a measure that includes questions examining preservice educators' attitudes about FSP because their attitudes will directly affect their ability to work with families and particularly CLD families.

Preservice Educators' Self-efficacy Beliefs Related to FSP and with Working with CLD Families

In addition to understanding preservice educators' perceptions of roles and potential barriers and attitudes towards FSP, it is important for educator training program faculty to ascertain knowledge about preservice educators' beliefs about their ability to effectively partner with families in order to provide the appropriate amount of support

and guidance (Denessen, Bakker, Kloppenburg, and Kerkhof, 2009; Garcia, 2004). Nearly every measure identified had at least some questions on self-efficacy beliefs surrounding working with families. This is likely due to the fact that educators who report having a high degree of self-efficacy are better able to serve students and their families. If educators believe in themselves and their ability to collaborate with families, the likelihood they will effectively work with families increases (Coleman, 2012; Garcia, 2014; Gestwicki, 2015).

Preservice educators who believe in themselves and in their ability to collaborate with families in meaningful ways perceive themselves to have a high degree of self-efficacy. Self-efficacy is a teacher's perception of competence, not necessarily their actual level of competence (Gestwicki, 2015). Vartuli (2005) added that

> self-efficacy influences how teachers feel, think, behave, and motivate themselves. The strength of teachers' self-efficacy helps determine how much effort they will expend on an activity, how long they will persevere when confronted by obstacles, and how resilient they will be when faced with adversity. (p. 76)

Educators who feel competent in their skills are more likely to collaborate with families (Garcia, 2004). In addition, teachers who believe they are capable of implementing FSP strategies are more likely to reach out and foster engagement with families in order to promote a student's academic and social-emotional development (Coleman, 2012). Self-efficacy is an important factor to consider in how preservice educators perceive themselves and their capabilities.

Unfortunately, the majority of preservice educators do not believe they have the necessary skills to collaborate effectively with families (de Bruïne et al., 2014; Denessen

et al., 2009; Katz & Bauch, 1999; Patte, 2011; Sutterby et al., 2007). Denessen et al. (2009) surveyed preservice teachers and found that the majority of respondents had a low degree of self-efficacy related to communicating and engaging with families. Preservice teachers perceived themselves to lack the necessary communication skills to interact with parents, conduct two-way communication, involve parents in decision-making, and learn from parents about their child's strengths and weaknesses. de Bruïne et al. (2014) conducted an exploratory study asking 65 preservice teachers and 32 teacher training program faculty about their perceptions of FSP strategies taught in their programs. The authors found that all believed that FSP skills were important, but perceived that their preparation was inadequate and mostly focused on communication. Preservice teachers had positive attitudes towards parents, but many were scared and intimidated by parents.

Patte (2011) asked 200 preservice teachers about FSP and found that they had knowledge of the importance of FSP and the barriers to implementing FSP. However, preservice teachers believed they did not have the skills to effectively implement FSP strategies and their perceptions of FSP were vague and open-ended (e.g., keep open communication, hold parent conferences, etc.). Tichenor (1998) examined preservice teachers' attitudes towards working with parents and found that most preservice teachers had positive attitudes towards working with parents, but often lacked the confidence to collaborate with families. Sutterby et al. (2007) conducted a study involving preservice teachers working with Latino families in an afterschool tutoring program. The authors reported that preservice teachers' perceptions of competence increased when they were able to interact with families and they had more positive attitudes about working with

Latino families, and were less likely to view the families from a deficit perspective. Katz and Bauch (1999) asked preservice teachers who took a course related to FSP about their perceptions of their FSP skills and competencies, and most felt some degree of comfort related to working with parents, but perceived they needed more training related to: introductory activities, written communications, telephone calls, volunteers, meeting with parents who have children with special needs, home visits, recorded messages, decision-making meetings, and parent-teacher conferences.

Knoblauch and Woolfolk Hoy (2008) studied the differences in self-efficacy among preservice teachers placed in urban and suburban schools and found that preservice teachers in urban schools had lower self-efficacy beliefs related to teaching and working with CLD families and students than preservice teachers placed in suburban schools with majority white student populations. These researchers concluded that in order to enhance preservice teachers' self-efficacy beliefs about working with all students and families, preservice educators needed to be exposed to racially diverse schools and settings.

Siwatu, Chesnut, Alejandro, and Young (2016) examined preservice educators' self-efficacy towards culturally responsive teaching practices and found that preservice teachers understood the value of being competent in culturally responsive practices. However, they were not confident in their ability to successfully engage in culturally responsive practices. Preservice educators felt they lacked knowledge about how to interact with CLD students and their families and did not have enough experiences working in diverse settings.

Lastly, Garmon (2005) analyzed the research on CLD issues and preservice educators and concluded that in order to increase preservice educators' self-efficacy beliefs and improve their ability to conduct FSP activities with CLD families, preservice educators needed to be: (1) open to new ideas, information and arguments about diversity; (2) self-aware/self-reflective about their own perceptions, attitudes, and beliefs; (3) have a commitment to social justice; (4) be exposed to wide array of experiences with individuals from all backgrounds and cultures; and (5) have educational experiences in the field working with CLD students and families. Garmon (2005) postulated that attention to these preservice experiences would improve students' confidence in their ability to meaningfully engage with CLD families.

The majority of FSP measures reviewed included questions on self-efficacy because of the role it has in creation of meaningful FSP. In order for a measure to be comprehensive and examine extensively the perceptions, attitudes, and beliefs that preservice educators have regarding FSP including questions about self-efficacy beliefs is imperative. Furthermore, researchers have shown that preservice teachers' self-efficacy related to working with families is relatively low, especially in working with CLD families. As such, for educator training program faculty to cater to the needs of their students, understanding preservice educators' beliefs about their competence in working with families is essential.

Summary and Conclusions

This chapter contains a literature review that initially focused on how major education legislation has developed over time to emphasize the need for FSP. Next,

studies were reviewed that demonstrated the major outcomes and advantages of strong family school partnering. After this, major theoretical components and frameworks that have been proposed to explain FSP were presented. Finally, 18 prior studies were comprehensively reviewed that employed an educator FSP self-report measure to evaluate preservice educators' perceptions, attitudes, and beliefs regarding FSP. These measures were critiqued and key limitations were noted across these measures. The conclusion to be drawn from this literature review is that current assessments are not sufficient to capture the multi-dimensional nature of this issue; they fail to measure the perceptions, attitudes, and beliefs of preservice educators' from more than one profession; they were written prior to recent FSP legislation; and do not have questions that address working with culturally and linguistically diverse families and students. CLD issues and concerns are increasingly important to include due to the changing and shifting demographics of students entering our schools today.

Thus, this review clearly supports the need for a new scale that can capture such key issues. The creation of a reliable and valid self-report instrument that is designed to assess preservice educators' perceptions of roles, responsibilities, and barriers to implementing FSP, attitudes about the importance of collaborating with families, and beliefs about their efficacy related to FSP, including work with CLD populations will fill an important gap in the research literature. A new scale of this nature also is needed since most of the prior measures were developed before 2010, and as such, do not reflect current policies or the recognition that CLD students and families have become a majority reflected in our public schools. Thus, the purpose of this study was to develop

and test the reliability and validity of a new measure titled the Family-School Partnering and Collaboration Scale (FSPCS). The methods used to accomplish this goal are reviewed next.

Chapter 3: Research Method

This chapter includes a review of the phases used to develop and assess the final Family-School Partnering and Collaboration Scale (FSPCS).

Phase One: Planning, Literature Review

Phase One involved a thorough literature review of the topics and dimensions related to FSP, and the perceptions, attitudes, and beliefs teachers, other school professionals, and preservice educators have about FSP. This review was summarized and presented in the previous chapter.

Phase Two: Initial Item Development and Expert Review

After reviewing the literature, an initial pool of items was created largely based on the work of Garcia (2004). Adapting items from previously validated measures and developing additional items as needed has been researched and deemed an appropriate method for item creation (Fraser, 1986; Walker & Fraser, 2005). Garcia's (2004) measure was used as a guide in the initial item development because Garcia (2004) included items that asked teachers about their perceptions, attitudes, and beliefs regarding FSP. However, the first version of the FSPCS departed from Garcia's (2004) scale in that the items were rephrased and the measure omitted some of Garcia's items to make the scale more concise (See Appendix G for the items included in the first version of the FSPCS). The purpose of modifying, omitting, and changing Garcia's items was to enable the measure to be taken quickly during class time during a preservice educator course on

FSP, so that it could be used as a pre/post measure to gain insight into whether or not the course increased understanding and competencies in FSP.

The initial version of the FSPCS contained 24-items. The anchors of the scale were the following: Strongly Disagree (1) to Strongly Agree (6). A 6-point rating scale was used because it has been hypothesized that six choices would be enough points to accurately illustrate the real differences in perceptions, beliefs, and attitudes that preservice educators have towards FSP. Fewer choices may not yield responses that are as reliable and rating scales with more points may be confusing to the participants (Johnson & Christensen, 2017).

To determine item clarity and face validity, two experts, one of whom was an education professor in the Morgridge College of Education and the other was the FSP Director at the Colorado Department of Education, reviewed the items. Both experts have written extensively on the topic of family-school partnerships and were well-versed in the components of effective FSP. Expert review is helpful in maximizing the content validity of a scale (DeVellis, 2017; Johnson & Christensen, 2017; Walker & Fraser, 2005; Worthington & Whittaker, 2005) and to determine if support for construct validity and reliability is likely (Vogt, King, & King, 2004).

Phase Three: Initial Pilot Study and Item Analysis

The initial 24-item FSPCS was piloted with 27 preservice early childhood special education and school psychology graduate students and was administered to participants during the first week of a ten-week course, Family-School Partnering and Consultation

(2016), and again at the conclusion of the course. The mean scores and corrected item-total correlations for the items included in the pilot version can be found in Table 1.

Table 1
Mean Scores for Items in the Pilot Version of the FSPCS

		Mean	N	Std. Deviation	Corrected Item-total Correlation
1. Family attitudes towards school are determined by their background characteristics.	PreQ1	4.52	27	1.01	.20
	PostQ1	4.52	27	1.01	.83
2. Families who support education are most likely to come to school meetings.	PreQ2	4.07	27	1.11	.11
	PostQ2	3.37	27	1.31	.47
3. Students are more apt to be successful in school when they have help at home.	PreQ3	5.33	27	.62	.30
	PostQ3	5.30	27	.82	.54
4. Family circumstances negatively affect students in today's classrooms.	PreQ4	4.37	27	.62	.32
	PostQ4	4.52	27	1.01	.32
5. Awareness of school programs is directly related to family socio-cultural and economic status.	PreQ5	3.70	27	1.27	-.01
	PostQ5	3.70	27	1.46	.31
6. Some families are more motivated to support their child's learning and schooling.	PreQ6	4.70	27	.99	.22
	PostQ6	4.04	27	1.26	.42
7. Families should be a part of all decisions about their child's schooling.	PreQ7	5.41	27	.84	.36
	PostQ7	5.70	27	.54	.19
8. There are numerous ways for families to be involved in their child's education.	PreQ8	5.44	27	.85	.07
	PostQ8	5.59	27	.84	.33
9. Mutual partnerships between families and schools are crucial to a child's education.	PreQ9	5.63	27	.63	.62
	PostQ9	5.89	27	.51	.19
10. Families have critical information to share about their children.	PreQ10	5.89	27	.32	.50
	PostQ10	6.00	27	.00	-

11. Families must be members of all essential school committees.	PreQ11	4.56	27	1.12	.00
	PostQ11	5.11	27	1.25	.13
12. Families must learn how to advocate for their children's education.	PreQ12	5.00	27	.83	.36
	PostQ12	5.56	27	.70	.29
13. My professional responsibilities include students and also their families.	PreQ13	5.70	27	.61	.49
	PostQ13	5.93	27	.27	.37
14. I am encouraged to build strong ties with community family oriented programs.	PreQ14	5.11	27	1.05	.52
	PostQ14	5.78	27	.42	.31
15. Collaboration with families to support children is crucial to my success.	PreQ15	5.56	27	.58	.71
	PostQ15	5.93	27	.27	.28
16. I play a major role in forging family-school partnerships.	PreQ16	5.26	27	.81	.59
	PostQ16	5.63	27	.57	.46
17. Communication with families is a large part of my job.	PreQ17	5.52	27	.64	.56
	Post17	5.81	27	.48	.50
18. I am expected to offer families resources to support their child's success.	PreQ18	5.56	27	.64	.60
	PostQ18	5.70	27	.54	.57
19. I feel comfortable providing families parenting and child rearing support.	PreQ19	4.07	27	1.07	.43
	PostQ19	4.74	27	.98	. 42
20. I am prepared to collaborate with families to foster a child's school performance.	PreQ20	4.59	27	1.01	.63
	PostQ20	5.59	27	.64	.52
21. I am familiar with effective practices, strategies and programs to increase family involvement.	PreQ21	3.78	27	.97	.66
	PostQ21	5.44	27	.64	.46
22. I understand cultural factors that affect family systems, structures, and practices.	PreQ22	4.26	27	.81	.51
	PostQ22	5.41	27	.64	.39
23. I am comfortable explaining students' school performance and behavior to parents.	PreQ23	4.59	27	.75	.50
	PostQ23	5.26	27	.53	.31

24. I have the ability to initiate and sustain positive family school partnerships.	PreQ24	4.67	27	1.00	.58
	PostQ24	5.44	27	.58	. 40

As an exploratory measure the initial scale had satisfactory internal consistency reliability (Cronbach's α .84 for the total scale). The resulting data were analyzed across domains.

The domain of Professional Responsibilities contained 5-items and included items such as, "My professional responsibilities include students and also their families," and "Communication with families is a large part of my job." The Cronbach's α for this domain pre-course was .82, and post-course was .74.

The domain of Self-efficacy contained 6-items and included items like, "I am comfortable explaining students' school performance and behavior to parents," and "I am prepared to collaborate with families to foster a child's school performance." The Cronbach's α for Self-efficacy was .86 pre-course, and .80 post course.

The 5-item Perceptions on the Importance of Collaborating with Families domain contained items such as, "Mutual partnerships between families and schools are crucial to a child's education," and "Families have critical information to share about their children." The Cronbach's α for this domain was .71 pre-course and .55 post-course.

Lastly, the 6-item domain of Perceptions of Family Characteristics that Influence Family Involvement included statements like, "Family attitudes towards school are determined by their background characteristics," and "Awareness of school programs is

directly related to family-socio-cultural and economic status." The Cronbach's α for this domain was .52 pre-course and .77 post-course.

Three-items were uncategorized, "There are numerous ways for families to be involved in their child's education;" "Families must be members of all essential school committees;" and "Families must learn how to advocate for their children's education."

Phase Four: Initial Scale Revision, Cognitive Interviews, Final Scale Revision

Based on the results of the initial item analysis, several revisions were made to the FSPCS. After the item inspection, the 6-items found within the domain of *Perceptions of Family Characteristics that Influence Family Involvement* were deleted, which reduced the measure to 18-items. The items were deleted due to item clarity and item appropriateness. It is common in scale development that, "items that do not contribute to the major identifiable factors may end up being trimmed" (DeVellis, 2017, p. 166). Consequently, the author conducted another extensive literature review on FSP: preservice educators, school counselors, teachers, and school psychologists' beliefs and self-efficacy surrounding FSP, their professional roles, their background characteristics, the barriers to forming strong FSP, CLD perceptions, and FSP scales that had already been developed. In addition, a more thorough review of the ESSA (2015) was conducted to determine if additional items needed to be added to reflect current legislation policies regarding FSP.

An additional 30 items were created, for a total of 48 items to assess new domains not included in the initial scale. The new domains were conceptualized as: *Perceptions of Roles, Responsibilities, and Barriers to Implementing FSP*, *Attitudes about the*

Importance of Collaborating with Families, and *Beliefs about their Efficacy Related to FSP*. These domains were added to reflect a more current and comprehensive literature review of prior scales. Items were added within each domain area to focus on working with CLD families and on current best practices in FSP. Additional demographic items were also added to allow for an examination of response differences based on demographic characteristics and prior exposure to FSP. These additional items were then rereviewed by the two experts who reviewed the initial scale items. The experts were asked to review the additional items and domains to determine item clarity and face validity. Both experts approved the additional items and new domains. They agreed that creating a more comprehensive measure than the initial scale was warranted based on their classroom experiences teaching preservice educators about FSP principles and practices.

Cognitive interviews. In-person cognitive interviews were conducted on the newly revised scale with thirteen preservice graduate students from the programs to be included in the final field administration, providing feedback on the comprehensibility of the items. These preservice graduate cognitive interview participants included: 4 general and special education teachers, 5 school psychologists, 2 school counselors, 1 school social worker, and 1 school administrator. The participants included 10 women and 3 men; 8 of the participants identified as white, 3 identified as Latino, 1 identified as black, and 1 identified as Asian (See Table 2).

Table 2
Demographics of Cognitive Interview Participants

Characteristics	*n*	%
University Type		

Public	0	0.0
Private	13	100.0
Program		
Child, Family, & School Psychology	5	38.4
Counseling	2	15.4
Early Childhood Special Education	2	15.4
Educational Leadership & Policy Studies	1	7.7
Social Work	1	7.7
Teacher Preparation Program	2	15.4
Gender		
Female	10	76.9
Male	3	23.1
Non-binary	0	0.0
Age		
20-24 years of age	4	30.8
25-30 years of age	6	46.1
31-36 years of age	3	23.1
37-41 years of age	0	0.0
42+ years of age	0	0.0
Ethnicity		
White	8	61.5
Black or African American	1	7.7
Latino	3	23.1
Asian	1	7.7

Cognitive interviews:

> often reveal confusion around vocabulary or concepts or misunderstandings related to response options that a researcher might overlook without cognitive interviewing. This provides additional assurance that the investigator and the respondent have a common understanding about the meaning of items and, thus, can enhance the validity of a scale. (DeVellis, 2017, p. 236)

Furthermore, cognitive interviews can elucidate the cognitive processes involved in answering items such as, the comprehension of the items, memory retrieval of relevant information, judgment/estimation process, and responses processes (Willis, 2005).

Cognitive interview participants were recruited using a snowball sampling method. The researcher taught a course on educational measurement in the Winter of 2018 to school psychology, early childhood special education, and teacher preparation graduate students, and asked students if they would like to take part in the cognitive interview and if they knew of other students in different education programs that would be willing to participate. The researcher emphasized that participation was completely voluntary and unrelated to the educational measurement course, and that they were under no obligation to participate. The cognitive interview recruitment email is included in Appendix H. Participants were given an information form stating the purpose of the cognitive interview, that participation was voluntary, and there was minimal risk for participating. This form is included in Appendix I. Respondents completed the cognitive interview (See Appendix J for items included in the cognitive interview) in the presence of the researcher who asked specific questions about impressions of the items and ease of responding following guidelines set forth by Beatty and Willis (2007). The participants met with the researcher at a time most convenient to them either individually or in small groups in a conference room at the Morgridge College of Education. In addition, the respondents were able to ask the researcher questions while completing the cognitive interview.

Final scale revision. The results of the cognitive interviews were compiled and used to evaluate the quality of each item and its comprehensibility. This information was then used to make final edits and adjustments to items to be included on the final FSPCS that was administered to a larger sample. The majority of items were considered clear and easy to understand; however, small grammatical changes were made to several items based on participants' feedback. Demographic items were added to the final scale to better understand the background characteristics of the respondents who were included in Phase 5 - the final field administration. See Appendix K for a complete list of the items included on the final version of the FSPCS, including a breakdown of items proposed for each domain (e.g., Perceptions, Attitudes, and Beliefs), and the demographic items.

Phase Five: Field Administration of the Final FSPCS

Phase Five was the field administration of the final version of the FSPCS that was completed after obtaining approval for the study by the IRB. The final scale was administered online to a convenience sample of preservice educators beginning in early July 2018 and ending in November 2018. This phase allowed for a determination of the psychometric properties of the instrument, including the reliability of the measure, its underlying factor structure, and an analysis of differences across different preservice educator groups.

Description of the final scale. The final version of the FSPCS consisted of a Demographics section and a Rating section. In the first section, nine demographic items were included that asked participants to indicate if they were attending a public or private university, the education program they were in, their gender, age, ethnicity, how far along

they were in their graduate program, types of FSP activities they had engaged in, if they were a parent, and if they had a close relative or child with special needs. In the second section, 39 items were included that asked participants to complete a a six-point rating scale (1=Strongly Disagree to 6= Strongly Agree) for each item. The items were grouped three questions per page to reduce the number of pages the respondents needed to navigate. Dillman, Smyth, and Christian (2009) reported that grouping three items on one page was reasonable, especially if the instrument is taken on a mobile device. Considering the measure would be taken by graduate students, the researcher anticipated that many of the participants would take the measure on a mobile device and the instrument design needed to reflect that method of response. The items grouped together were from the same domain (Perceptions, Attitudes, or Beliefs) because there has been found to be a higher correlation among answers on the same page, thus "it is important to select questions that are related, otherwise respondents may infer connections across questions that the researcher does not intend" (Dillman et al., 2009, p. 315).

Participants for the field administration. Participants in the final study included preservice educators from education training programs from public and private universities in Colorado. Any graduate student in a college of education training program or social work training program that intended to work in schools upon completion of their degree could participate in the final study. Thus, the participants in the final study included preservice educators from programs in school psychology, counseling, teaching, curriculum and instruction, educational leadership, library and information science, research methods and statistics, and social work. Students who were enrolled in colleges

of education, but who did not intend to work in schools were excluded from the study. In order to recruit participants to complete the FSPCS, listserv emails were sent biweekly to students within these programs at one private university starting in July 2018. Emails were sent to public university faculty and distributed to their students twice during the months of August and September 2018. Emails that were sent to faculty included an email letter asking them to distribute an invitation to participate announcement and a Qualtrics link to students in their programs. Listserv emails included the invitation to participate announcement. The sample email letter and invitation to participate announcement sent to faculty and preservice educators can be found in Appendix L. Social exchange theory principles were used in the writing of the invitation to participate announcement because "social exchange concepts provide a means of reconciling philosophical views of the human desire to find meaning through interactions with others and the human desire to achieve self-interests from which they also draw satisfaction" (Dillman et al., 2009, p. 24). Biweekly listserv invitation to participate announcements were sent out based on the process Dillman et al. (2009) delineated to increase the response rate for internet surveys. Listserv announcements and faculty emails were sent regularly throughout the months of July 2018 to November 2018 since a person's decision to complete a web survey is prompted by frequent follow-up (Dillman et al., 2009).

Sample size. In order to obtain meaningful data and prevent spurious results, having a sufficiently large sample size was required. The larger the sample size, the higher the likelihood the factor pattern will be more stable than one that is derived from a

smaller sample size (DeVellis, 2017). Researchers have made many recommendations on the sample size required to conduct factor analysis, from a minimum of 100 participants (Kline, 1979) to 1000 participants (Comrey & Lee, 1992). After months of multiple attempts to increase response rates, 155 participants completed the instrument which was deemed to be adequate since DeVellis (2017) remarked that, "it is certainly not uncommon to see factor analyses used in scale development based on more modest sample (e.g., 150 subjects)" (pp. 203-204).

Procedures for the field administration. Qualtrics, an online survey software program, was used to create, distribute, and collect survey responses. Participants were provided a URL link with the invitation to participate announcement. If the potential respondents entered or clicked on the scale URL, the informed consent form initially appeared (See Appendix M). After reading the consent form participants could either choose to participate or not. Only participants who voluntarily agreed to participate continued to the scale items. Responses were anonymous and participants were not forced to answer any questions and were able to withdraw at any time.

Upon completion, respondents were asked if they wanted to receive an incentive, which was a $5 Starbucks eGiftcard. Dillman et al. (2009) determined that a $5 incentive after completing a survey increased the response rate of graduate students. In order to keep scale responses anonymous and maintain the anonymity of the participants, a second survey was created that collected only the respondent's name and email address. By creating a second "incentive" survey through Qualtrics, the scale responses and the participant's contact information were not linked together. On the scale's termination

page, a custom end-of-survey message included a question that asked participants if they would like to receive the incentive. Choosing "no" ended the survey; whereas, choosing "yes" enabled participants to click on the "incentive" survey link, where contact information was collected without compromising anonymity on the actual scale.

The responses to the scale were exported from Qualtrics into a Statistical Package for the Social Sciences (SPSS) data file that was kept confidential in a password-protected file only accessible to the researcher and faculty sponsor. Data were analyzed using IBM SPSS Version 25 software.

Chapter 4: Results

In this chapter, the sample characteristics and descriptive data associated with the final field administration of the Family-School Partnering and Collaboration Scale (FSPCS) are reported. After this, analyses associated with the two primary research questions and two associated hypotheses are presented:

1) What is the measured construct?

a) Do items factor appropriately into three distinct domains (i.e., Perceptions, Attitudes, and Beliefs) regarding FSP? Is the factor structure confirmed?

b) Do the items in the FSPCS adhere to the Rasch model?

c) Is there adequate reliability and validity for each of the factors?

2) Do preservice educators respond differently to items based on demographic differences?

Hypothesis 1: There are three distinct factors that operationally define what influences the development of strong family school partnerships: perceptions, attitudes, and beliefs.

Hypothesis 2: Participants with distinct demographic characteristics who are enrolled in different education training programs rate items significantly different on the FSPCS.

Description of the Final Sample

There were 155 participants in the final field administration, with the majority identified as female (84.5%). The majority of participants were between 20-30 years of age, with 38.1% between 20-24 years of age and 40.6% between the ages of 25-30 years.

The rest of the respondents fell into the older age categories. The majority of the respondents identified as white (70.3%), while only 29.7% of respondents identified as CLD. Participants primarily identified themselves as enrolled in Psychology programs (i.e., Counseling, Child, Family, and School Psychology, and Social Work) (60%), versus Teaching programs (i.e., Curriculum and Instruction, Early Childhood Special Education, and Teacher Preparation) (17%), Educational Leadership (14%), or Information Sciences programs (i.e., Research Methods and Statistics and Library and Information Science) (8%) programs. Over 56.8% of participants had just entered their respective program, while 30.3% were halfway through their training, and 12.9% had almost competed their studies. Additional demographic information can be found in Table 3.

Table 3
Demographic Characteristics of Field Administration Participants

Characteristics	*n*	%
University Type		
Public	27	17.4
Private	128	82.6
Program		
Child, Family, & School Psychology	60	38.7
Counseling	18	11.6
Curriculum & Instruction	7	4.5
Early Childhood Special Education	2	1.3
Educational Leadership & Policy Studies	22	14.2
Library & Information Science	4	2.6
Research Methods & Statistics	9	5.8
Teacher Preparation Programs	17	11.0
Social Work	15	9.7
Other	1	0.6
Gender		
Female	131	84.5
Male	21	13.5

Non-binary	2	1.3
Prefer not to answer	1	0.6
Age		
20-24 years of age	59	38.1
25-30 years of age	63	40.6
31-36 years of age	14	9.0
37-41 years of age	12	7.7
42+ years of age	7	4.5
Ethnicity		
White	109	70.3
Black or African American	6	3.9
Latino	18	11.6
Asian	14	9.0
American Indian or Alaska Native	1	0.6
Other	6	3.9
Prefer not to answer	1	0.6
How far along in their graduate program		
Just entered	88	56.8
About halfway done	47	30.3
Almost completed	20	12.9
Type of FSP activities they have engaged in		
Written communication	88	56.8
Meeting with parents who have children with special needs	77	49.7
Parent teacher conferences	63	40.6
Phone calls with parents	87	56.1
Home visits	31	20.0
Advisory committees that include parents	26	16.8
Working on a team with school staff and families to foster student achievement	52	33.5
Conducting parent education workshops	25	16.1
Working with parent volunteers	51	32.9
Teaching parents and students how to access community resources	39	25.2
Training staff on how to conduct effective FSP activities	8	5.2
Assisting parents, family, and community members in organizing support programs students	27	17.4

Parent		
Yes, I have children who are typically developing	23	14.8
Yes, I have children, one of whom has special needs	4	2.6
No	128	82.6
Sibling, close relative, or child with special needs		
Yes	42	27.1
No	113	72.9

Data Cleaning and Descriptive Statistics

Prior to analyzing the data, data were cleaned to search for missing data. Only two of the responses had a large portion of missing data and the rating section of these two individuals were excluded from the final analyses, bringing the total N for the remaining analyses to 153.

Next, descriptive analyses were conducted through SPSS, and the number of respondents who answered the item, the means, standard deviations, and skewness and kurtosis are provided below (Table 4). Skewness and kurtosis were used to examine all items prior to conducting factor analysis because screening variables for normality is an important first step in most statistical analyses (Tabachnick & Fidell, 2013). Although not all of the items were normally distributed, since the sample size was small (<200 participants), keeping all of the items was deemed appropriate for the initial analyses (George & Mallery, 2010; Tabachnick & Fidell, 2013). In addition, due to the heterogenous nature of the participants' program of study, keeping the items was determined to be acceptable. The scale responses were coded as follows: 1 (Strongly Disagree), 2 (Moderately Disagree), 3 (Disagree Slightly More than Agree), 4 (Agree Slightly More than Disagree), 5 (Moderately Agree), and 6 (Strongly Agree).

Table 4
Descriptive Statistics

Item	*n*	Mean	Std. Deviation	Skewness	Kurtosis
1	155	5.55	.95	-2.83	8.92
2	155	5.27	1.10	-1.83	3.34
3	155	5.54	.86	-2.63	8.30
4	155	4.83	1.11	1.00	.99
5	155	5.23	1.13	-1.77	3.05
6	155	5.33	1.23	-2.17	4.21
7	155	5.22	1.16	-1.94	3.76
8	155	5.23	1.29	-2.05	3.64
9	155	3.96	1.48	-.44	-.71
10	155	3.99	1.40	-.58	-.34
11	154	5.15	1.01	-1.51	3.10
12	154	4.47	1.16	-.70	.50
13	155	4.07	1.35	-.31	-.73
14	155	4.79	1.09	-.74	.36
15	154	4.90	.97	-.76	.87
16	155	5.24	.95	-2.01	5.35
17	155	5.24	.87	-1.09	1.17
18	155	4.63	1.34	-.72	-.31
19	155	4.06	1.39	-.51	-.41
20	155	5.19	1.07	-1.65	-.43
21	155	4.30	1.26	-.40	-.43
22	155	5.01	.94	-.91	1.31
23	155	5.05	1.18	-1.41	1.78
24	155	5.06	1.00	-1.34	2.20
25	155	4.77	1.23	-1.06	.81
26	155	4.77	1.12	-.72	-.17
27	155	4.05	1.32	-.32	-.57
28	154	4.66	1.14	-1.12	1.17
29	154	4.36	1.20	-5.83	-.06
30	154	4.03	1.25	-.38	-.34
31	155	5.81	.48	-2.61	6.10
32	154	5.73	.58	-2.42	6.58
33	155	5.57	.76	-1.83	2.83
34	155	5.68	.61	-1.78	1.93
35	155	5.77	.57	-3.22	13.73
36	155	5.52	.83	-2.13	5.27
37	155	5.70	.56	-1.93	3.90
38	155	5.65	.76	-2.69	9.38

39	154	4.94	1.65	-1.47	.76

Research Question 1a: Do Items Factor Appropriately into Three Distinct Domains (i.e., Perceptions, Attitudes, and Beliefs) Regarding FSP? Is the Factor Structure Confirmed?

Confirmatory factor analysis. Confirmatory factor analysis (CFA) was performed on the 39-item rating scale, based on the hypothesized three domains encompassing the influences on FSP presented in Appendix K. CFA was used to determine the goodness-of-fit between the hypothesized model and the sample data (Byrne, 2016). A hallmark of CFA is its use to test hypotheses of *a priori* determined latent factor structures (Hurley, Scandura, Schriesheim, Brannick, Seers, Vandenverg, & Williams, 1997), which is what the researcher did here. IBM SPSS AMOS Version 25 was used for the analysis (Arbuckle, 2017). The CFA model using the three pre-assigned latent factors (shown in Figure 2) was inputted into AMOS and maximum-likelihood parameter estimation was used, with the model converging to a solution in 33 iterations.

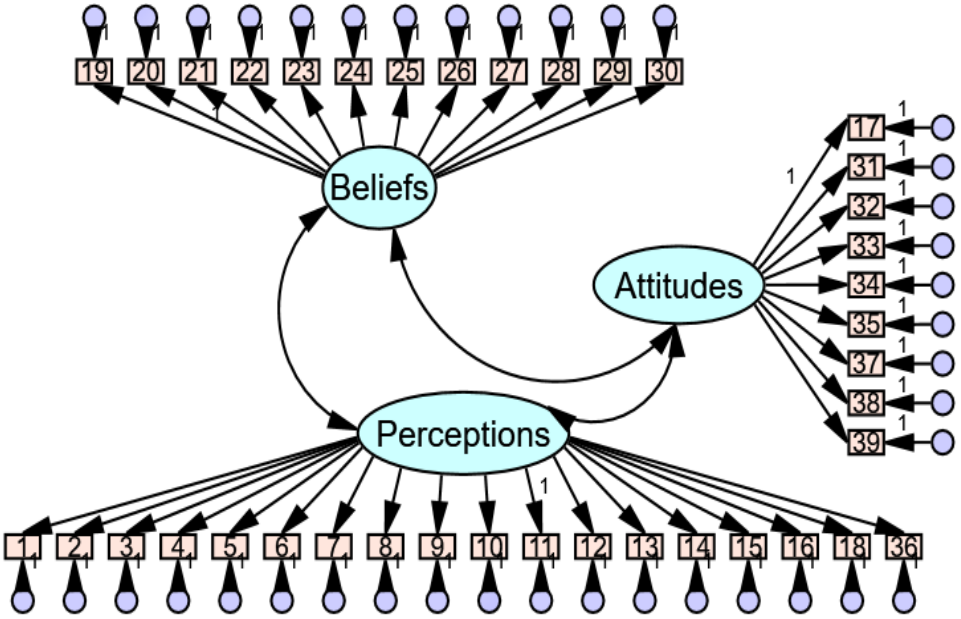


Figure 2. CFA model diagram for the original latent factors.

There were 819 distinct sample moments, 162 distinct parameters to be estimated, and 657 degrees of freedom, leading to an over-identified model. Prior to examining model fit, assessment of observation outliers was done using the squared Mahalanobis distance (d^2). d^2 measures the distance in standard deviation units between data values for one case and the sample means for all variables. There were no respondents with d^2 values substantially higher than others, which indicated that there was not strong evidence of observation outliers.

Second, an analysis of univariate normality and multivariate normality was performed. Kurtosis values greater than 7 indicated issues with univariate nonnormality (Byrne, 2016), and four items (1, 3, 35, and 38) exceeded the threshold value. Univariate normality does not preclude multivariate nonnormality, as kurtosis critical ratio values greater than 5 are indicative of multivariate nonnormality (Byrne, 2016). The

multivariate kurtosis critical ratio of 24.39 indicated significant multivariate nonnormality, and corrections to the model fit statistics for nonnormality from Walker and Smith (2017) were applied. This adjustment is similar to the Satorra-Bentler χ^2 value that is available in other CFA programs but is not available in AMOS. The SPSS syntax from Walker and Smith (2017) provided for an adjusted χ^2 value (and subsequently adjusted fit indices) based on the Bollen-Stine bootstrap procedure. The adjusted model fit parameters are shown in Table 5.

Table 5
CFA Model Fit Statistics

χ^2	CFI	RMSEA	*p*
552.17	.96	.03	<.001

The small χ^2 value compared to the degrees of freedom and the rejection of the null hypothesis indicated an acceptable fit of the model to the data. However, χ^2 is sensitive to small sample sizes, therefore other fit measures were analyzed. The Comparative Fit Index (CFI) compares the model fit to a baseline model, with scores from 0 to 1 (higher values indicate a better fit). The Root Mean Square Error of Approximation (RMSEA) is less sensitive to sample size, with values below 0.05 indicating adequate model fit (Byrne, 2016). The CFI value of 0.96 and RMSEA value of 0.03 indicated adequate model fit to the data. These results support the validity of the original 39-item three latent factor scale.

Exploratory factor analysis. In an attempt to improve upon the originally hypothesized construct, an exploratory factory analysis (EFA) was next performed. Exploratory factor analysis has many functions, it: 1) helps determine how many latent

variables underlie a set of items, 2) condenses information so that variables can be better explained, 3) helps to define the substantive content, and 4) helps identify items that are performing well or poorly (DeVellis, 2017). Performing an EFA after a CFA on the original construct (Hurley et al., 1997) supposes that the additional information from EFA can lead to refinement of the construct and possibly lead to improved model fit statistics, compared to the original construct.

The EFA in the current study employed a principal axis factor analysis with varimax rotation with the 39 items and 153 responses. Principal axis factoring (PAF) was chosen because it would be able to maximize factor extraction and estimate the underlying factors (Field, 2013). In addition, PAF was used because it is the preferred method when trying to detect structure (Tabachnick & Fidell, 2013). A varimax rotation was chosen because it simplified the interpretation of factor loadings by maximizing the amount of variance of the items, which then led to a few large loadings for each factor (Field, 2013). Other extraction and rotation methods will also be shown below, although the researcher found that the extracted factors/components were generally insensitive to the extraction and rotation methods used.

The Kaiser-Meyer-Olkin Measure (KMO) and Bartlett's test of sphericity were used to determine the appropriateness of conducting a factor analysis with the sample. A KMO statistic can fall within 0 and 1, with high values indicating that factor analysis would be appropriate. Bartlett's test of sphericity was used to see how much redundancy there was between the variables, and its value needs to be statistically significant (<.05) (Field, 2013). The KMO value for this sample was .89 and the value for Bartlett's Test

of Sphericity was < .001, thus the data were determined to be suitable for factor analysis (Table 6).

Table 6
Kaiser-Meyer-Olkin (KMO) and Bartlett's Test of Sphericity

Test		Value
KMO Measure of Sampling Adequacy		.87
Bartlett's Test of Sphericity	Approximate Chi-square	3720.33
	df	741
	Significance	<.001

Eigenvalues represent the amount of variance explained by a factor, and help to determine the overall importance and the amount of contribution a given factor has on a scale (Field, 2013). Kaiser's criteria of retaining factors with eigenvalues greater than 1.0 and eliminating factors with eigenvalues less than 1.0 resulted in 8 retained factors. Cattell's (1966) scree plot was used to visually plot the eigenvalues for examination of the relative importance of the factors, and is shown in Figure 3. Determination of the number of retained factors from the scree plot was ambiguous, as indications for inflection points could be seen at 2, 3, and 5 factors. Considering that Kaiser's criteria tends to overestimate the number of factors to retain (Field, 2013), along with the ambiguity of the scree plot and the factor loadings shown below, six factors were initially retained for this analysis.

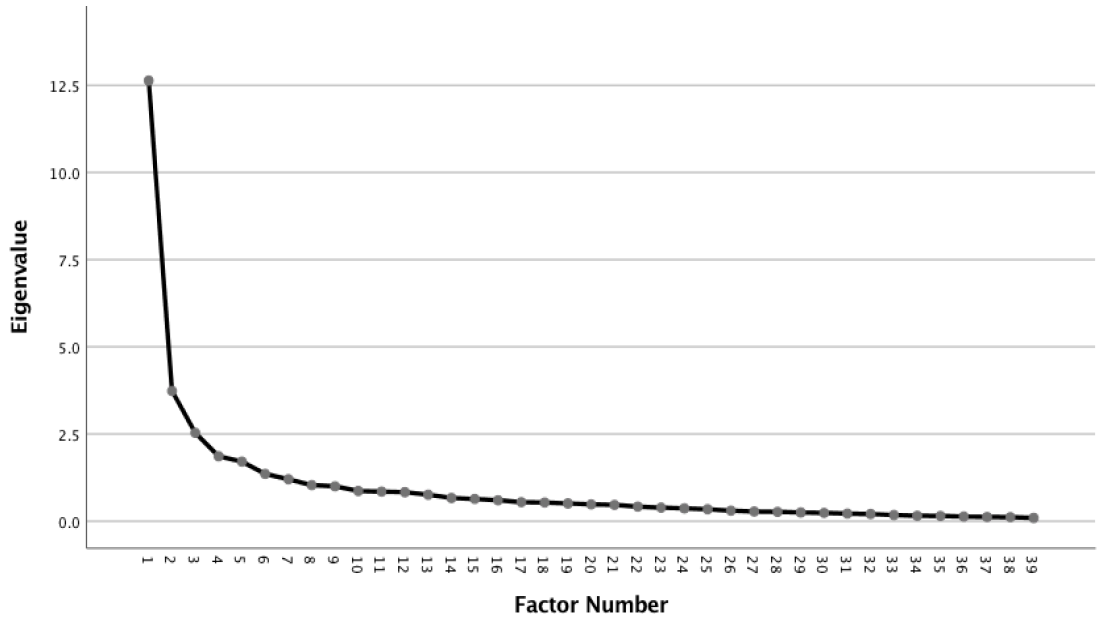


Figure 3. Scree plot showing the initial eigenvalues for the 39 total factors.

Table 7 shows the eigenvalues and the percentage of variance explained for the six retained factors on the raw data, after extraction, and after rotation. While the first factor was dominant initially and after extraction (explaining about 32% of the variance), after rotation the first two factors were dominant, with the remaining four factors having similar values to each other.

Table 7
Eigenvalues

	Initial Eigenvalues		Extraction Sums of Squared Loading		Rotation Sums of Squared Loadings	
Factor	Total	% of Variance	Total	% of Variance	Total	% of Variance
1	12.63	32.39	12.29	31.51	6.78	17.38
2	3.73	9.56	3.40	8.72	6.75	17.30
3	2.53	6.50	2.06	5.28	2.30	5.91
4	1.86	4.77	1.45	3.71	2.04	5.24
5	1.71	4.38	1.17	3.00	1.71	4.39
6	1.36	3.47	.97	2.47	1.67	4.28

The factor loadings for the 39 questions on each of the six factors are shown in Table 8. Only loadings greater than 0.4 are shown.

Table 8
Factor Loadings

Item	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
1		.81				
2		.76				
3		.80				
4		.66				
5		.71				
6		.74				
7		.75				
8		.73				
9				.73		
10		.46		.50		
11		.42				
12						.51
13						.67
14						
15						.60
16		.49				
17						
18						
19				.67		
20	.47	.49				
21	.72					
22	.51					
23	.66					
24	.71					
25	.77					
26	.77					
27	.81					
28	.77					
29	.83					
30	.86					
31			.52			
32			.46			
33			.53			

34		.63		
35		.73		
36	.47			
37		.47		
38			.79	
39				

An item was retained for further analysis if the item loaded on one factor at 0.4 or higher, and did not load on any other factors at 0.4 or higher (Pedhazur & Schmelkin, 1991). By following these criteria, six items were eliminated: 10, 14, 17, 18, 20, and 39. In addition, the criteria above resulted in only 1 item for Factor 5 (38) and 2 items for Factor 4 (9 and 19). These factors were also eliminated, thus, 30 items in four factors were retained for further analysis. While Factor 6 had only 3 items (12, 13, and 15), these items had a coherent relationship with each other and with Factor 2 (which will be explained below).

The factor analysis was re-run with direct oblimin rotation, which is an oblique rotation method (in contrast to varimax rotation, which is orthogonal). The delta factor, which determines the level of correlation allowed between factors, was set to 0 (it is valid between -0.8 and 0.8). Oblique rotation allows for correlation between factors, which often makes sense for psychological constructs (Field, 2013). The direct oblimin rotation resulted in similar eigenvalues to those presented above: two strong factors, three weaker factors, with Factor 6 being comparable in explained variance to Factors 1 and 2. However, there were 9 items in Perceptions, 10 in Beliefs, 5 in Attitudes, and 3 in Perceptions of Barriers (in Factor 5 instead of Factor 6). Additionally, Principal Component Analysis (PCA) with varimax rotation was performed. The eigenvalues were nearly identical to the original PAF analysis, with the first two components being

stronger than the remaining four components. There were 10 items in Perceptions, 11 in Beliefs, 2 in Attitudes, and 3 in Perceptions of Barriers (in Factor 5 instead of Factor 6). There were more items with large loadings (above 0.4) in factors 6-8. The researcher concluded that the structure of the retained factors/components was similar, regardless of the extraction and rotation methods used, with the original method (PAF with varimax rotation) having the best-defined factors.

Factors 1 and 2 were shown to be the strongest factors and corresponded to Beliefs and Perceptions, respectively. Table 9 shows the items with factor loadings above 0.4 for Factor 1, with items pre-assigned into Beliefs in bold. All ten of the items with loadings above 0.4 for Factor 1 were pre-assigned into Beliefs, out of twelve total items pre-assigned. The remaining two items pre-assigned into Beliefs (19 and 20) were previously eliminated from further analysis.

Table 9
Factor Loadings for Factor 1 (Beliefs)

Item	Factor Loading
21	.73
22	.51
23	.66
24	.71
25	.77
26	.77
27	.81
28	.77
29	.83
30	.86

Note. Items pre-assigned into Beliefs are highlighted in bold.

Similarly, Table 10 shows the items with factor loadings above 0.4 for Factor 2. All eleven of the items were pre-assigned into Perceptions, out of the eighteen total pre-

assigned items. The remaining seven items pre-assigned to Perceptions had either been eliminated (9, 10, 14, 18) or were in Factor 6 (12, 13, and 15).

Table 10
Factor Loadings for Factor 2 (Perceptions)

Item	Factor Loading
1	.81
2	.76
3	.80
4	.66
5	.71
6	.74
7	.75
8	.73
11	.42
16	.49
36	.47

Note. Items pre-assigned into Perceptions are highlighted in bold.

Factor 3 was weaker than Factors 1 and 2, and primarily corresponded to Attitudes. Table 11 shows the items with factor loadings above 0.4 for Factor 3. All six of the items with loadings above 0.4 for Factor 3 were pre-assigned into Attitudes, out of nine pre-assigned items for this category. The remaining three items (17, 38, and 39) were previously eliminated.

Table 11
Factor Loadings for Factor 3 (Attitudes)

Item	Factor Loading
31	.81
32	.76
33	.80
34	.66
35	.71
37	.74

Note. Items pre-assigned into Attitudes are highlighted in bold.

Table 12 shows the items with factor loadings above 0.4 for Factor 6. This factor will hereafter be referred to as "Factor 4." All three of the items were pre-assigned into

Perceptions. These items were distinct from the other Perceptions items because the items found within this factor were all related to perceived potential barriers to forming FSP (e.g., time, administrator's policies, criticism, fear). This category hereafter is called "Perceptions of Barriers" (PoB).

Table 12
Factor Loadings for Factor 6 (Perceptions of Barriers (PoB)) and the Pre-assigned Category for these Items

Item	Factor Loading	Pre-assigned Category
12	.51	Perceptions
13	.67	Perceptions
15	.60	Perceptions

Based on the results of the EFA, 30-items were retained and 9-items were eliminated. See Appendix N for a complete list of the retained items as well as the items found within each domain, and the items that were removed. The 30 retained items were used in the subsequent analyses.

Research Question 1b: Do the Items in the FSPCS Adhere to the Rasch Model?

Rasch analysis on the four-factor construct was performed using Winsteps Software Version 4.3.1 (Linacre, 2018). The Rasch model supports a more comprehensive assessment of the psychometric properties in order to establish the construct validity of a measure when compared to classic test theory (Bond & Fox, 2015). In addition, the Rasch model provides measures of individual item and person parameters (ability and difficulty, respectively). The Rasch model analysis was used to further assess the psychometric properties and suitability of the FSPCS. Dimensionality, item fit, response category structure, reliability and separation, targeting, and item invariance are all examined below.

Dimensionality. A key assumption of Rasch models is unidimensionality. Unidimensionality means that the scale represents a single construct. Analysis of dimensionality was performed with the Rasch PCA of residuals on the 30-items retained from the EFA. The Rasch model explained 48.4% of the total variance, which correctly exceeded the 40% criterion that typically supports unidimensionality (Linacre, 2018). However, the first contrast of the residuals (i.e., the second dimension) had an eigenvalue of 5.12 and explained 8.8% of variance, and the second contrast (i.e., the third dimension) had an eigenvalue of 3.31 and explained 5.7% of variance. Both the first and second contrast exceeded the first contrast eigenvalue recommendation of 3.0 and 5% criteria for unidimensionality (Linacre, 2018). This indicated that there was likely multidimensionality, and supported running the Rasch analysis on the four factors separately.

The dimensionality of the four separate Rasch models for each of the four factors is shown in Table 13. Rasch models for Factors 1, 2, and 4 explain over half of the total variance, and all factors feature first contrast eigenvalues less than 3. However, all factors have first contrast percentage variance explained above 5%. The particularly large first contrast percentage variance explained for factors 3 and 4 is likely related to the small number of items comprising these factors.

Table 13
Dimensionality Indices by Factor

Factor	Measure Eigenvalue	Measure % Variance	1st Contrast Eigenvalue	1st Contrast %Variance
1	19.41	70.8	1.94	7.1
2	15.92	61.4	1.71	6.6
3	3.04	33.6	1.50	16.6
4	3.49	53.8	1.70	26.2

Item and person fit. Fit represents the degree to which data correspond to model expectations, and applies to both items and persons. Analysis of fit aids in assessing unidimensionality, as items that fit poorly do not support the Rasch model construct. Person fit refers to the pattern of responses across items for individual respondents, whereas item fit is the pattern of responses across respondents for each individual item (Bond & Fox, 2015). Fit is typically described in terms of unstandardized and standardized χ^2 ratios. "Mean square" is the unstandardized mean of the squared residuals between the Rasch model expectations and the responses for a particular item. The standardized metric is analogous to Z-scores of the residuals, which take into account sample size. In each of the unstandardized and standardized fit statistics, "infit" and "outfit" statistics are applied. Infit gives greater weight to items (persons) closer to the corresponding person ability (item difficulty), whereas outfit is not weighted and is more sensitive to outlying values of person ability or item difficulty. Thus, infit is more of a concern than outfit, however both are important for a complete assessment of model fit. Individual item fit statistics were computed to determine underfit and overfit items. Underfit items demonstrate erratic behavior, and do not have sufficient predictability to be useful in a Rasch model construct. Overfit items lack local independence and are often linearly dependent on other test items. Underfit is generally considered more of a problem than overfit. Infit MNSQ values between 0.6 and 1.4 generally indicate acceptable fit for Likert scale items (Bond & Fox, 2015). Table 14 lists the item fit for all 30 items, based on *separate* Rasch models for each of the four factors. There were 3 misfitting items, all underfit, with two items from Factor 1 and one item from Factor 2.

These items were removed from the subsequent Rasch model analysis below, and would be candidates for rewording or possible removal from future implementations of the FSPCS.

Table 14
Item Fit Table

Item Number	Infit MNSQ	Factor	Diagnosis
21	.98	1	Fit
22	**1.56**	**1**	**Underfit**
23	**1.44**	**1**	**Underfit**
24	.89	1	Fit
25	1.16	1	Fit
26	.95	1	Fit
27	.88	1	Fit
28	.90	1	Fit
29	.68	1	Fit
30	.67	1	Fit
1	.91	2	Fit
2	.95	2	Fit
3	.71	2	Fit
4	.84	2	Fit
5	.89	2	Fit
6	1.08	2	Fit
7	.74	2	Fit
8	1.10	2	Fit
11	**1.63**	**2**	**Underfit**
16	1.36	2	Fit
36	1.30	2	Fit
31	1.05	3	Fit
32	1.04	3	Fit
33	1.24	3	Fit
34	.85	3	Fit
35	.87	3	Fit
37	.93	3	Fit
12	.95	4	Fit

13	1.04	4	Fit
15	.99	4	Fit

Note. Bold items are deemed misfitting.

Global fit for the four separate Rasch models, after removal of the three misfitting items, is shown in Table 15. Expected values of the mean square (MNSQ) infit and outfit values are 1.0 for both persons and items and 0.0 for standardized Z-scores (ZSTD) (Bond & Fox, 2015). Both of these conditions were met reasonably well for the item sets.

Table 15
Global Fit Statistics

	Infit MNSQ	Infit ZSTD	Outfit MNSQ	Outfit ZSTD
Factor 1				
Persons Mean Fit	1.00	-.16	.99	-.16
Items Mean Fit	.99	.16	.99	.13
Factor 2				
Persons Mean Fit	.97	.01	.99	.03
Items Mean Fit	1.03	.11	.99	-.15
Factor 3				
Persons Mean Fit	.99	.11	.97	.09
Items Mean Fit	1.00	.05	.97	-.05
Factor 4				
Persons Mean Fit	1.00	-.16	.99	-.16
Items Mean Fit	.99	-.02	.99	-.03

Response category functioning. Next, the functionality of the response categories was examined, to determine if the scaling used in the instrument was appropriate. A series of measures to examine response category fit is shown in Table 16, which was run separately for each factor. First, except for response categories 1 and 2 for Factor 3, and category 1 for Factor 4, the minimal count for each category exceeded 10, clearing a prerequisite for response category analysis (Linacre, 2018). The lower ends of Factors 3 and 4 were not utilized and there is not a sufficient sample to analyze the

response categories. The observed average values increased monotonically through the response categories, which indicated that individuals with higher FSP competence rated items higher, and vice versa (Bond & Fox, 2015). Additionally, no categories featured outfit MNSQ values above 2.0. Such response categories would "introduce more noise than meaning into the measurement process" and would be "good candidates for collapsing into adjacent categories" (Bond & Fox, 2015, p. 252, 249). The last column, Calibration Threshold, is a general measure of response category fit, where monotonically increasing values are desired, which was indeed the case here. Separation between categories of 1.4 to 5.0 logits indicate that the response categories were distinguished from one another without large gaps in response options (Linacre, 2018). This criterion was met for the several response categories including all of Factor 1, and the upper end of Factors 3 and 4. Differences smaller than 1.4 occurred between other categories, indicating potential issues with the distinction between the response categories, although the acknowledged criteria are often difficult to meet in practice.

Table 16
Response Category Fit Statistics

Factor - Response Category	Count	Observed Average	Infit MNSQ	Outfit MNSQ	Calibration Threshold
1-1	24	-3.90	1.55	1.46	NONE
1-2	67	-1.58	1.01	.96	-3.71
1-3	162	-.30	.94	.99	-1.72
1-4	280	1.14	.84	.88	-.09
1-5	407	2.67	1.01	1.02	1.49
1-6	284	4.17	1.01	1.02	4.04
2-1	28	-1.66	.97	.94	NONE
2-2	29	-.29	1.55	1.56	-1.11
2-3	47	.03	.69	.64	-.68
2-4	137	1.00	.99	1.02	-.44
2-5	381	1.97	1.06	.98	.49

2-6	908	2.85	1.00	1.00	1.74
3-1	0	-	-	-	-
3-2	1	.20	.97	.87	NONE
3-3	8	.89	1.20	1.35	-1.66
3-4	39	1.20	.88	.71	-.61
3-5	154	2.22	.99	1.02	.38
3-6	716	3.02	1.07	1.03	1.89
4-1	8	-.90	1.21	1.28	NONE
4-2	24	-.65	1.08	1.16	-1.96
4-3	54	-.20	.81	.78	-1.21
4-4	127	.58	.98	.96	-.63
4-5	144	1.63	.90	.91	.94
4-6	102	2.66	1.09	1.07	2.87

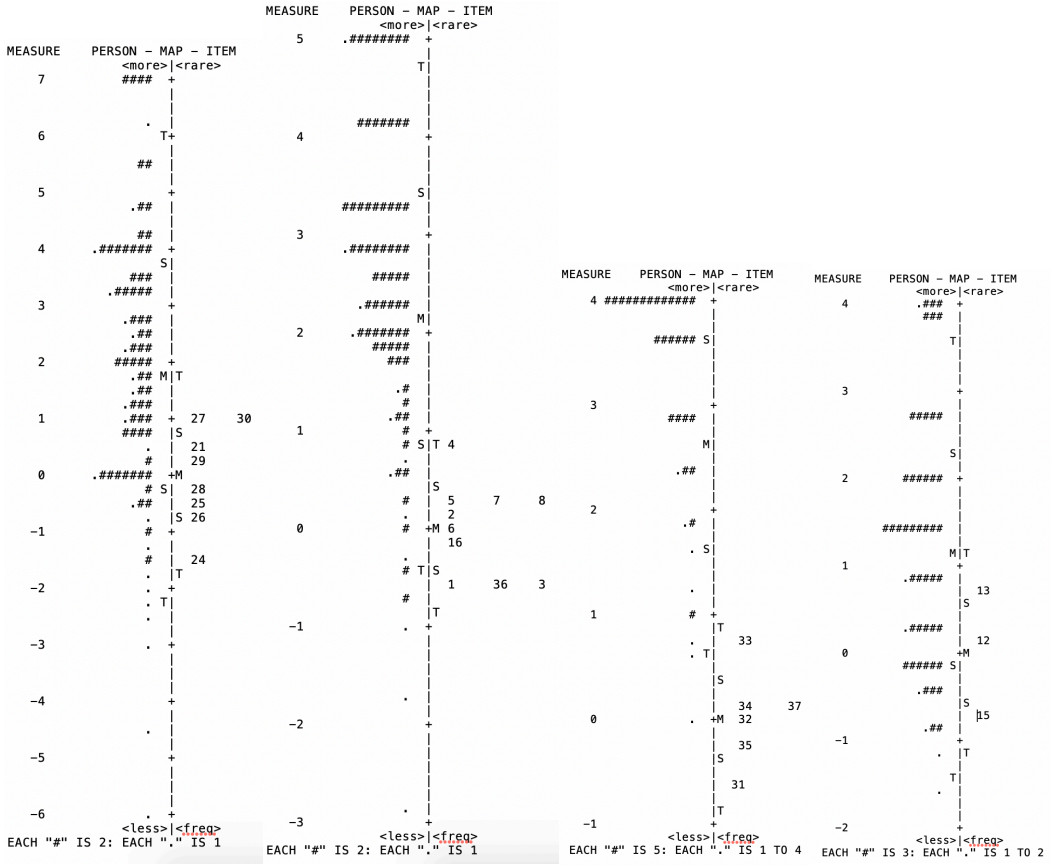
Separation and reliability. Separation and reliability estimates are provided from the four separate Rasch analyses in Table 17. Separation represents the spread of either persons or items across response ranges, and is an indicator of reliability. Reliability itself is analogous to Cronbach's α (Bond & Fox, 2015). Person separation only correctly exceeded the threshold of 2.0 provided by Pomeranz, Byer, Moorhouse, Velozo, and Spitznagel (2008) for Factor 1. The person reliability was low for Factors 2, 3, and 4. The low values of both separation and reliability for Factors 3 and 4 are likely related to the small number of items making up these factors. Item separation and reliability were both strong for Factors 1, 2, and 4, suggesting that the results using the current set of responses can be replicated, in a statistical sense, across similar groups but with different samples of professionals. The items from Factor 3 feature lower separation and reliability, indicating redundancy in responses across the sample and the items.

Table 17
Separation and Reliability

Factor	Person Separation	Person Reliability	Item Separation	Item Reliability
1	3.00	.90	6.33	.98
2	1.56	.71	3.19	.91

3	.50	.20	1.87	.78
4	1.01	.50	5.24	.96

Targeting. Item difficulty and person ability were both assessed by placing persons and items on the same logit scale and determining how ability and difficulty relate to each other. This joint placement of persons and items is known as targeting, and indicates how well the measure encompasses the construct for the sample. The person-item map, or Wright Map, shown in Figure 4 for each of the four factors, illustrates how well the items cover the distribution of FSP competency across the sample, as well as how the FSP competency of the sample relates to the range of difficulty of the items. By convention, the mean of the item logit position is at 0.0 logits, and Figure 4 shows that the mean of the person logit position is near +2.0 logits for Factors 1 and 2, near +2.75 logits for Factor 3, and near +1.0 logit for Factor 4. This meant that the FSP competency of the sample group exceeded the FSP competency measured by the 30 items retained after the EFA by 1.0-2.75 logits. There was some overlap of items and respondents in the range of -1.0 to +1.0 logits for Factors 1 and 4. In contrast, items for Factors 2 and 3 are clustered near 0.0 logits and had minimal overlap with respondents. This is also reflected in the differences in item separation in Table 17. For all of the factors, additional or modified items could be used to better measure higher levels of FSP competency. This could be accomplished by reducing redundancy in some of the items – items that were addressing similar facets of FSP and also have similar levels of difficulty according to Figure 4 (e.g., items 5, 7, and 8 are at equivalent positions on the construct continuum).



Note. "M" is mean, "S" is one standard deviation, and "T" is two standard deviations.

Figure 4. Person-Item maps for Factors 1-4, left to right.

Item invariance. Item invariance by group is represented by differential item functioning (DIF) in Rasch analysis, and assesses whether or not the meaning of each item varies based on different groupings of respondents (Bond & Fox, 2015). In this case, the researcher assessed DIF for gender (females and males) and for the academic program (four groups of nine programs) the respondent was in, to see how the item difficulty varied between groups. A general rule of thumb is that differences in DIF of .50 logits or more represents substantial differences between respondent groups for that particular item (Bond & Fox, 2015). Table 18 shows DIF measures, which were

calculated for each of the four factors separately, including *t*-test and *p*-values. There was no statistically significant DIF for any of the items. The 6 items with non-significant DIF contrast > 0.5 were split between Perceptions (2), Beliefs (1), and Attitudes (3). From Table 18 there is no clear pattern of DIF across the four factors, and overall there was no significant DIF by gender.

Table 18
Differential Item Functioning Statistics for Gender

Item	Female Measure	Male Measure	DIF Contrast	t-test	p-value
1	-.81	-.23	.58	1.62	.12
7	.11	.70	. 59	1.90	.07
28	-.22	-.89	.68	1.78	.09
31	-.44	-1.84	1.39	1.30	.22
32	-.15	.57	.72	1.42	.18
35	-.34	-1.06	. 72	.91	.38

Note. Bold values represent statistically significant differences ($p < .01$). DIF Contrast and t-test represented as absolute value.

For the DIF analysis between academic programs, the nine programs were assigned into groups of four, as shown in Table 19. Four groups allowed for larger sample sizes and a simplified analysis compared to nine groups.

Table 19
Grouping for Academic Program DIF Analysis

Academic Program	Group
Child, Family, and School Psychology	Psychology
Counseling	Psychology
Social Work	Psychology
Curriculum and Instruction	Teaching
Early Childhood Special Education	Teaching
Teacher Preparation Programs	Teaching
Educational Leadership and Policy Studies	Educational Leadership
Library and Information Science	Information Sciences
Research Methods and Statistics	Information Sciences

Table 20 shows statistically significant ($p < .01$) DIF > .50 based on the four groups of academic programs. Only 4 items featured significant DIF, with item 25 featuring DIF across two comparisons. Psychology and Information Sciences each had significant DIF for 2 of the 3 comparisons in Perceptions (items 1, 2, and 6) in Table 21. Both item 25 comparisons feature Educational Leadership.

Table 20
Differential Item Functioning by Academic Program

Item	Programs	Program 1 Measure	Program 2 Measure	DIF Contrast	*t*	*p*
1	Psych-Info Sci	-1.03	.17	1.20	3.17	<.01
2	Psych-Teach	-.33	.99	1.33	4.31	<.01
6	Teach-Info Sci	-.95	.80	1.75	3.49	<.01
25	Psych-Edu Lead	-.48	-2.29	1.81	3.37	<.01
25	Teach-Edu Lead	-.22	-2.29	2.06	3.44	<.01

Note. DIF Contrast and t-test represented as absolute value.

Research Question 1c: Is There Adequate Reliability and Validity for Each of the Factors?

To determine the internal consistency of the 30 retained items and the four factors, Cronbach's α reliability was estimated. A Cronbach's α value between .70 to >.90 is considered good and the higher the value the better (Johnson & Christensen, 2017). Item analyses were conducted for the items found within the domains of *Perceptions of Roles and Responsibilities, Perceptions of Barriers to Implementing FSP*, *Attitudes about the Importance of Collaborating with Families*, and *Self-efficacy Beliefs Related to FSP.* Cronbach's α values for the domains of *Perceptions of Roles and Responsibilities* (.92)*, Attitudes about the Importance of Collaborating with Families* (.73), and *Self-efficacy Beliefs Related to FSP* (.94) were high. *Perceptions of Barriers to*

Implementing FSP was low (.58), which may be due to the small number items found within the domain.

The correlations between the four factors are shown in Table 21. There was significant correlation between the original three factors (Beliefs, Perceptions, and Attitudes), but not with Perceptions of Barriers. This is not surprising as Perceptions of Barriers has negative connotations, compared to the other three factors that had positively-oriented phrasing.

Table 21
Pearson Correlation Between Factors

Factor	1	2	3	4
1 (Beliefs)	1.00			
2 (Perceptions)	.49*	1.00		
3 (Attitudes)	.29*	.39*	1.00	
4 (Perceptions of Barriers)	.08	.19	.19	1.00

Note: * indicates statistical significance at the .01 level (two-tailed).

Research Question 2: Do Preservice Educators Respond Differently to Items Based on Demographic Differences?

Several analyses were performed comparing the summed score within the 30 retained items and the four FSPCS domains - Perceptions, Perceptions of Barriers, Attitudes, and Beliefs - among different demographic groups. The researcher compared the differences between respondents by: race, university type, age, gender, graduate school progress, program type, and experience with FSP activities. Independent sample t-tests were used to determine whether the difference in means was greater than 0.0 when comparing differences among two groups (Field, 2013). Analysis of variance (ANOVA) was used to compare the means from several different demographic groups. For each of

the t-tests performed equal variances were assumed, and the assumption of homogeneity of variances was met for each t-test. The standard error was examined to see how much variability existed between sample means. Cohen's *d* was used to determine effect size: 0.2 (small), 0.5 (medium), and 0.8 (large), as was eta-squared (η^2): .02 (small), .13 (medium), and .26 (large) (Cohen, 1988). No adjustments were made to accommodate inflation of Type I error in the t-tests; however, Bonferroni's adjustment was used to control the family-wise error rate in the ANOVAs.

Differences by race/ethnicity. An analysis was first performed comparing the summed scores for the domains of Perceptions, Perceptions of Barriers (PoB), Attitudes, and Beliefs for participants who were white (*n*= 109) and respondents who were from culturally and linguistically diverse backgrounds (*n*= 46). See Table 22 for the means and standard deviations for each of these four sub-domains for the different ethnic groups. There was a statistically significant difference in the means in the Perceptions domain, $t(153) = 3.24$ $p = .01$, $d = .48$. Respondents who identified as white endorsed items in the Perceptions domain higher than respondents who identified as CLD. There were no statistically significant differences in the means between groups in the domains of PoB, $t(153) = -1.60$, $p = .248$, $d = .20$; Attitudes, $t(153) = 1.56$, $p = .12$, $d = .25$; or Beliefs, $t(153) = .81$, $p = .42$, $d = .14$.

Table 22
Means and Standard Deviations on the FSPCS Domains by Race/Ethnicity

Race/Ethnicity	*n*	*M*	SD	Std. Error Mean
Perceptions**				
White	109	59.64	5.57	.53
CLD	46	54.76	13.26	1.95
Perceptions of Barriers				

White	109	13.22	2.58	.25
CLD	46	13.76	2.81	.41
Attitudes				
White	109	34.42	2.10	.20
CLD	46	33.73	3.22	.47
Beliefs				
White	109	46.37	8.71	.83
CLD	46	45.02	11.03	1.63

**$p < .01$

Differences by university type. A second analysis was performed comparing the summed scores for the domains of Perceptions, Perceptions of Barriers (PoB), Attitudes, and Beliefs for participants who attended a private university (n= 128) and participants who attended a public university (n= 27). See Table 23 for the means and standard deviations for the different university types. There was a statistically significant difference in the means in the Perceptions of Barriers domain, $t(153) = -2.63$, $p = .01$, $d = .54$. Respondents who attended a public university responded higher to items in the PoB domain than participants from a private university. There were no statistically significant differences in the means between groups in the domains of Perceptions, $t(153) = 2.30$, $p = .02$, $d = .60$; Attitudes, $t(153) = 1.20$, $p = .23$, $d = .29$; or Beliefs, $t(153) = 1.35$, $p = .18$, $d = .32$.

Table 23
Means and Standard Deviations on the Summed Scores for the Domains by Private/Public University Attendance

University Type	*n*	*M*	SD	Std. Error Mean
Perceptions*				
Private	128	57.45	9.46	.84
Public	27	61.70	3.11	.60
Perceptions of Barriers				
Private	128	13.63	2.57	.23
Public	27	12.19	2.79	.54
Attitudes				

Private	128	34.11	2.62	.23
Public	27	34.74	1.70	.33
Beliefs				
Private	128	45.50	9.94	.88
Public	27	48.19	6.25	1.20

*$p < .05$

Differences by age. A third analysis was performed comparing the summed scores for the domains of Perceptions, Perceptions of Barriers (PoB), Attitudes, and Beliefs for participants of differing ages: 20-24 years of age (n= 59), 25-30 years of age (n= 63), 31-36 years of age (n= 14), 37-41 years of age (n= 11), and 42+ years of age (n= 7). See Table 24 for the means and standard deviations for the different age groups. There were no statistically significant differences in the means among groups in the domains of Perceptions, $F(4,150) = 1.65$, $p = .17$, $\eta^2 = .04$; Perceptions of Barriers, $F(4,150) = 1.67$, $p = .16$, $\eta^2 = .04$; Attitudes, $F(4,150) = 2.11$, $p = .08$, $\eta^2 = .05$; or Beliefs, $F(4,150) = 2.68$, $p = .03$, $\eta^2 = .07$.

Table 24
Means and Standard Deviations on the Summed Scores of the Domains Based on Age

Age Range	*n*	*M*	SD	Std. Error Mean
Perceptions				
20-24 years	59	59.22	6.77	.88
25-30 years	63	58.16	9.56	1.20
31-36 years	14	53.07	14.25	3.81
37-41 years	12	60.25	3.44	.99
42+ years	7	56.57	8.54	3.23
Perceptions of Barriers				
20-24 years	59	13.27	2.62	.34
25-30 years	63	13.67	2.52	.32
31-36 years	14	12.21	2.08	.56
37-41 years	12	14.42	3.90	1.12
42+ years	7	12.29	1.98	.75
Attitudes				
20-24 years	59	33.85	2.46	.32
25-30 years	63	34.51	2.35	.30

31-36 years	14	34.86	2.18	.58
37-41 years	12	34.91	1.08	.31
42+ years	7	32.29	4.79	1.81
Beliefs				
20-24 years	59	44.14	8.35	1.09
25-30 years	63	45.54	9.89	1.24
31-36 years	14	48.07	10.16	2.71
37-41 years	12	52.83	6.90	1.99
42+ years	7	49.29	11.87	4.49

Differences by gender. A fourth analysis was performed comparing the summed scores for the domains of Perceptions, Perceptions of Barriers (PoB), Attitudes, and Beliefs for participants who were female (n= 131) or male (n=21). See Table 25 for the means and standard deviations by gender. There were no statistically significant differences in the means between groups for the domains of: Perceptions, $t(150) = 2.33$, $p = .02$, $d = .42$; Perceptions of Barriers, $t(150) = -.72$, $p = .47$, $d = .17$; Attitudes, $t(150) = -.658$, $p = .51$, $d = .12$; or Beliefs, $t(150) = 1.50$, $p = .14$, $d = .31$.

Table 25
Means and Standard Deviations on Summed Scores of the Domains by Gender

Gender	*n*	*M*	SD	Std. Error Mean
Perceptions				
Female	131	59.41	6.22	.54
Male	21	55.48	11.60	2.53
Perceptions of Barriers				
Female	131	13.36	2.64	.23
Male	21	13.81	2.80	.61
Attitudes				
Female	131	34.35	2.45	.21
Male	21	34.62	1.83	.40
Beliefs				
Female	131	46.72	8.49	.74
Male	21	43.52	12.02	2.62

Differences by parents/non-parents. A fifth analysis was performed comparing the summed score for the domains of Perceptions, Perceptions of Barriers (PoB), Attitudes, and Beliefs for participants who were either a parent of a child who was developing typically (n=23), a parent who had a child with special needs (n= 4), or a respondent who was not a parent (n= 128). See Table 26 for the means and standard deviations for the different groups. There were no statistically significant differences in the means among groups for the domains of: Perceptions, $F(2, 152) = .56$, $p = .57$, $\eta^2 = .01$; Perceptions of Barriers, $F(2, 152) = .98$, $p = .38$, $\eta^2 = .01$; Attitudes, $F(2, 152) = .66$, $p = .52$, $\eta^2 = .01$; or Beliefs, $F(2, 152) = 2.26$, $p = .11$, $\eta^2 = .03$.

Table 26
Means and Standard Deviations on the Summed Scores of the Domains for Parent/Non-parent

Parent	*n*	*M*	SD	Std. Error Mean
Perceptions				
Yes, I have children who are typically developing	23	56.57	11.04	2.30
Yes, I have children, one of whom is special needs	4	60.50	3.87	1.92
No, I am not a parent	128	58.41	8.52	.75
Perceptions of Barriers				
Yes, I have children who are typically developing	23	12.87	2.77	.58
Yes, I have children, one of whom is special needs	4	14.75	3.59	1.80

No, I am not a parent	128	13.43	2.61	.23
Attitudes				
Yes, I have children who are typically developing	23	33.70	3.67	.77
Yes, I have children, one of whom is special needs	4	34.75	1.50	.75
No, I am not a parent	128	34.30	2.26	.20
Beliefs				
Yes, I have children who are typically developing	23	48.65	10.91	2.28
Yes, I have children, one of whom is special needs	4	52.50	10.66	5.33
No, I am not a parent	128	45.28	9.03	.80

Differences by graduate school progress. A sixth analysis was performed comparing the summed scores for the domains of Perceptions, Perceptions of Barriers (PoB), Attitudes, and Beliefs for participants who had just entered their respective program (n=88), those who were halfway done (n= 47), or those who had almost completed their program (n= 20). See Table 27 for the means and standard deviations for the different groups. There was a statistically significant difference in the mean in the Perceptions domain, $F(2, 152) = 4.15$, $p = .02$, $\eta^2 = .05$. In order to determine which pair(s) of subgroups were significantly different from one another in the Perceptions domain, follow-up pairwise comparisons were conducted using Bonferroni's method to

control Type I error. A significant difference in means was found when comparing those that had just entered their program to those that were about halfway done, with a higher mean for those that had just entered than for those that were halfway done. There were no statistically significant differences in the means among groups in the domains of Perceptions of Barriers, $F(2, 152) = .08$, $p = .02$, $\eta^2 = .00$; Attitudes, $F(2, 152) = .77$, $p = .47$, $\eta^2 = .01$; or Beliefs, $F(2, 152) = .81$, $p = .45$, $\eta^2 = .01$.

Table 27
Means and Standard Deviations on the Summed Scores for the Domains by Time in Program

Time in Program	*n*	*M*	SD	Std. Error Mean
Perceptions*				
Just Entered	88	59.93	6.13	.65
About Halfway Done	47	56.13	10.31	1.50
Almost Completed	20	55.40	13.07	2.92
Perceptions of Barriers				
Just Entered	88	13.31	2.62	.28
About Halfway Done	47	13.47	2.89	.42
Almost Completed	20	13.50	2.28	.51
Attitudes				
Just Entered	88	34.06	2.61	.28
About Halfway Done	47	34.60	1.83	.27
Almost Completed	20	34.05	3.25	.73
Beliefs				
Just Entered	88	45.27	8.48	.90
About Halfway Done	47	46.34	10.01	1.46
Almost Completed	20	45.97	9.44	.76

*$p < .05$

Differences by graduate program. A one-way analysis of variance (ANOVA) was performed, whereby the participants, defined by their program type, were compared in terms of their summed score within the domains of Perceptions, Perceptions of Barriers, Attitudes, and Beliefs. Respondents were grouped into one of four categories as they were for the differential item statistics tests: Child, Family, and School Psychology, Counseling, and Social Work were one group (n= 93); Curriculum and Instruction, Early Childhood Special Education, Teacher Preparation Programs were another group (n= 26); Educational Leadership and Policy Studies was a third group (n= 22); and Library and Information Science and Research Methods and Statistics were included in the fourth group (n= 13). See Table 28 for the means and standard deviations summed scores by domain for the different programs. A statistically significant effect of program type was found in the domains of Perceptions, $F(3,150) = 13.64$, $p < .001$, $\eta^2 = .21$; Perceptions of Barriers, $F(3,150) = 3.68$, $p = .01$, $\eta^2 = .07$; and Beliefs, $F(3,150) = 8.43$, $p < .001$, $\eta^2 = .14$. There were no statistically significant differences in the means between program type in the domain of Attitudes, $F(3,150) = 1.19$, $p < .316$, $\eta^2 = .02$.

Table 28
Means and Standard Deviations on the Summed Scores of the Domains by Program Type

Program Type	*n*	*M*	SD	Std. Error Mean
Perceptions***				
Psychology	93	60.09	7.38	.77
Teaching	26	59.27	5.32	1.04
Educational Leadership	22	56.60	9.10	1.94
Information Sciences	13	45.31	12.88	3.57
Perceptions of Barriers**				
Psychology	93	12.92	2.47	.26
Teaching	26	14.59	2.79	.55

Educational Leadership	22	13.73	2.54	.54
Information Sciences	13	14.38	2.10	.58
Attitudes				
Psychology	93	34.49	2.27	.24
Teaching	26	34.04	2.37	.47
Educational Leadership	22	33.82	3.17	.68
Information Sciences	13	33.31	3.01	.84
Beliefs***				
Psychology	93	45.63	8.70	.90
Teaching	26	48.73	6.50	1.28
Educational Leadership	22	49.95	9.37	2.00
Information Sciences	13	35.54	12.39	3.43

**$p < .01$; ***$p < .001$

In order to determine which pair(s) of program type subgroups were significantly different from one another, follow-up pairwise comparisons were conducted using Bonferroni's method to evaluate the differences among means for the domains of Perceptions, PoB, and Beliefs. Based on the results, participants from Information Sciences programs (i.e., Library and Information Science and Research Methods and Statistics) had significantly lower mean scores within the domains of Perceptions and Beliefs, than respondents from the other programs. Respondents from Psychology programs had significantly lower mean scores within the domain of Perceptions of Barriers, than respondents from Teaching programs. See Table 29 for the results of pair-wise comparisons. Respondents in programs related to Psychology, Teaching, and Educational Leadership were not significantly different from one another in the domains of Perceptions and Beliefs. No significant differences were found within the Attitudes domain.

Table 29
Program Type Group Pairwise Comparisons

Program Type	*M* Difference	Std. Error Mean
Perceptions		
Information Sciences vs.		
Psychology	-14.78[a]	2.35
Teaching	-13.96[a]	2.70
Educational Leadership	-11.28[a]	4.81
Perceptions of Barriers		
Psychology vs.		
Teaching	-1.61[a]	.56
Beliefs		
Information Science vs.		
Psychology	-10.10[a]	2.61
Teaching	-13.19[a]	3.00
Educational Leadership	-14.42[a]	3.09

[a]The mean difference is significant at the 0.05 level.

An additional one-way analysis of variance (ANOVA) was performed, whereby the participants, defined by their program type (i.e., Psychology, Teaching, Educational Leadership, and Information Sciences), were compared in terms of their summed score on the items that specially asked respondents about their perceptions, attitudes, and beliefs about working with CLD families (Items: 16, 22, 28, 29, 30, 32). There was found to be a statistically significant effect on the summed score on CLD items and the program they were enrolled in, $F(3,150) = 5.529$, $p = .001$, $\eta^2 = .10$. See Table 30 for the means and standard deviations for scores on CLD items by program type. In order to determine which pair(s) of program type subgroups were significantly different from one another, follow-up pair-wise comparisons were conducted using Bonferroni's method to evaluate the differences among means. Based on the results, participants from Information Sciences programs (i.e., Library and Information Science and Research Methods and Statistics) had significantly lower mean scores on CLD items when

compared to respondents from the other programs. See Table 31 for the pair-wise comparisons. No significant differences in scores were found among the other program groups.

Table 30
Means and Standard Deviations for Summed Scores on CLD Items by Program Type

Program Type	*n*	*M*	SD
Psychology	93	29.01	4.39
Teaching	26	30.73	3.09
Educational Leadership	22	29.68	6.30
Information Sciences	13	24.62	4.71

Table 31
Pair-wise Comparison of Scores on CLD Items by Program Type

Program Type	*M* Difference	Std. Error Mean
Information Sciences vs.		
Psychology	-4.40[a]	1.34
Teaching	-6.12[a]	1.53
Educational Leadership	-5.07[a]	1.58

[a]The mean difference is significant at the 0.05 level.

Differences by experience with FSP activities. Next, analyses were performed comparing the number of FSP activities the respondents had engaged in (e.g., written communication, parent-teacher conferences, telephone calls) to other demographic factors and total score on the FSPCS. The first comparison was done examining the mean number of FSP activities the respondents had participated in and the program they were enrolled in. See Table 32 for the means and standard deviations for number of FSP activities engaged in by program type.

Table 32
Means and Standard Deviations for Number of FSP Activities Engaged in by Program

Program	*n*	*M*	SD
Child, Family, & School Psychology	60	3.18	2.43
Counseling	18	2.94	1.83

Curriculum & Instruction	7	3.29	2.81
Early Childhood Special Education	2	4.50	.71
Educational Leadership & Policy Studies	22	6.55	3.20
Library & Information Science	4	2.00	3.37
Research Methods & Statistics	9	2.89	3.44
Teacher Preparation Programs	17	2.29	1.65
Social Work	15	5.20	3.19
Other	1	8.00	-

A one-way analysis of variance (ANOVA) was then performed, whereby the participants, defined by their program type, were compared in terms of the total number of FSP activities they had engaged in to determine if there was a statistically significant difference among groups. There was found to be a statistically significant effect on the number of FSP activities participants had engaged in and the program they were enrolled in, $F(8,145) = 5.373$, $p < .00$, $\eta^2 = .23$.

In order to determine which pair(s) of program type subgroups were significantly different from one another, follow-up pair-wise comparisons were conducted using Bonferroni's method to evaluate the differences among means. Respondents in the Educational Leadership and Policy Studies program reported engaging in significantly more FSP activities than participants in the Child, Family, and School Psychology, Counseling, Research Methods and Statistics, and Teacher Preparation programs. No significant differences were found among the other groups. See Table 33 for the pair-wise comparisons.

Table 33
Program Type Group Pair-wise Comparisons on the Number of FSP Activities Engaged in

Program Type	*M* Difference	Std. Error Mean
Child, Family, & School Psychology vs.		
Counseling	.239	.700
Curriculum & Instruction	-.102	1.04

Early Childhood Special Education	-1.32	1.87
Educational Leadership & Policy Studies	-3.36[a]	.649
Library & Information Science	1.18	1.35
Research Methods & Statistics	.294	.931
Teacher Preparation Programs	.889	.716
Social Work	-2.02	.75
Counseling vs.		
Curriculum & Instruction	-.341	1.16
Early Childhood Special Education	-1.56	1.94
Educational Leadership & Policy Studies	-3.60[a]	.828
Library & Information Science	.944	1.44
Research Methods & Statistics	.056	1.06
Teacher Preparation Programs	.650	.881
Social Work	-2.26	.911
Curriculum & Instruction vs.		
Early Childhood Special Education	-1.21	2.09
Educational Leadership & Policy Studies	-3.26	1.13
Research Methods & Statistics	.397	1.31
Teacher Preparation Programs	.991	1.17
Social Work	-1.91	1.19
Early Childhood Special Education vs.		
Educational Leadership & Policy Studies	-2.05	1.92
Library & Information Science	2.50	2.56
Research Methods & Statistics	1.61	2.04
Teacher Preparation Programs	2.206	1.95
Social Work	-.700	1.96
Educational Leadership & Policy Studies vs.		
Library & Information Science	4.55	1.42
Research Methods & Statistics	3.66[a]	1.03
Teacher Preparation Programs	4.25[a]	.841
Social Work	1.35	.872
Library & Information Science vs.		
Research Methods & Statistics	-.889	1.57
Teacher Preparation Programs	-.294	1.45
Social Work	-3.20	1.47
Research Methods & Statistics vs.		
Teacher Preparation Programs	.594	1.07
Social Work	-2.31	1.10
Teacher Preparation Programs vs.		
Social Work	-2.91	.923

[a]The mean difference is significant at the 0.05 level.

Another one-way analysis of variance (ANOVA) was performed, whereby the participants, defined by the number of FSP activities they had engaged in and their summed scores within the domains of Perceptions, Perceptions of Barriers, Attitudes, and Beliefs were compared. Respondents were grouped into one of five categories: 0 FSP activities (n= 21), 1-2 FSP activities (n= 40), 3-4 FSP activities (n= 41), 5-7 FSP activities (n= 33), and 8+ FSP activities (n= 20). See Table 34 for the means and standard deviations for the number of FSP activities participants had engaged in and their summed scores within the FSPCS domains. A statistically significant main effect on the number of FSP activities participants had engaged in was found within the Beliefs domain, $F(4,150) = 11.52$, $p < .001$, $\eta^2 = .24$. There were no statistically significant differences in the means between groups in the domains of Perceptions, $F(4,150) = 1.14$, $p = .34$, $\eta^2 = .03$; Perceptions of Barriers, $F(4, 150) = .20$, $p = .94$, $\eta^2 = .01$; Attitudes, $F(4, 150) = 1.36$, $p = .25$, $\eta^2 = .03$.

Table 34
Means and Standard Deviations for Number of FSP Activities Engaged in and Summed Scores within the FSPCS Domains

Number of FSP Activities	*n*	*M*	SD	Std. Error Mean
Perceptions				
0	21	56.24	9.93	2.17
1-2	40	57.88	8.35	1.32
3-4	41	57.41	9.48	1.48
5-7	33	60.91	5.07	.88
8+	20	58.00	11.60	2.60
Perceptions of Barriers				
0	21	13.57	2.68	.58
1-2	40	13.25	2.66	.42
3-4	41	13.17	2.30	.36
5-7	33	13.48	2.46	.43
8+	20	13.70	3.66	.82
Attitudes				

0	21	33.57	2.93	.64
1-2	40	34.18	2.35	.37
3-4	41	33.93	2.54	.40
5-7	33	34.45	2.84	.49
8+	20	35.20	1.06	.24
Beliefs				
0	21	38.29	10.69	2.33
1-2	40	44.95	9.18	1.45
3-4	41	44.15	8.42	1.31
5-7	33	49.15	7.31	1.27
8+	20	54.55	4.45	1.00

In order to determine which pair(s) of FSP activity subgroups were significantly different from one another in the Beliefs domain, follow-up pairwise comparisons were conducted using Bonferroni's method to evaluate the differences among means. Respondents who reported that they had not engaged in any FSP activities reported significantly lower sum of scores on the Beliefs domain than participants who had engaged in 5 or more activities. Respondents who reported in engaging in 8 or more FSP activities had significantly higher scores in the Beliefs domain than participants who reported engaging in four or less FSP activities. No significant differences were found among the other groups. See Table 35 for the pair-wise comparisons.

Table 35
Pairwise Comparisons of Number of FSP Activities Reported and the Summed Score on the Beliefs Domain

Number of FSP Activities	*M* Difference	Std. Error Mean
0 vs		
1-2	-6.66[a]	2.25
3-4	-5.86	2.24
5-7	-10.87[a]	2.34
8+	-16.26[a]	2.61
1-2 vs.		
8+	-9.60[a]	2.30
3-4 vs.		
5-7	-5.01	1.96
8+	-10.40[a]	2.28

5-7 vs. 8+	5.40	2.37

[a]The mean difference is significant at the 0.05 level.

Summary of the Results

The results of the study are presented in this Chapter. Descriptive statistics, confirmatory factor analysis of the original construct, exploratory factor analysis to suggest a refined construct, Rasch modeling, reliability analysis, and comparison tests were performed on the Family-School Partnering and Collaboration Scale (FSPCS). The final scale after all of these analyses is best described as having 30-items and four domains: *Perceptions of Roles and Responsibilities* (11-items: 1-8, 11, 16, 36), *Perceptions of Barriers to Implementing FSP* (3-items: 12, 13, 15), *Attitudes about the Importance of Collaborating with Families* (6-items: 31-35, 37), and *Self-efficacy Beliefs Related to FSP* (10-items: 21-30).

Research question #1. The EFA results indicated that the items factor appropriately into four domains with the three most pronounced domains being Perceptions, Attitudes, and Beliefs, and the fourth factor, Perceptions of Barriers being viewed as a sub-class of Perceptions. Therefore, the hypothesized three-domain structure of Perception, Attitudes, and Beliefs was largely supported. Rasch analysis was run for the four domains separately, which all showed unidimensionality. Three misfitting items were removed, and the Rasch analysis was re-run to examine response category functioning, separation and reliability, targeting, and item invariance.

The final 30 items that comprise the FSPCS were found to be reliable. The Cronbach's α values for the domains of *Perceptions of Roles and Responsibilities* (.92),

Attitudes about the Importance of Collaborating with Families (.73), and *Self-efficacy Beliefs Related to FSP* (.94) were high. *Perceptions of Barriers to Implementing FSP* was low (.58).

Research question #2. When differences between groups were assessed using the final revised version of the FSPCS important group differences emerged.

First, significant differences in the summed scores within the domains of Perceptions, Perceptions of Barriers, Beliefs, and on CLD items were seen when respondents from the Information Sciences programs were compared to participants from the other education programs (i.e., Psychology, Teaching, Educational Leadership and Policy Studies). Respondents from Information Sciences programs endorsed items with lower ratings than respondents from other education programs.

Second, respondents who identified as white endorsed items in the Perceptions domain higher than participants who were from CLD backgrounds.

Third, participants who were attending public universities endorsed items within the Perceptions of Barriers domain higher than respondents from a private university.

Fourth, respondents who had just entered their program rated items within the Perceptions domain higher than participants who were about halfway through their studies.

Fifth, respondents from Psychology programs rated items within the Perceptions of Barriers domain significantly lower than participants from Teaching programs.

Lastly, significant differences were found when examining the number of FSP activities respondents had reported engaging in with the summed score within the *Self-efficacy Beliefs Related to FSP* domain.

The implication of these differences and the overall importance of having a new comprehensive measure to assess preservice educators' impressions of FSPCS is discussed in the remaining Chapter.

Chapter 5: Discussion, Conclusions, and Recommendations

Family-school partnerships (FSP) are critically important to increasing student achievement and family engagement. Schools, districts, and states have made FSP a fundamental aspect of education reform efforts. As such, it is essential for education program faculty members to prepare preservice educators to effectively engage with families. Preservice educators need to have the necessary skills to work with families along with a strong understanding of their perceptions, attitudes, and beliefs towards FSP. In addition, education program faculty need to have a better understanding of the perceptions, attitudes, and beliefs of the preservice educators they teach, in order to improve students' competencies and skills related to FSP. Thus, the primary purpose of this study was to develop a reliable, valid, and comprehensive measure to assess preservice educators' perceptions of roles, responsibilities, and barriers to implementing FSP; attitudes about the importance of collaborating with families; and beliefs about their efficacy related to FSP.

After an extensive review of the literature related to FSP and an examination of the scales already created to measure FSP competencies, an initial version of the Family-School Partnering and Collaboration Scale (FSPCS) was developed. It was initially piloted with preservice educators taking a course on FSP. The pilot study revealed that the scale was reliable, but that a more thorough literature review and expert panel critique were needed to better assess preservice educators' perceptions, attitudes, and beliefs

regarding FSP. Following another extensive literature review, expert panel review, and cognitive interviews with preservice educators, a second generation FSPCS was developed to reflect the information gleaned from those sources. This second version of the FSPCS was administered to 155 preservice educators from different education training programs throughout the state of Colorado. The exploratory factor analyses conducted with this sample resulted in a final recommended version of the FSPCS that consists of 4 subdomains: *Perceptions of Roles and Responsibilities* (items: 1-8, 11, 16, 36)*, Perceptions of Barriers to Implementing FSP* (items: 12, 13, 15), *Attitudes about the Importance of Collaborating with Families* (items: 31-35, 37), and *Self-efficacy Beliefs Related to FSP* (items: 21-30). This final recommended scale was then used to assess differences across: race, university type, age, gender, graduate school progress, program type, and experience with FSP activities.

A summary of the study findings is discussed below in relation to the research questions, along with an overall conclusion, the limitations of the study, and recommendations for future research.

Summary of the Findings

The Family-School Partnering and Collaboration Scale (FSPCS) was developed to comprehensively assess preservice educators' self-reported perceptions, attitudes, and beliefs regarding FSP and their competencies in developing meaningful partnerships with families. In answer to the first Hypothesis as to if there were three distinct factors, a series of factor analyses were performed to assess the factor structure of the FSPCS,

followed by Rasch analyses on the associated items and finally, reliability assessments on the final items contained in the recommended final scale.

Research question 1. The overall answer to *Question 1* regarding the underlying structure of the scale was based on a confirmatory factor analysis (CFA) that was first used to confirm the *a priori* latent factor structure hypothesized by the researcher. Maximum likelihood parameter estimation was used, and because multivariate nonnormality was observed in the data, appropriate adjustments were made for the goodness-of-fit estimates. These estimates showed adequate fit between the hypothesized model and the data.

Exploratory factor analysis. An exploratory factor analysis (EFA) was then performed on the full 39-item scale to estimate the factor structure, independent of the original assignment of items into Perceptions, Attitudes, and Beliefs. The principal factor analysis using orthogonal (varimax) rotation resulted in four factors for the 30 retained items, as 9 items were removed for low or cross-loadings (items: 9, 10, 14, 17, 18, 19, 29, 38, and 39). The two strongest factors were associated with items pre-assigned to Beliefs and Perceptions, and the third factor was associated with items pre-assigned to Attitudes. The fourth factor was associated with items originally assigned to Perceptions that have negative connotations – these items are referred to as "Perceptions of Barriers." As Perceptions of Barriers can be viewed as a sub-class of Perceptions, the three-factor construct is largely represented in the EFA. The factor structure was independent of the method of factor/component extraction and rotation, as principal factor analysis with oblique (direct oblimin) rotation and PCA with orthogonal (varimax) rotation resulted in

the same factor structure. Below, Figure 5 is a visual representation of the 4-factor model present in the FSPCS with *Influences on FSP* as the centerpiece.

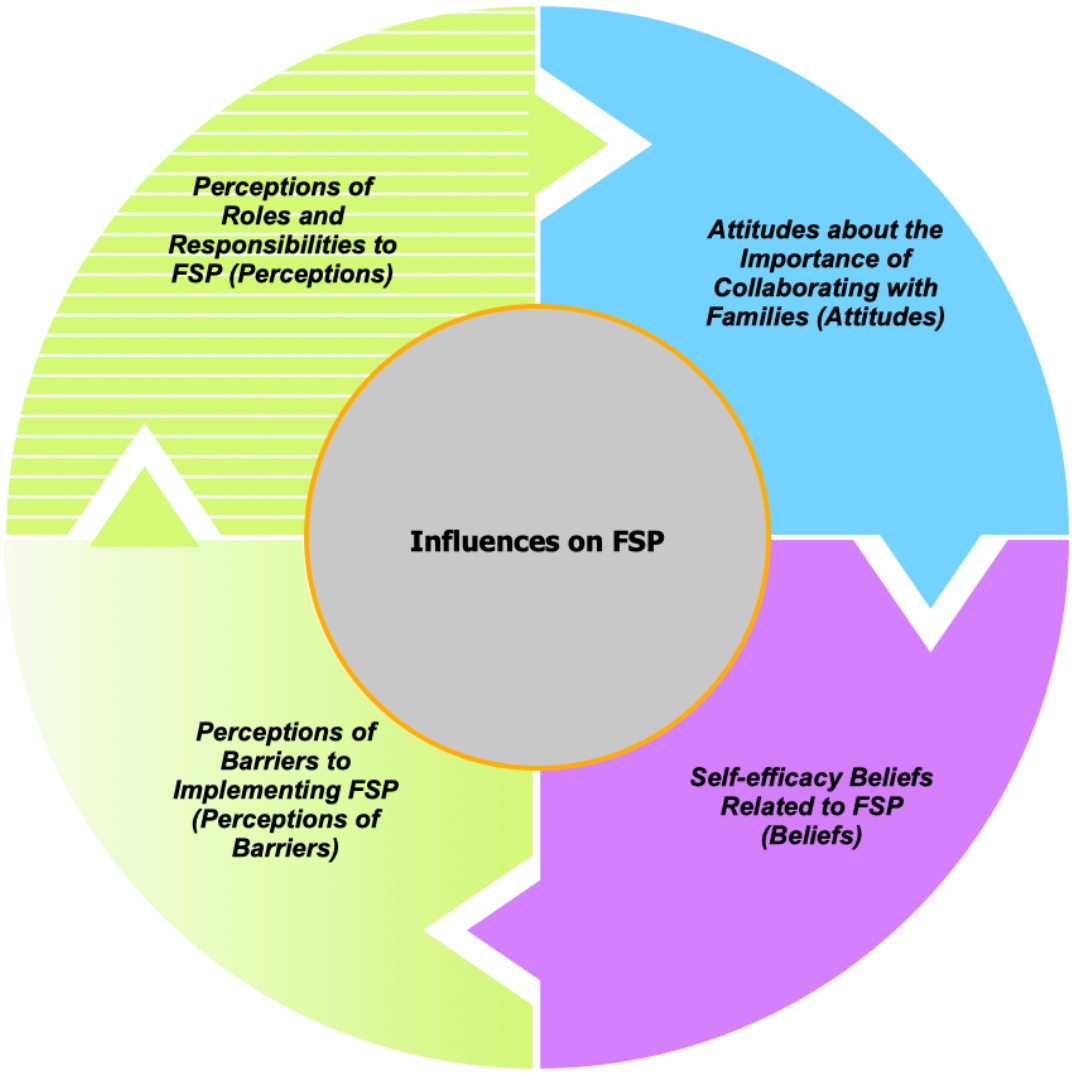


Figure 5. Visual representation of the FSPCS 4-factor model.

Rasch model analysis. When a Rasch model analysis was performed separately on each of the four factors to gain additional insights into the association between respondents and items, only three underfitting items were identified and removed from the subsequent analyses. Unidimensionality of each of the four factors was found,

although Factor 3 (Attitudes) had the weakest variance explained of each of the Rasch-scaled measures. The response category functionality was assessed to determine if the scale used in the instrument was appropriate. Ordering of the response scale was found to be suitable. Separation and reliability of the items and persons was adequate for Perceptions and Beliefs, providing confidence that similarly structured results would be found if similar items or similar participants were used in future studies. Separation and reliability were low for Attitudes and Perceptions of Barriers, which may result from the small number of items associated with these factors. Item difficulty and person ability analysis showed that the scale was "too easy" for the respondents, or in other words, the FSP competency of the respondents exceeded the FSP competency level measured by the items. Additional questions (or modified existing questions) addressing the higher end of the FSP competency scale would be beneficial for assessing person ability there. In this regard, two potential items that could be added to the scale are: "I feel confident in my ability to build trust with the students and families I work with", and "I believe I can use my students' cultural background to help promote learning and increase student achievement." Item invariance, represented by differential item function (DIF), was analyzed for gender and for the distribution of education programs that the respondents were in. DIF helps to show which items feature significant variance in responses based on different groupings of respondents. For the gender analysis, no statistically significant differences in responses was found. For the education program analysis, there were 4 items with statistically significant DIF.

Reliability analysis. Finally, reliability and validity were assessed on the 30 remaining items (after removing the 9 items eliminated based on the EFA) across the four-factor construct. Reliability was suitable for the four factors of: 1) *Perceptions of Roles and Responsibilities* (.92), 2) *Attitudes about the Importance of Collaborating with Families* (.73), 3) *Self-efficacy Beliefs Related to FSP* (.94), but was a bit lower on the fourth, 4) *Perceptions of Barriers to Implementing FSP sub factor* (.58), which may be due to the small number of items within the domain.

Research question 2. In regards to *Question 2* addressed in this study, it was found that differences were observed in respondents from different demographic groups on the FSPCS. The researcher compared the differences between respondents by: race, university type, age, gender, graduate school progress, program type, and experience with FSP activities. Overall, there were differences across program type, experience with FSP activities, race, university type, and graduate school progress. It is important to note that the conclusions to be drawn from these analyses must be viewed in light of compromises that may be due to the unequal sample sizes.

Differences by graduate program. Preservice educators from programs related to Information Sciences (Library and Information Sciences and Research Methods and Statistics) were found to respond differently to items when compared to respondents from Psychology, Teaching, and Educational Leadership programs. Respondents from Information Sciences programs endorsed items with lower ratings when examining their summed scores within the domains of Perceptions, Perceptions of Barriers, Beliefs, and on CLD items. Respondents from Psychology programs endorsed items within

Perceptions of Barriers significantly lower than respondents from Teaching programs. However, respondents in programs related to Psychology, Teaching, and Educational Leadership did not endorse items significantly differently from one another within the domains of Perceptions, Attitudes, or Beliefs. The significant differences in scores between respondents from Information Sciences programs and other education programs may be related to the professional roles of Library and Information Science and Research Methods and Statistics educators and the indirect roles (e.g., data collection, program evaluation, digital collection specialist, web designer), if any, they have in forming FSP. In addition, respondents from Library and Information Science and Research Methods and Statistics programs reported that they had engaged in fewer FSP activities than respondents from the other education programs.

Differences by experience with FSP activities. Results indicated that the fewer number of FSP activities preservice educators had engaged in was related to a lower summed score within the domain of *Self-efficacy Beliefs Related to FSP*. Respondents, regardless of program type, who reported engaging in five or more FSP activities had significantly higher *Self-efficacy Beliefs Related to FSP* scores than respondents who had engaged in 3 or less FSP activities.

Differences by race. Respondents who identified as white endorsed items in the Perceptions domain higher than participants who were from CLD backgrounds. Respondents who were white may have endorsed items within the Perceptions domain differently than those who identified as CLD because of their background experiences

and previously held assumptions about FSP and working with families (Denessen et al., 2009; Graue & Brown, 2003).

Differences by university type. Participants who were attending public universities endorsed items within the Perceptions of Barriers domain higher than respondents from a private university. This difference may be due to the unique experiences and coursework preservice educators from different university programs have in their respective programs, which may influence how they perceive barriers to FSP.

Differences by graduate school progress. Respondents who had just entered their program rated items within the Perceptions domain *higher* than participants who were about halfway through their studies. Respondents who were halfway through their program may have had a greater awareness of their roles and responsibilities based on coursework and field experiences, thus influencing how they endorsed items within the Perceptions domain. Whereas new students may not have the knowledge about the responsibilities inherent in their future professions due to their limited experiences within their respective programs (Milton-Wildey, Kenny, Parmenter, & Hall, 2014).

Overall Conclusions

The current study provided the initial psychometric properties for the Family-School Partnering and Collaboration Scale (FSPCS). It was determined that the FSPCS reliability and validity were supported. In addition, the FSPCS was found to have a four-factor solution: Perceptions, Attitudes, and Beliefs with the fourth factor, Perceptions of Barriers being viewed as a sub-class of Perceptions. While more research is needed to

confirm the findings from this current investigation and to further refine the scale, the FSPCS can provide valuable information on preservice educators' perceptions, attitudes, and beliefs related to FSP and support its use as a tool in assessing students FSP competencies before they enter the field. Moreover, this measure can assist educator faculty in aiding their students in developing appropriate levels of FSP competencies and help students have a greater self-awareness about how their perceptions, attitudes, and beliefs affect the development of strong FSP. Since this new scale may provide insights into students' mindsets surrounding FSP, this information could then be employed to enhance preservice training experiences. Such training is needed to ensure that educators enter their respective fields ready to collaborate and engage the families of the students they serve.

Furthermore, the FSPCS can provide faculty with a breakdown of specific insights that may assist in helping to develop activities and field placements to further increase students' levels of self-awareness and improve communication and collaboration skills, especially when working with families (Evans, 2013). Information from the FSPCS may enable faculty to target constructivist and adult learning theory and practices to best support students' ongoing development regarding FSP (Kroeger & Lash, 2011). Indeed, Lafromboise et al. (1991) identified three ways that rating scales could be useful in the training of graduate students: 1) in supervision, when supervisors are working closely with their students; 2) as a self-reflection tool when students are examining how their thoughts impact their actions; and 3) as a tool that could be used by individuals working in the field. Thus, the FSPCS could be used to aid faculty, preservice educators,

and educators in the field. Moreover, if further validation of the FSPCS is performed with respondents working in the education field, the FSPCS also could be a useful tool for school districts seeking to measure FSP perceptions, attitudes, and beliefs in their employees, which would align with current legislation requirements related to evaluating FSP competencies (ESSA, 2015). The final recommended version of the FSPCS was found to be a comprehensive instrument that measured preservice educators' self-reported perceptions, attitudes, and beliefs.

Other instruments have assessed preservice teachers' thinking surrounding FSP, but no measure has assessed preservice educators from various education training programs (Amatea et al., 2012; Denessen et al., 2009; Graue & Brown, 2003; Katz & Bauch, 1999; Morris & Taylor, 1998; Tschannen-Moran & Woolfolk Hoy, 2001). This new measure goes beyond those employed in the past, in that it can be used with preservice educators from various education training programs who intend to work in schools upon completion of their degree (i.e., students in school psychology, counseling, teaching, curriculum and instruction, educational leadership, library and information science, research methods and statistics, and social work). Since the FSPCS was found to be comprehensive, reliable, and valid, faculty from different education training programs may choose to use interdisciplinary collaboration to optimize the learning of their students in regards to FSP, and study the differences in perceptions, attitudes, and beliefs among their students. By using interdisciplinary collaboration faculty can learn with and from their colleagues in other education and social work departments to improve and

enhance the experiences that preservice educators have in their respective programs (Lam, 2005; Williams et al. 2012; Zwarenstein et al., 2005).

Limitations of the Study

This current study has important limitations that can be grouped into those that pertain to the instrument itself, to the final sample included in the study, and to the overall procedures to recruit subjects into the study. Issues related to each of these three general limitation areas will be reviewed with an explanation of how these issues serve to limit the generalizations that can be made.

Instrument limitations. First, the instrument developed, the FSPCS, was a self-report measure, which may have caused respondents to answer items based on a social desirability bias or they may have overestimated their understanding of FSP concepts. Second, the instrument used a rating scale, which is subjective and assumes that the distance between each point is equidistance, when the points are not (Bond & Fox, 2015). Additionally, respondents may be influenced by their previous responses and keep agreement in their responses to items regardless of the content (DeVellis, 2017). Third, none of the items was reverse-phrased, which is sometimes recommended in scale development to reduce response bias (Field, 2013). Fourth, although focus groups have been documented to be beneficial in scale development (Fowler, 2014), this study did not utilize this approach. Including focus group discussions with preservice educators during the initial stages of the measurement design process may have provided valuable insights into their understanding of FSP concepts and may have helped in the drafting of items.

Sample limitations. Overall there were three issues in regards to the sample employed in this study. First, the sample size was relatively small (<200). Gorsuch (1983) suggested 5 participants for each item, which would have meant that 225 participants would have been needed for the current study. Although Comrey (1973) recommended that having 500 to 1000 participants would be "very good" and "excellent," in most circumstances having a sample size of 200 would be adequate for running ordinary factor analysis (Comrey, 1988; DeVellis, 2017). A larger sample size would have facilitated splitting the data into two groups, one used for EFA and the other used for CFA of the construct produced by the EFA. Second, the majority of participants were from one private university in the Mountain West, and results may not be representative of a nationwide sample. In addition, FSP legislation and implementation strategies may differ in other regions, thus impacting how respondents endorse items on the FSPCS. Third, the unequal distribution and sample sizes across race, gender, age, and program types means that the conclusions drawn about differences across education programs must be reverified in other studies before broad generalizations can be made about the perceptions, attitudes, and beliefs that preservice educators have towards FSP.

Procedural or recruitment limitations. The manner of data collection, which involved emailing the announcement to faculty and program listservs contributed to two important limitations. First, it was very difficult to actually achieve a desired response rate. Individuals who may be in an education program, but who did not have easy access to the internet may have been less likely to complete the measure, due to its online distribution method. Second, the online distribution method prevented the researcher

from confirming that the participants did indeed intend to work in schools upon completion of their degree (i.e., no way to check if they had a school-based internship, or if they were taking courses that required school placements). As such, the researcher relied on the participants to be honest about their intention to work in schools.

Future Recommendations and Implications

While the findings of the current investigation are promising, more empirical support is needed to further validate the FSPCS. It is recommended that the scale be distributed to graduate-level education programs throughout the United States to further validate the scale and determine if the scale is appropriate for nationwide use. By administering the measure to a broader audience, the results of the scale would be more generalizable and would include more preservice educators from different education programs.

Several refinements to the scale should be considered, based on both the EFA and Rasch model analysis. First, nine items were removed for either large cross-loadings or insufficient loadings on the first three factors. These items would be candidates for revision. In particular, items with significant cross-loadings result in ambiguous measurement of the factors and attributes the items were designed to measure. This focus on a single factor defines unidimensionality. Additionally, three items were found to misfit the Rasch model. There is some justification to remove these items (Bond & Fox, 2015 p. 65). One should carefully examine and consider both the item wording itself and also characteristics of the respondents in relation to this item to determine if there is justification for the misfit and for deletion of those items.

According to the Rasch model analysis, the FSPCS subscales did not adequately measure higher-functioning FSP competency—that is, it was not well-targeted for the sample. This point warrants additional questions designed to measure higher FSP competency, possibly with adjustment of existing items to reduce redundancy in the lower FSP competency scale. Additional adjustments to the broader scale may also be in order based on the inadequate separation between item response categories (rating scale of 1-6) used in the scale. As inadequate separation was found across all response categories, this would suggest a response scale with fewer categories (possibly a rating scale of 1-4), where more differentiation between responses may result.

Confirmatory factor analysis of the final 30-item four-factor construct would be useful, using a dataset that is independent of the dataset used in EFA. Using the same data for EFA and CFA is discouraged, based on cross-validation and capitalizing on chance (Fokkema & Grieff, 2017; Hurley et al., 1997). Splitting of the current dataset into two samples was not possible, based on the relatively small total sample size. A future distribution and collection of FSPCS results could be used in CFA to validate the four-factor structure determined by the EFA. The CFA model that could be used to validate the construct is shown in Figure 6.

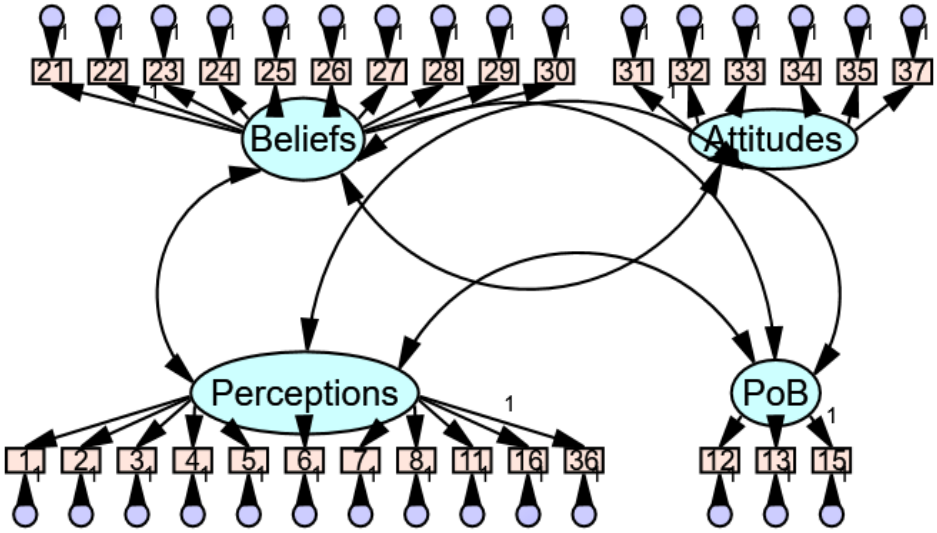


Figure 6. CFA model that could be used, with an independent data sample, in validation of the four-factor construct.

Another recommendation is that the scale be used as a pre/post measure of FSP perceptions, attitudes, and beliefs. Preservice educators could complete the scale at the start of their training program and upon completion, or they could complete the scale prior to taking a course related to FSP and again after completing the course. By understanding the perceptions, attitudes, and beliefs that preservice educators have regarding FSP, educator training program faculty would be able to make changes in their programs to facilitate the development of FSP skills in their students.

The information ascertained from using the FSPCS could provide educator training program faculty with a baseline of their students' level of FSP understanding to assess whether their students' self-reported perceptions, attitudes, and beliefs change after completing a course or their studies. If a preservice educator takes a course on FSP, but fails to show an increased level of self-efficacy related to FSP, faculty could collaborate with the individual student to better support their professional development regarding

FSP. This type of data would also provide valuable information to preservice educators, which may aid them in becoming reflective, critical thinkers who understand the various perceptions, attitudes, and beliefs they have that influence their ability to form strong FSP. Thus, if faculty and preservice educators are aware of their perceptions, attitudes, and beliefs, meaningful cognitive changes can occur and educators will be better able to meet the needs of their students.

An implication that can be drawn from this study is that graduate-level education programs need to create ample opportunities for students to engage in FSP activities, especially if they will engage with families in their future profession on a regular and ongoing basis. Based on results of the study, preservice educators who had reported engaging in several FSP activities had higher scores within the domain of *Self-efficacy Beliefs Related to FSP*, which supports the notion that more exposure to FSP activities is beneficial to preservice educators (Garmon, 2005; Knoblauch & Woolfolk Hoy, 2008; Sutterby et al., 2007).

Another implication for future research is that the FSPCS may also be used as an outcome measure of interdisciplinary collaboration that has been posed as one way to optimize the learning of preservice educators who will need to work together upon graduation to design and implement school-based family, school, and community collaboration (Miller, Coleman, & Mitchell, 2018). Having a current comprehensive and reliable measure of professional perceptions, attitudes, and beliefs regarding work with families will help improve and enhance such experiences across respective disciplines (Lam, 2005; Williams et al., 2012; Zwarenstein et al., 2005).

Lastly, with additional research and refinement the FSPCS may help provide needed information on critical training and interventions that may lead to more successful FSP between educators and families. Since FSP has been found to increase student academic achievement, educational attainment, social-emotional development, and increased parental and teacher self-efficacy (Cox, 2005; Epstein, 2008; Fan & Chen, 2001; Henderson & Mapp, 2002; Redding, et al., 2004) and helps address the inequities seen in schools (Jeynes, 2005, 2010, 2017), this measure could strengthen the bond between home and school and close achievement gaps. Thus, this new measure is an important and needed addition to the literature on FSP and on the training of preservice educators.

REFERENCES

Albright, M., Weissberg, R., & Dusenbury, L. (2011). *School-family partnership strategies to enhance children's social, emotional, and academic growth*. Newtown, MA: National Center for Mental Health Promotion and Youth Violence Prevention, Education Development Center, Inc.

Amatea, E. S., Mixon, K., & McCarthy, S. (2013). Preparing future teachers to collaborate with families contributions of family systems counselors to a teacher preparation program. *The Family Journal*, *21*(2), 136-145. doi: https://doi.org/10.1177/1066480712466539

Amato, P. R., & Rivera, F. (1999). Paternal involvement and children's behavior problems. *Journal of Marriage and the Family, 61,* 375–384. American School Counselor Association. (2016). The school counselor and school-family community partnerships [Position Statement]. Retrieved from https://www.schoolcounselor.org/asca/media/asca/PositionStatements/PS_Partnerships.pdf

American School Counselor Association (ASCA). (2016). The school counselor and school-family-community partnerships. Retrieved from https://www.schoolcounselor.org/asca/media/asca/PositionStatements/PS_Partneships.pdf

Appleseed. (2006*). It takes a parent: Recommendations regarding the vital role of parents and guardians in achieving student and school success*. Washington, DC: Author.

Arbuckle, J.L. (2017). Amos (Version 25.0) [Computer Program]. Chicago: IBM SPSS.

Avalos, B. (2011). Teacher professional development in teaching and teacher education over ten years. *Teaching and Teacher Education*, *27*(1), 10-20. doi:10.1016/j.tate.2010.08.0 07

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, *84*(2), 191-215. Retrieved from http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.315.4567&rep=rep1&type=pdf

Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York, NY: W. H. Freeman and Co.

Barnard, W. M. (2004). Parent involvement in elementary school and educational attainment. *Children & Youth Services Review, 26*(1), 39–62. doi: https://doi.org/10.1016/j.childyouth.2003.11.002

Baum, A. C., & McMurray-Schwarz, P. (2004). Preservice teachers' beliefs about family involvement: Implications for teacher education. *Early Childhood Education Journal, 32*(1), 57–61. doi: 1082-3301/04/0800-0057/0

Beatty, P. C., & Willis, G. B. (2007). Research synthesis: The practice of cognitive interviewing. *Public Opinion Quarterly*, *71*(2), 287-311. doi: https://doi.org/10.1093/poq/nfm006

Beijaard, D., Verloop, N., & Vermunt, J.D. (2000). Teachers' perceptions of professional identity: An exploratory study from a personal knowledge perspective. *Teaching and Teacher Education, 16*, 749-764. Retrieved from

http://s3.amazonaws.com/academia.edu.documents/31096192/teachers_perceptions.pdf?AWSAccessKeyId=AKIAIWOWYYGZ2Y53UL3A&Expires=1501807200&Signature=3osi%2FG43jW%2FPzZQ1e93WvaBq%2F0c%3D&response-content-disposition=inline%3B%20filename%3DTeachers_perceptions_of_professional_ide.pdf

Beijaard, D., Meijer, P.C., & Verloop, N. (2004). Reconsidering research on teachers' professional identity. *Teaching and Teacher Education, 20*(2), 107-128. doi: https://doi.org/10.1016/j.tate.2003.07.001

Belway, S., Durán, M., & Spielberg, L. (2010). *State laws on family engagement in education: National PTA reference guide*. Washington, D.C.: National PTA.

Bingham, A., & Abernathy, T. V. (2007). Promoting family-centered teaching: Can one course make a difference? *Issues in Teacher Education, 16*(1), 37-60. Retrieved from http://files.eric.ed.gov/fulltext/EJ796258.pdf

Bond, T.G., & Fox, C.M. (2015). *Applying the Rasch model: Fundamental measurement in the human sciences* (3rd ed.). New York: Routledge.

Bronfenbrenner, U. (1986). Ecology of the family as a context for human development. Research perspectives. *Developmental Psychology, 22*, 723–742. Retrieved from http://www.psy.miami.edu/faculty/dmessinger/c_c/rsrcs/rdgs/emot/Bronfenbrenner.DP.1986.pdf

Brown, A. L., Harris, M., Jacobson, A., & Trotti, J. (2014). Parent teacher education connection: Preparing preservice teachers for family engagement. *The Teacher Educator*, *49*(2), 133-151. doi: 10.1080/08878730.2014.887169

Bryan, J., & Holcomb-McCoy, C. (2004). School counselors' perceptions of their involvement in school-family-community partnerships. *Professional School Counseling, 7*(3), 162-171. Retrieved from http://s16138924.onlinehome-server.com/students/courses/sc606/Schoo-family-Community-Partnership.pdf

Bryan, J., & Griffin, D. (2010). A multidimensional study of school-family-community partnership involvement: School, school counselor, and training factors. *Professional School Counseling*, *14*(1), 75-86. doi: https://doi.org/10.5330/prsc.14.1.q447832251421482

Bull, A., Brooking, K., & Campbell, R., (2008). Successful home-school partnerships. Wellington: Ministry of Education. Retrieved from http://www.nzcer.org.nz/system/files/884_Successful_Home-School_Partnership v2.pdf

Byrne, B.M. (2016). *Structural equation modeling with amos: Basic concepts, applications, and programming* (3rd ed.). New York: Routledge.

Cattell, R.B. (1966). The scree test for the number of factors. *Multivariate Behavioral Research, 1*(2), 245-276. doi: 10.1207/s15327906mbr0102_10

Christenson, S. L., & Sheridan, S. (2001). *Schools and families: Creating essential connections for learning*. New York, NY: Guilford Press.

Christenson, S. L. (2004). The family-school partnership: An opportunity to promote the learning competence of all students. *School Psychology Review, 33*(1), 83-102.

Clarke, D., & Hollingsworth, H. (2002). Elaborating a model of teacher professional growth. *Teaching and Teacher Education*, *18*(8), 947-967. doi: https://doi.org/10.1016/S0742-051X(02)00053-7

Cohen, J. (1988). *Statistical power analysis for the behavioural sciences* (2nd ed.). New York: Academic Press.

Coleman, M. (2012). *Empowering family-teacher partnerships: Creating essential connections for learning*. New York, NY: Guilford Press.

Colorado Department of Education (CDE). (2014). Educator effectiveness: Fact sheet. Retrieved from https://www.cde.state.co.us/educatoreffectiveness/sb191factsheet

Colorado Department of Education (CDE). (n.d.). Rubric for evaluating Colorado teachers. Retrieved from https://www.cde.state.co.us/educatoreffectiveness/rubric-for-colorado-teachers

Comrey, A.L. (1973). *A first course in factor analysis*. New York: Academic Press.

Comrey, A.L. (1988). Factor analytic methods of scale development in personality and clinical psychology. *Journal of Consulting and Clinical Psychology, 56,* 754-761. doi: https://dx.doi.org/10.1037/0022-006X.56.5.754

Comrey, A.L., & Lee, H.B. (1992). *A first course in factor analysis* (2nd ed.). Hillsdale, N.J.: Erlbaum.

Cox, D. D. (2005). Evidence-based interventions using home-school collaboration. *School Psychology Quarterly*, *20*(4), 473-497. doi: http://dx.doi.org/10.1521/scpq.2005.20.4.473

Curtis, M.J., Grier, J.E., & Hunley, S.A. (2004). The changing face of school psychology: Trends in data and projections for the future. *School Psychology Review, 33,* 49-66. Retrieved from https://www.researchgate.net/profile/Sawyer_Hunley/publication/232518486_The_Changing_Face_of_School_Psychology_Trends_in_Data_and_Projections_for_the_Future/links/02e7e52bc408f1de0f000000/The-Changing-Face-of-School-Psychology-Trends-in-Data-and-Projections-for-the-Future.pdf

Curtis, M.J., Castillo, J.M., & Gelley, C. (2012). School psychology 2010: Demographics, employment, and the context for professional practice—Part 1. *Communique, 40*(7), 1-28.

D'Haem, J., & Griswold, P. (2016). Teacher educators' and student teachers' beliefs about preparation for working with families including those from diverse socioeconomic and cultural backgrounds. *Education and Urban Society*, doi: 0013124516630602.

de Acosta, M. (1996). A foundational approach to preparing teachers for family and community involvement in children's education. *Journal of Teacher Education*, 47(1), 9-15. doi: https://doi.org/10.1177/0022487196047001003

de Bruïne, E. J., Willemse, T. M., D'Haem, J., Griswold, P., Vloeberghs, L., & Van Eynde, S. (2014). Preparing teacher candidates for family–school partnerships. *European Journal of Teacher Education, 37*(4), 409-425. doi: http://dx.doi.org/10.1080/02619768.2014.912628

Deemer, S.A., & Minke, K.M. (1999). An investigation of the factor structure of the teacher efficacy scale. *Journal of Educational Research, 93,* 3-10. Retrieved from https://www.researchgate.net/profile/Sandra_Deemer/publication/249037440_An_Investigation_of_the_Factor_Structure_of_the_Teacher_Efficacy_Scale/links/5642139d08aebaaea1f8b70e.pdf

Denessen, E. J. P. G., Bakker, J. T. A., Kloppenburg, H. L., & Kerkhof, M. (2009). Teacher-parent partnerships: Preservice teacher competences and attitudes during teacher training in the Netherlands. *International Journal about Parents in Education*, 3(1), 29-36. Retrieved from http://repository.ubn.ru.nl/bitstream/handle/2066/90375/90375.pdf?sequence=1

Desforges, C., & Abouchaar, A. (2003). *The impact of parental involvement, parental support and family education on pupil achievements and adjustment: A literature review, Research Report 443*. London: DIES.

DeVellis, R.F. (2017). Scale development: Theory and applications (4th ed.). Thousand Oaks, CA: Sage Publications, Inc.

Dillman, D. A., Smyth, J. D., & Christian, L. M. (2009). *Internet, mail, and mixed-mode surveys the tailored design method.* Hoboken, NJ: Wiley.

Drake, D.D, (2000). Parents and families as partners in the education process: Collaboration for the success of students in public schools. *ERS Spectrum,* 34-35.

Education for All Handicapped Children Act of 1975, P.L. 94-142, 20 U.S.C. § 1400 *et seq*.

Elementary and Secondary Education Act of 1965, P.L. 89-750, 20 U.S.C. § 6301 *et seq*

Elias, M. J., Zins, J. E., Weissberg, R. P., Frey, K. S., Greenberg, M. T., Haynes, N. M., et al. (1997). Promoting social and emotional learning: Guidelines for educators. Alexandria, VA: Association for Supervision and Curriculum Development.

El Nokali, N. E., Bachman, H. J., & Votruba-Drzal, E. (2010). Parent involvement and children's academics and social development in elementary school. *Child Development*, 81, 988-1005. doi: 10.1111/j.1467-8624.2010.01447.x

Emerson, L., Fear, J., Fox, S., & Sanders, E. (2012). *Parental engagement in learning and schooling: Lessons from research,* A report by the Australian Research Alliance for Children and Youth (ARACY) for the Family-School and Community Partnership Bureau: Canberra, Australia.

Epstein, J.L. (1994). Theory to practice: School and family partnerships lead to school improvement and student success. In Cheryl L. Fagnano and Beverly Z. Werber (Eds.), *School, family, and community interaction: A view from the firing lines* (pp. 39-52). Boulder, CO: Westview Press.

Epstein, J.L. (1995). School/family/community partnerships. Caring for the children we share. *Phi Delta Kappan, 76*(9), 701-713.

Epstein, J. L., Sanders, M. G., & Clark, L. A. (1999). Preparing educators for school-family-community partnerships. Results of a national survey of colleges and universities. Retrieved from http://files.eric.ed.gov/fulltext/ED429045.pdf

Epstein, J. L. (2003). No contest: Why preservice and inservice education are needed for effective programs of school, family, and community partnerships. In S. Castelli,

M. Mendel, & B. Ravn (Eds.), *School, family, and community partnerships in a world of differences and change* (pp. 190-208). Gdansk, Poland: University of Gdansk.

Epstein, J. L. (2005). Links in a professional development chain: Preservice and inservice education for effective programs of school, family, and community partnerships. *The New Educator, 7*(2), 124–141. Retrieved from http://dx.doi.org/10.1080/15476880590932201

Epstein, J. L. (2008). Improving family and community involvement in secondary schools. *Principal Leadership*, 73(6), 9-12. Retrieved from https://pdfs.semanticscholar.org/b6e1/d2ac66a3669444a1f363b665b56c97f89ab pdf

Epstein, J.L. (2011). *School, family, and community partnerships: Preparing educators and improving schools* (2nd ed.). Boulder, CO: Westview Press.

Epstein, J. L., & Salinas, K. C. (1993). School and family partnerships: Surveys and summaries. Baltimore: The Johns Hopkins University: Center on Families, Communities, Schools and Children's Learning.

Epstein, J. L., Salinas, K. C., & Horsey, C. S. (1994). Reliabilities and summaries of scales: School and family partnership surveys of teachers and parents in the elementary and middle grades. Baltimore: The Johns Hopkins University: Center on Families, Communities, Schools and Children's Learning and the Center for Research on Effective Schooling for Disadvantaged Students.

Epstein, J.L. (2013). Ready or not? Preparing future educators for school, family, and community partnerships. *Teacher Education, 24*(2), 115-188. doi: 10.1080/10476210.2013.786887

Evans, M.P. (2013). Educating preservice teachers for family, school, and community engagement. *Teaching Education, 24*(2), 123-133. doi: 10.1080/10476210.2013.78697.

Every Student Succeeds Act. of 2015, P.L. 114-95. 20 U.S.C. § 1001 *et seq*

Fan, X., & Chen, M. (2001). Parental involvement and students' academic achievement: A meta-analysis. *Educational Psychology Review, 13*(1), 1-22. Retrieved from http://files.eric.ed.gov/fulltext/ED430048.pdf

Ferrara, M. M. (2011). Phrase versus phase: Family engagement. *The Clearing House: A Journal of Educational Strategies, Issues and Ideas, 84*(5), 180-183. doi: https://doi.org/10/1080/00098655.2010.550953

Field, A. (2013). *Discovering statistics using IBM SPSS statistics* (4th ed.). Thousand Oaks, CA: Sage.

Fishbein, M. (1967). A consideration of beliefs, and their role in attitude measurement. In M. Fishbein (Ed.), *Readings in attitude theory and measurement* (pp. 257-266). New York, NY: John Wiley & Sons.

Fokkema, M. & Greiff, S. (2017). How performing PCA and CFA on the same data equals trouble: Overfitting in the assessment of internal structure and some editorial thoughts on it. *European Journal of Psychological Assessment, 33*(6), 399-402. doi: http://dx.doi.org/10.1027/1015-5759/a000460

Ford, A.C. & Stassi, K. (2014). Authority in cross-racial teaching and learning (re)considering the transferability of warm demander approaches. *Urban Education, 49*(1), 39-74. doi: https://doi.org/10.1177/0042085912464790

Fowler, F.J. (2014). *Survey research methods* (5th ed.). Thousand Oaks, CA: SAGE Publications, Inc.

Fraser, B. J. (1986). *Classroom environment*. London: Croom Helm.

Fuller, F.F., & Brown, O.H. (1975). Becoming a teacher. In K. Ryan (Ed.), *Teacher Education* (pp.25-52). Chicago: National Society for the Study of Education.

Garcia, D.C. (2004). Exploring connections between the construct of teacher efficacy and family involvement practices: Implications for urban teacher preparation. *Urban Education, 39,* 290-315. doi: https://doi.org/10.1177/0042085904263205

Garmon, M.A. (2005). Six key factors for changing preservice teachers' attitudes/beliefs about diversity. *Educational Studies, 38*(3), 275-286. doi: http://dx.doi.org/10.1207/s15326993es3803_7

George, D., & Mallery, M. (2010). *SPSS for windows step by step: A simple guide and reference, 17.0 update* (10th ed.). Boston: Pearson.

Gestwicki, C. (2015). *Home, school, & community relations: A guide to working with families* (9th ed.). Boston, MA: Cengage Learning.

Gibson, S., & Dembo, M.H. (1984). Teacher Efficacy: A construct validation. *Journal of Educational Psychology, 76*, 569-582. doi: http://dx.doi.org/10.1037/00220663.76.4.569

Gorsuch, R.L. (1983). *Factor analysis* (2nd ed.). Hillsdale, N.J.: Erlbaum.

Graham, D. (2011). Family-School partnerships: Towards sustainable pedagogical practice. *Asian-Pacific Journal of Teacher Education, 39,* 165-176. Retrieved from http://www.nzcer.org.nz/system/files/884_Successful_Home-School_Partnership-v2.pdf

Graue, E., & Brown, C. P. (2003). Preservice teachers' notions of families and schooling. *Teaching and Teacher Education*, *19*(7), 719-735. doi: https://doi.org/10.1016/j.tate.2003.06.002

Guskey, T. R. (1986). Staff development and the process of teacher change. *Educational Researcher*, *15*(5), 5-12. Retrieved from http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.910.5262&rep=rep1&ype=pdf

Guskey, T.R. (2002). Professional development and teacher change. *Teachers and Teaching, 8*(3), 381-391. doi: 10.1080/135406002100000512

Henderson, A.T., & Mapp, K.L. (2002). *A new wave of evidence: The impact of school, family and community connections on student achievement*. Austin, TX: Southwest Educational Development Laboratory.

Hoover-Dempsey, K. V., Bassler, O. C., & Brissie, J. S. (1987). Parent involvement: Contributions of teacher efficacy, school socioeconomic status, and other school characteristics. *American Educational Research Journal*, 24(3), 417-435. doi: https://doi.org/10.3102/00028312024003417

Hoover-Dempsey, K. V., & Sandler, H. M. (1995). Parental involvement in children's education: Why does it make a difference? *Teachers College Records, 97*, 310 331.

Hoover-Dempsey, K. V., Walker, J. M., Jones, K. P., & Reed, R. P. (2002). Teachers involving parents (TIP): Results of an in-service teacher education program for enhancing parental involvement. *Teaching and Teacher Education*, *18*(7), 843 867. doi: https://doi.org/10.1016/S0742-051X(02)00047-1

Hornby, G., & Lafaele, R. (2011). Barriers to parental involvement: An explanatory model. *Educational Review, 63*(1), 37-52. doi: 10.1080/00131911.2010.488049

Hussar, W.J., & Bailey, T.M. (2014). Projections of educational statistics to 2022 (41st ed.). Washington, D.C.: National Center for Educational Statistics. Retrieved from https://files.eric.ed.gov/fulltext/ED544761.pdf

Hurley, A.E., Scandura, T.A., Schriesheim, C.A., Brannick, M.T., Seers, A., Vandenberg, R.J., & Williams, L.J. (1997). Exploratory and confirmatory factor analysis: Guidelines, issues, and alternatives. *Journal of Organizational Behavior, 18*(6), 667-683. doi: http://doi.org/10.1002/(SICI)1099-1379(199711)18:6<667::AID JOB874>3.0.CO;2-T

IBM Corp. (2017). IBM SPSS statistics for mac (Version 25) [Computer Program]. Armonk, NY: IBM Corp.

Ingram, M., Wolfe, R. B., & Lieberman, J. M. (2007). The role of parents in high achieving schools serving low-income, at-risk populations. *Education and Urban Society*, 39(4), 479-497. doi: https://doi.org/10.1177/0013124507302120

Individuals with Disabilities Education Act of 1997, P.L. 105-17, 20 U.S.C. § 1400 *et seq*.

Individuals with Disabilities Education Improvement Act of 2004, P.L. 108- 446, 20 U.S.C. $ 1400 et seq.

Jeynes, W. H. (2005). A meta-analysis of the relation of parental involvement to urban elementary school student academic achievement. *Urban Education, 40*(3), 237 269. doi: https://doi.org/10.1177/0042085905274540

Jeynes, W. H. (2007). The relationship between parental involvement and urban secondary school student academic achievement a meta-analysis. *Urban Education, 42*(1), 82-110. doi: https://doi.org/10.1177/0042085906293818

Jeynes, W.H. (2010). The salience of the subtle aspects of parental involvement and encouraging that involvement: Implications for school-based programs. *Teachers College Record, 12*(3), 747-774.

Jeynes, W.H. (2016). A meta-analysis: The relationship between parental involvement and African American student outcomes. *Journal of Black Studies, 47*(3), 195 216. doi: 10.1177/0021934715623522

Jeynes, W.H. (2017). A meta-analysis: The relationship between parental involvement and Latino student outcomes. *Education and Urban Society, 49*(1), 4-28. doi: 10.1177/0013124516630596

Johnson, B., & Christensen, L.B. (2017). *Educational research: Quantitative, qualitative, and mixed approaches* (8th ed.). Thousand Oaks, CA: Sage.

Katz, L., & Bauch, J. P. (1999). The Peabody Family Involvement Initiative: Preparing preservice teachers for family/school collaboration. *School Community Journal*, *9*(1), 49-70. Retrieved from http://www.adi.org/journal/ss01/chapters/Chapter14-Katz&Bauch.pdf

Kendall, S., Straw, S., Jones, M., Springate, I. & Grayson, H. (2008). A review of the research evidence: Narrowing the gap in outcomes for vulnerable groups. Slough: NFER. Retrieved from https://www.nfer.ac.uk/publications/LNG01/LNG01.pdf

Kim, E. M., Coutts, M. J., Holmes, S. R., Sheridan, S. M., Ransom, K. A., Sjuts, T. M., & Rispoli, K. M. (2012). Parent involvement and family-school partnerships: Examining the content, processes, and outcomes of structural versus relationship based approaches. CYFS Working Paper No. 2012-6. *Nebraska Center for Research on Children, Youth, Families and Schools*. Retrieved from http://files.eric.ed.gov/fulltext/ED537851.pdf

Klieme, E., & Vieluf, S. (2009). Teaching practices, teachers' beliefs and attitudes. *Creating Effective Teaching and Learning Environments. First Results from TALIS*, 87-135. Retrieved from https://www.oecd.org/berlin/43541655.pdf

Kline, P. (1979). *Psychometrics and psychology*. London: Academic Press.

Knoblauch, D., & Hoy, A. W. (2008). "Maybe I can teach those kids." The influence of contextual factors on student teachers' efficacy beliefs. *Teaching and Teacher Education*, *24*(1), 166-179. doi: https://doi.org/10.1016/j.tate.2007.05.005

Kroeger, J., & Lash, M. (2011). Asking, listening, and learning: Toward a more thorough method of inquiry in home–school relations. *Teaching and Teacher Education*, *27*(2), 268-277. doi: 10.1016/j.tate.2010.08.010

LaFromboise, T.D., Coleman, H.L.K., & Hernandez, A.G. (1991). Development and factor structure of the cross-cultural counseling inventory-revised. *Professional Psychology: Research and Practice,* 22, 380-388. doi: 10.1037/0735 7028.22.5.380

Lam, S. K. Y. (2005). An interdisciplinary course to prepare school professionals to collaborate with families of exceptional children. *Multicultural Education*, *13*(2), 38-42. Retrieved from http://files.eric.ed.gov/fulltext/EJ759626.pdf

Lightfoot, S. (2003). *The essential conversation. What parents and teachers can learn from each other*. New York: Basic Books.

Linacre, J.M. (2018). Winsteps (Version 4.3.1) [Computer Software]. Beaverton, Oregon: Winsteps.com.

Linacre, J.M. (2018). *Winsteps rasch measurement computer program user's guide*. Beaverton, Oregon: Winsteps.com.

Lines, C., Miller, G., & Arthur-Stanley, A. (2011). *The power of family-school partnering*. New York, NY: Taylor and Francis Group, LLC.

Locke, D. C. (1988). Teaching culturally different students: Growing pine trees of bonsai trees. *Contemporary Education, 59*(3), 130-133.

Manz, P. H., Mautone, J. A., & Martin, S. D. (2009). School psychologists' collaborations with families: An exploratory study of the interrelationships of

their perceptions of professional efficacy and school climate, and demographic and training variables. *Journal of Applied School Psychology*, *25*(1), 47-70. doi: 10.1080/15377900802484158

Marshall, P. (1996). Multicultural teaching concerns: New dimensions in the area of teacher concerns research?. *The Journal of Educational Research, 89*(6), 371 379. Retrieved from http://www.jstor.org.du.idm.oclc.org/stable/27542059

Miller, G.E., Coleman, J., & Mitchell, J. (2018). Towards a model of interprofessional preparation to enhance partnering between educators and families. *Journal of Education for Teaching, 44*(3), 353-365. doi: http://doi.org/10.1080/02607476.2018.1465660

Milton-Wildey, K., Kenny, P., Parmenter, P., & Hall, J. (2014). Educational preparation for clinical nursing: The satisfaction of students and new graduates from two Australian universities. *Nurse Education Today, 34,* 648-654. doi: http://dx.doi.org/10.1016/j.nedt.2013.07.004

Moles. O. (1993). Collaboration between schools and disadvantaged parents: Obstacles and openings. In Chavkin, N. (Ed.), *Families and school in a pluralistic society* (pp. 21-49). Albany, NY: State University of New York Press.

Morris, V. G., & Taylor, S. I. (1998). Alleviating barriers to family involvement in education: The role of teacher education. *Teaching and Teacher Education*, 14, 219–231. doi: https://doi.org/10.1016/S0742-051X(97)00037-1

National Association of School Psychologists. (2012). *School-family partnering to enhance learning: Essential elements and responsibilities* [Position Statement].

Bethesda, MD: Author. Retrieved from http://nasponline.org/about_nasp/positionpapers/homeschoolcollaboration.pdf

National Education Goals Panel. (1995). The national education goals report: Building a nation of learners. Washington, D.C. Retrieved from https://www2.ed.gov/legislation/GOALS2000/TheAct/sec102.html

National PTA. (2007). National standards for family-school partnerships: What parents, schools, and communities can do together to support student success. Retrieved from http://s3.amazonaws.com/rdcmspta/files/production/public/National_Standards.pf

Nettles, S. M. (1991). Community involvement and disadvantaged students: A review. *Review of Educational Research*, 61, 379-406. doi: https://doi.org/10.3102/00346543061003379

No Child Left Behind Act of 2001, P.L. 107-110, 20 U.S.C. $ 6301 et seq.

Pajares, M.F. (1992). Teachers' beliefs and educational research: Cleaning up a messy construct. *Review of Educational Research, 62*(3), 307- 332. doi: 10.3102/00346543062003307

Patrikakou, E. (2008). The power of parental involvement: Evidence, ideas, and tools for student success. Retrieved from http://www.centerii.org/techassist/solutionfinding/resources/powerparinvolve.pdf

Patte, M. M. (2011). Examining preservice teacher knowledge and competencies in establishing family-school partnerships. *School Community Journal, 21*(2), 143. Retrieved from https://files.eric.ed.gov/fulltext/EJ957131.pdf

Pedhazur, E.J., & Schmelkin, L. (1991). *Measurement, design, and analysis: An integrated approach*. New York: Taylor & Francis Group, LLC.

Pelco, L.E., Ries, R.R., Jacobson, L., & Melka, S. (2000). Perspectives and practices in family-school partnerships. *School Psychology Review, 29*(2), 235-250.

Pickens, J. (2005). Attitudes and perceptions. Retrieved from http://healthadmin.jbpub.com/Borkowski/chapter3.pdf

Pomeranz, J.L., Byers, K.L., Moorhouse, M.D., Velozo, C.A., & Spitznagel, R.J. (2008). Rasch analysis as a technique to examine the psychometric properties of a career ability placement survey subtest. *Rehabilitation Counseling Bulletin, 51*(4), 251 259. doi: https://doi.org/10/1177/0034355208317317

Ponterotto, J.G., & Pederson, P.B. (1993). *Preventing prejudice: A guide for counselors and educators*. Newbury Park, CA: Sage.

Ponterotto, J., Baluch, S., Greig, T., & Rivera, L. (1998). Development and initial score validation of the teacher multicultural attitude survey. *Educational and Psychological Measurement, 58*(6), 1002. doi: https//doi.org/10/1177/0013164498058006009

Redding, S., Langdon, J., Meyer, J., & Sheley, P. (2004). The effects of comprehensive parent engagement on student learning outcomes. *American Educational Research Association*. Retrieved from http://www.schoolturnaroundsupport.org/sites/default/files/resources/redding.pdf

Reynolds, A., & Clements, M. (2005). Parental involvement and children's school success. In E. Patrikakou, R. Weissberg, S. Redding, & H. Walberg (Eds.),

School-family partnerships: Promoting the social, emotional, and academic growth of children (pp. 109–127). New York, NY: Teachers College Press.

Rivkin, S. (2016). Desegregation since the coleman report: Racial composition of schools and student learning, *Education Next, 16(*2). Retrieved from http://educationnext.org/files/ednext_XVI_2_rivkin.pdf

Rotter, J.B. (1966). Generalized expectancies for internal versus external control of reinforcements. *Psychological Monographs, 80,* 1-28.

Sheldon, S. B. (2007). Improving student attendance with school, family, and community partnerships. *The Journal of Educational Research, 100*(5), 267-275. doi:10.3200/JOER.100.5.267-275

Sheridan, S.M., Clark, B.L., & Christenson, S.L. (2014). Best practices in promoting family engagement in education. In P. Harrison & A. Thomas (Eds.), *Best practices in school psychology: Systems-level services* (pp. 438-452). Bethesda, MD: National Association of School Psychologists.

Siwatu, K. O., Chesnut, S. R., Alejandro, A. Y., & Young, H. A. (2016). Examining preservice teachers' culturally responsive teaching self-efficacy doubts. *The Teacher Educator*, *51*(4), 277-296. doi: 10.1080/08878730.2016.1192709

Spanierman, L. B., Oh, E., Heppner, P. P., Neville, H. A., Mobley, M., Wright, C. V., Dillon, F. R., & Navarro, R. (2010). The multicultural teaching competencies scale (MTCS): Development and initial validation. *Urban Education*, 46, 440-464. doi: 10.1177/0042085910377442

Sutterby, J. A., Rubin, R., & Abrego, M. (2007). Amistades: The development of relationships between preservice teachers and Latino families. *School Community Journal*, *17*(1), 77-94. Retrieved from http://files.eric.ed.gov/fulltext/EJ794792.pdf

Swap. S. (1993). *Developing home-school partnerships*. New York: Teacher's College Press.

Tabachnick, B. G. & Fidell, L. S. (2013). *Using multivariate statistics* (6th ed.). New York: Harper Collins College Publishers.

Tarquin, K.M., & Truscott, S.D. (2006). School psychology students' perceptions of their practicum experiences. *Psychology in the Schools, 43*(6), 727-736.

Tichenor, M.S. (1998). Preservice teachers' attitudes towards parent involvement: Implications for teacher education. *The Teacher Educator, 30*(4), 248-259.

Title I-Improving the Academic Achievement of the Disadvantaged: Final Rule, 68 Fed. Reg. 68689-68708 (Dec. 9, 2003) (to be codified at 48 C.F.R. pt. 200).

Tschannen-Moran, M., Woolfolk-Hoy, A., & Hoy, W.K. (1998). Teacher efficacy: Its meaning and measure. *Review of Educational Research, 68*(2), 202-248. Retrieved from https://www.researchgate.net/profile/Anita_Hoy/publication/249797734_Teache_Efficacy_Its_Meaning_and_Measure/links/0c960538792b902b26000000.pdf

Tschannen-Moran, M., & Woolfolk-Hoy, A. (2001). Teacher-efficacy: Capturing an elusive construct. *Teaching and Teacher Education*, *17*, 783–805. Retrieved

from

http://wps.ablongman.com/wps/media/objects/2347/2404137/Megan_Anita.pdf

Uludag, A. (2008). Elementary preservice teachers' opinions about parental involvement in elementary children's education. *Teaching and Teacher Education, 24*(3), 807-817. doi: https://doi.org/10.1016/j.tate.2006.11.009

U.S. Department of Health and Human Services/U.S. Department of Education (2016). Policy statement on *family engagement from the early years to the early grades*. Retrieved from http://www2.ed.gov/policy/speced/guid/earlylearning/joint-statement-full-text.pdf

Vartuli, S. (2005). Beliefs: The heart of teaching. *Young Children, 60*(5), 76-86.

Vickers, H. S., & Minke, K. M. (1995). Exploring parent-teacher relationships: Joining and communication to others. *School Psychology Quarterly*, *10*(2), 133. doi: 10.1037/h0088300

Vogt, D. S., King, D. W., & King, L. A. (2004). Focus groups in psychological assessment: enhancing content validity by consulting members of the target population. *Psychological Assessment, 16*(3), 231-243. Retrieved from http://www.ask-force.org/web/Discourse/Vogt-Focus-Groups-Psychological Assessment-2004.pdf

Walker, S.L., & Fraser, B.J. (2005). Development and validation of an instrument for assessing distance education learning environments in higher education: The distance education learning environments survey (DELES). *Learning Environments Research, 8*, 289-308. doi: 10.1007/s10984-005-1568-3

Walker, D., & Smith, T. (2017). Computing robust, bootstrap-adjusted fit indices for use with nonnormal data. *Measurement and Evaluation in Counseling and Development, 50*(1-2), 131-137. doi: 10.1080/07481756.2017.1326748

Walker, J.M.T., Wilkins, A.S., Dallaire, J.R., Sandler, H.M., & Hoover-Dempsey, K.V. (2005). Parental involvement: Model revision through scale development. *The Elementary School Journal, 106,* 85-105. doi: https://doi.org/10.1086/499193

Walker, J. M. T., Shenker, S. S., & Hoover-Dempsey, K. V. (2010). Why do parents become involved in their children's education? Implications for school counselors. *Professional School Counseling, 14,* 27-41. doi: https://doi.org/10.5330/prsc.14.1.768th8v77571hm7r

Watkins, T. J. (1997). Teacher communications, child achievement, and parent traits in parent involvement models. *The Journal of Educational Research, 91*(1), 3-14.

Weiss, H. B., Lopez, M. E., & Rosenberg, H. (2010). Beyond random acts: Family, school, and community engagement as an integral part of school reform. Washington, D.C.: U.S. Department of Education. Retrieved from http://www.hfrp.org/content/download/3809/104680/file/PolicyForumPaper12071FINAL.pdf

Wells, G. (2002). Learning and teaching for understanding: the key role of collaborative knowledge building. In J. Brophy (Ed.), *Social constructivist teaching: Affordances and constraints. Advances in Research in Teaching*, Vol. 9 (pp. 1-41). Retrieved from

http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.485.2592&rep=rep1&ype=pdf

Williams, B., Brown, R., & Boyle, M. (2012). Construct validation of the readiness for interprofessional learning scale: A Rasch and factor analysis. *Journal of Interprofessional Care, 2,* 326-332. doi: 10.3109/13561820.2012.671384

Willis, G.B. (2005). *Cognitive interviewing: A tool for improving questionnaire design*. London: Sage.

Wong, S. W., & Hughes, J. N. (2006). Ethnicity and language contributions to dimensions of parent involvement. *School Psychology Review*, *35*, 645–662. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2139999/

Worthington, R.L. & Whittaker, T.A. (2006). Scale development research: Content analysis and recommendations for best practices. *The Counseling Psychologists, 34*(6), 806-838. doi: 10.1177/0011000006288127

Zwarenstein, M., Reeves, S., & Perrier, L. (2005). Effectiveness of pre-licensure interprofessional education and post-licensure collaborative interventions. *Journal of Interprofessional Care,* 148-165. doi: https//doi rg.du.udem.oclc.org/10.1080/13561820500082800

Zygmunt-Fillwalk, E. M. (2006). The difference a course can make: Preservice teachers' perceptions of efficacy in working with families. *Journal of Early Childhood Teacher Education*, *27*(4), 327-342. doi: http://dx.doi.org/10.1080/10901020600996026

APPENDIX A. REVIEW OF CURRENT FSP INSTRUMENTS

Measures on Educators' Perceptions Regarding Roles, Responsibilities and Barriers to FSP									
Scale	Authors	Purpose	Scale Item Development	Subscale Factors	Total Scale Items & Scale Item Format	Coefficient Alpha	Factor Extraction & Rotation	Example of Scale Items	Limitations
Parent-Teacher Relationship Scale-II	Vickers & Minke, 1995	To develop a self-report instrument that assessed interpersonal connections and quality of communication between teachers and parents	Based on Brofenbrenner's (1986) ecological systems theory	2 Factors-Joining and Communication to Other	-35 items -Self-rating based on 5-point scale (1= Almost Never to 5= Almost Always	Total scale: .95 -Joining: .97 - Communication to Other: .86	Principal Component Analysis with Oblique Rotation and a 2-factor solution	"We have similar expectations for the student."	- Distributed only to in-service teachers -10-items were worded with a dyad-level measurement -No cross-validation support -Only examined two FSP factors
Teacher Efficacy Scale	Morris & Taylor, 1998	To develop a pre/post self-report instrument to assess undergraduate student teachers' perceptions on their ability to work with families	Based on de Acosta's (1996) themes of FSP that should be incorporated into teacher training coursework: family and school, community and schools, and the context of teaching	1 Factor-Perceptions Related to Working with Parents	-11 items -Self-rating based on a 5-point scale (1= Low to 5= High)	Not reported	Not reported	"How comfortable are you with the process of developing positive relations with parents of children that will be enrolled in your class(es)?"	-No psychometrics statistics provided -Administered only to undergraduate elementary education majors -Only examined preservice teachers' perceptions and knowledge related to a limited number of FSP activities
Peabody Family Involvement Initiative Survey (PFII)	Katz & Bauch, 1999	To develop a self-report instrument that assessed the effects an FSP course had on undergraduate preservice teachers' understanding of and their ability to conduct FSP activities	Based on Epstein's (1995) typologies of parent involvement: Parenting, Communicating, Volunteering, Learning at Home, Decision-making, and Collaborating with the Community	3 Factors-Preparation, Activity Types, and Family Preparation	-2 items each asking about 9 different FSP activities - Self-rating based on either a 4-point scale (1=Strongly Disagree to 4= Strongly Agree) or 3-point scale (1= No Preparation to 3= Very Prepared)	Not reported	Not reported	"Teacher's attitude and perceived feasibility in implementing this activity" Example of some of the activities included: introductory activities, written communication, decision-making meetings	- Did not include any information regarding psychometric properties -Small sample size -Some of the respondents did not intend to become teachers
Family-School Partnership Survey for School Psychologists	Pelco, Ries, Jacobson, & Melka, 2000	To develop a self-report instrument that assessed the perspectives and practices of school psychologists regarding FSP practices	Based on Epstein's (1995) typologies of parent involvement: Parenting, Communicating, Volunteering, Learning at Home, Decision-making, and Collaborating with the Community	3 Factors-General Perspectives about FSP, Importance of Partnership Activities, and Participation in Partnership Activities	-29 items -Self-rating based on either a 4-point scale (1= Strongly Disagree to 4= Strongly Agree) or 5-point scale (1= Not Important to 5= Very Important	Not reported	Not reported	"School psychologists do not have time to help educators involve family."	- Did not include any information regarding psychometric properties - Narrow definition of FSP that mainly focused on FSP activities that fostered effective communication between families and schools -The Participation in FSP Activities section only asked if the respondent had engaged in a particular FSP activity, but did not inquire about quality or frequency of that engagement
The School Counselor Involvement in Partnership Survey (SCIIPS)	Bryan & Holcomb, 2004	To develop a self-report measure that assessed school counselors' perceptions about FSP activities and their involvement in FSP	Based on Epstein's (1995) typologies of parent involvement, Swap's (1993) four model of partnerships, and Nettles (1991) four types of involvement	8 Factors-Involvement in School-Family-Community Partnerships, School Norms, Role Perceptions, Confidence in Ability to Build Partnerships, Commitment to Advocacy, Perceived Barriers, Attitudes about	-111 items -Self-rating based on 5-point scale (1=Strongly Disagree to 5=Strongly Agree)	-Total scale: .95 - School-Family-Community Partnerships: .90 - School Norms: .95 -Role Perceptions: .90 -Confidence in Ability to Build Partnerships: .84	Principal-axis Factoring with Varimax Rotation	"I lack the training necessary to build partnerships with the community."	- Only administered to American School Counselor Association (ASCA) members in South Carolina, which limited generalizability -Response rate of only 24%

				Partnerships, and Attitudes about Families and Communities		-Commitment to Advocacy: .75 -Perceived Barriers: .82 - Attitudes about Partnerships: .93 Attitudes about Families and Communities: .74			
Measures on Educators' Attitudes Towards FSP and Their Background Experiences Related to FSP									
Scale	Authors	Purpose	Scale Item Development	Subscale Factors	Total Scale Items & Scale Item Format	Coefficient Alpha	Factor Extraction & Rotation	Example of Scale Items	Limitations
School and Family Partnership: Questionnaires for teachers and Parents in the Elementary and Middle Grades	Epstein & Salinas, 1993	To develop a self-report measure that assessed teacher's attitudes about parent-teacher relationships	Based on Epstein's (1995) typologies of parent involvement: Parenting, Communicating, Volunteering, Learning at Home, Decision-making, and Collaborating with the Community and Brofenbrenner's (1986) ecological systems theory	16 Factors: Family Strengths, Attitudes about Family and Community Involvement, Type 1 Activities-Parenting, Type 2 Activities-Communicating, Type 3 Activities-Volunteering, Type 4 Activities-Learning at Home, School Programs to Involve Families, Importance of All Practices to Involve Families, Importance of Type 4 Activities, Importance of Type 6 Activities-Collaborating with Community, Parent Responsibilities, Support for Partnerships, Way Teachers Contact Families, Importance of Type 2 Activities-Communicating, Teacher Estimates of Parent Involvement, Teacher Estimates of Parents' Type 34 Activities-Learning at Home	-125 items - Self-rating based on 4-point scale (1= Strongly Disagree to 4= Strongly Agree; 1= Not Important to 4= Very Important; 1= Weak Support to 4=Strong Support; 1=Not Important to 4=Strong Program Now	- Family Strengths: .69 - Attitudes about Family and Community Involvement: .72 - Type 1 Activities-Parenting: .85 - Type 2 Activities-Communicating, -Type 3 Activities-Volunteering: .79 -Type 4 Activities-Learning at Home: .86 - School Programs to Involve Families: .91 - Importance of All Practices to Involve Families: .89 - Importance of Type 4 Activities: .77 - Importance of Type 6 Activities-Collaborating with Community: .82 - Parent Responsibilities: .84 - Support for Partnerships: .91 - Way Teachers Contact Families: .69 - Importance of Type 2 Activities-Communicating: .75 - Teacher Estimates of Parent Involvement, Teacher Estimates of Parents' Type 3 Activities-Learning at Home: .90	Not presented	"Every family has some strengths that could be tapped to increase student success in school."	-Administered only to inservice teachers working in low-SES schools - Factor analysis was performed but results were not presented
	Hoover-Dempsey et al., 2002	To develop a self-report pre/post measure that evaluated the effects of a short-term in-service FSP program had in improving teachers' FSP competencies	Based on Hoover-Dempsey & Sandler's (1995, 1997) model on the parent involvement process	6 Factors-Teacher Efficacy, Teacher Beliefs about Parent Efficacy for Helping Children Succeed in School, Teacher Beliefs for Parent Involvement, Teacher Beliefs about the Importance of Specific Involvement Practices, and Teacher Reports of Parent Involvement	- 82 items - Self-rating based on 6-point scale (1=Strongly Disagree to 6=Strongly Agree)	-Teacher Efficacy: pre-course .81, post-course .86 - Teacher Beliefs for Parent Efficacy for Helping Children Succeed in School: pre-course .80, post-course .69 -Teacher Beliefs about the Importance of Specific Involvement Practices: pre-course .90, post-course .94 -Teacher Invitations to Parent Involvement:	Not reported	"If my students' parents ty really hard, they can help their children learn even when the children are unmotivated."	- Small sample size -Respondents were in-service teachers from only two schools (one middle and one elementary school)

						pre-course .89, post-course .89 -Teacher Reports of Parental Involvement: pre-course .89, post-course.92			
Family Involvement Teacher Efficacy Scale	Graue & Brown, 2003	To develop a self-report measured that assessed the beliefs, memories, and proposed practices of pre-service teachers to better understand the social and cultural dimensions that teachers bring into their training	Based on Epstein's (1995) typologies of parent involvement: Parenting, Communicating, Volunteering, Learning at Home, Decision-making, and Collaborating with the Community	6 Factors- Demographics, Memories, Parent Knowledge, Teacher Knowledge, Expectations, and Involvement	- 87 items that used a rating scale, 3 items were open response - Self-rating based on 4-point scale (0= Never to 3=Always	- Memories: .87 - Parent Knowledge: .81 - Teacher Knowledge: .82 - Expectations: .92 - Involvement: .78	Not reported	"Did your parents show respect for school, supervise homework, or attend school events?"	- Small sample size -Respondents were newly admitted undergraduate teacher education students
Teacher Reported Involvement Measure	Wong & Hughes, 2006	To develop a self-report instrument that assessed teachers' perceptions about FSP and their attitudes towards CLD families	Based on Epstein's (1995) typologies of parent involvement: Parenting, Communicating, Volunteering, Learning at Home, Decision-making, and Collaborating with the Community	3 Factors- Alliance, General Parent Involvement, and Teacher Initiation	- 28 items - Self-rating based on a 5-point scale (0= No Involvement to 4= High Involvement; 1= Almost Never to 5= Almost Always	- Alliance: .90 - General Parent Involvement: .85 - Teacher Initiation of Involvement: .71	Exploratory Factor Analysis with Orthogonal contrasts to identify sources of ethnic differences	"Teacher can talk to and feel heard by parent."	- Respondents only included first grade teachers from three Texas elementary schools - Scale was used in conjunction with a parent rating measure and data was analyzed using both measures - Narrow definition of SES (highest educational level in the home), thus neglecting other elements of SES that may contribute to a family's school participation
	Denessen et al., 2009	To develop a self-report measure that assessed the effects that Dutch preservice teachers' biographies and their teaching training had on their ability to engage in FSP activities	Based on Beijaard, Verloop, and Vermount's (2000) model of teachers' professional identity formation	3 Factors- Competences, Attitudes, and Biography	- 42 items - Self-rating based on 4-point scale (1=Strongly Disagree to 4= Strongly Agree	- Competences: .90 - Attitudes: .72 - Biography: .83	Not reported	"I know how to deal with aggressive parents."	- Administered only to Dutch preservice teachers and some of the items may not be appropriate or applicable to U.S. educator programs
Teacher Family Role Expectations Scale (TFRES)	Amatea, Cholewa, & Mixon, 2012	To develop a self-report instrument that was used as a pre/post measure that assessed preservice teachers' perceptions of the roles teachers, families, and caregivers have in a student's education	Based on Ponterotto and Pedersen's (1993) construct of multicultural awareness, which a teacher's awareness of, comfort with, and sensitivity to cultural pluralism in school settings.	1 Factor- Attitude	- 29 items - Self-rating based on a 4-point scale (1= Strongly Disagree to 4= Strongly Agree	Total scale: .84	Not reported	"To be an effective teacher, I need to be aware of my students' cultural and economic backgrounds."	- Small sample size - Only administered to elementary education majors from one university - Examined only FSP attitudes about working with CLD families and failed to examine other FSP dimensions

Measures on Educators' Self-efficacy Related to FSP

Scale	Authors	Purpose	Scale Item Development	Subscale Factors	Total Scale Items & Scale Item Format	Coefficient Alpha	Factor Extraction & Rotation	Example of Scale Items	Limitations
The Teacher Efficacy Scale	Gibson & Dembo, 1984	To develop a self-report measure that assessed teacher efficacy	Based on Rotter's Locus of Control theory and Bandura's two component model of efficacy: general efficacy and sense of self-efficacy (Bandura, 1977, 1978; Rotter, 1966)	2 Factors- Sense of Teaching Efficacy and Personal Teaching Efficacy	- 30 items - Self-rating based on a 6-point scale (1= Strongly Agree to 6= Strongly Disagree	Total Scale: .79 - Sense of Teaching Efficacy: .75 - Personal Teaching Efficacy: .78	Oblique and Orthogonal Rotations were initially used and the Orthogonal Factor Model was the final solution	"A teacher is very limited in what he/she can achieve because a student's home environment is a large influence on his/her achievement	- Administered only to elementary school teachers - Examined self-efficacy beliefs related to teaching was was not specifically examining FSP competencies -Developed 35 years ago
Ohio State Teacher Efficacy Scale	Tschannen-Moran & Woolfolk Hoy, 2001	To develop a self-report measure that assessed preservice and inservice teachers' perceptions of personal competence and their analysis of resources/constraints involved in teaching contexts and tasks	Based on Bandura's (1977) social cognitive theory and the Tschannen-Moran et al. (1998) model of teacher efficacy	3 Factors- Efficacy for Instructional Strategies, Efficacy for Classroom Management, and Efficacy for Student Engagement	- 24 items - Self-rating based on a 9-point scale (1= Not at All to 9= A Great Deal)	Total Scale: .94 - Efficacy for Instructional Strategies: .91 - Efficacy for Classroom Management: .90 - Efficacy for Student Engagement: .87	Principal-axis Factoring with Varimax Rotation	"How much can you assist families in helping their children do well in school?"	- Examining self-efficacy beliefs related to teaching and was specifically examining FSP dimensions - Only one question specifically addressed FSP practices

Family Involvement Teacher Efficacy Scale	Garcia, 2004	To develop a self-report measure that assessed teachers' perceived levels of efficacy related to specific FSP practices	Based on Epstein's (1995) typologies of parent involvement: Parenting, Communicating, Volunteering, Learning at Home, Decision-making, and Collaborating with the Community	6 Factors- Parenting, Communicating, Volunteering, Learning at Home, Decision-making, Collaborating with the Community	-35 items - Self-rating based on a 6-point scale (1= Strongly Agree to 6= Strongly Disagree	Total Scale: .85	Not presented	"It is the teachers' role to implement strategies to get parents to volunteer in school-related activities."	- Respondents were in-service teachers near the completion of an advanced degree education program - Scale was focused on self-efficacy
Perceptions of Capacity for Family Collaboration Rating Scale (PCFC)	Manz, Mantone, & Martin, 2009	To develop a self-report measured that assessed school psychologists' perceptions of their professional efficacy and school climate related to FSP	Based on Bandura's (1977) social cognitive theory	2 Factors- Professional Efficacy and School Climate	- 17 items - Self-rating based on 4-point scale (1= Strongly Disagree to 4= Strongly Agree)	- Professional Efficacy: .76 - School Climate: .75	Oblique and Orthogonal Rotations were initially used and the Orthogonal Factor Model was the final solution	"Families support the services I provide for their children."	- Administered only to NASP member school psychologists - Focused on only two dimensions and did not consider attitudes or perceptions of roles and barriers to FSP
Teacher Efficacy in Engaging Families Scale (TEEFS)	Amatea, Cholewa, & Mixon, 2012	To develop a self-report instrument that was used as a pre/post measure to assess preservice teachers perceived levels of efficacy in conducting FSP activities	Based on Bandura's (1977) social cognitive theory	1 Factor- Self-efficacy	- 22 items - Self-rating based on a 4-point scale (1= Not Confident to 4= Highly Confident	Total scale: .93	Not presented	"Use the unique funds of knowledge of my students' families and community members in developing lesson plans."	- Small sample size - Preservice teachers were asked to estimate their capabilities in implementing certain FSP practices, whereas most FSP scales ask about their actual capabilities - Administered only to elementary education majors from one university.
Measures on Educators' CLD Competencies									
Scale	Authors	Purpose	Scale Item Development	Subscale Factors	Total Scale Items & Scale Item Format	Coefficient Alpha	Factor Extraction & Rotation	Example of Scale Items	Limitations
The Multicultural Teaching Concerns Survey (MTCS)	Marshall, 1996	To develop a self-report instrument that measured preservice and inservice teachers' concerns related to working with CLD students and their families	Based on Locke's (!998) multicultural awareness model and in Fuller and Brown's (1975) three-tier model on concerns: about self, tasks, and teaching impact	4 Factors- Cross-cultural Competence, Strategies and Techniques, School Bureaucracy, and Familial/Group Knowledge	-64 items - Self-report based on a 5-point scale (1= An Extremely Unimportant Concern at this Time to 5= An Extremely Important Concern for me at this Time	Not presented	Varimax Rotation	"Do parents of diverse students possess high expectations for their children?"	- Small sample - No reliability and validity statistics provided - Not specifically focused on FSP dimensions
The Teacher Multicultural Attitude Survey (TMAS)	Ponterotto, Baluch, Greig, & Rivera, 1998	To develop a self-report instrument that assessed teachers' general multicultural awareness, appreciation, and tolerance	Based on Ponterotto and Pedersen's (1993) construct of multicultural awareness, which is a teachers' awareness of, comfort with, and sensitivity to cultural pluralism in school settings	1 Factor- Multicultural Awareness and Sensitivity	-20 items - Self-rating based on a 5-point scale (1= Strongly Disagree to 5= Strongly Agree	Total Scale .86	Initially, a Principal Components Method focusing on an extracted factor matrix, and Oblique and Orthogonal Rotations were used with the One-Factor Model being the final solution	"Teachers have the responsibility to be aware of their students' cultural backgrounds."	- Small sample size -Not specifically focused on FSP dimensions
The Multicultural Teaching Competency Scale (MTCS)	Spanierman et al., 2010	To develop a self-report instrument that comprehensively assessed preservice and inservice teachers' multicultural teaching competence	Based on the authors' definition of multicultural teaching competency: "an iterative process in which teachers continuously (a) explore their attitudes and beliefs about multicultural issues, (b) increase their understanding of specific populations, and (c) examine the impact this awareness and	2 Factors- Multicultural Teaching Skill and Multicultural Teaching Knowledge	- 56 items - Self-rating based on a 6-point scale (1= Strongly Disagree to 6= Strongly Agree)	Total Scale: .88 - Multicultural Teaching Skill: .83 - Multicultural Teaching Knowledge: .80	Principal Components Analysis was initially conducted with an Oblique Rotation and a Two-Factor final solution	"I am knowledgeable of how historical experiences of various racial and ethnic minority groups may affect students' learning."	- Not specifically focused on FSP dimensions - Preservice and inservice respondents' data was aggregated, which prevented an examination of differences amongst groups

			knowledge has on what and how they teach as well as how they interact with students and their families" (Spanierman et al., 2011, p. 44).						

APPENDIX B. COMPARISON OF CURRENT FSP INSTRUMENTS

Measures on Educators' Perception Roles, Responsibilities, and Barriers to FSP							
Authors	In-service Teachers	Preservice Teachers	School Psychologists	School Counselors	Pre/Post Measure	Satisfactory Psychometric Properties	CLD-specific Items
Vickers & Minke (1995)	x					x	
Morris & Taylor (1998)		x			x		
Katz & Bauch (1999)	x	x			x		
Pelco et al. (2000)			x				
Bryan & Holcomb-McCoy (2004)				X		x	
Measures on Educators' Attitudes Towards FSP and Their Background Experiences Related to FSP							
Epstein & Salinas (1993)	x					x	
Hoover-Dempsey et al. (2002)	x	x			x	x	
Graue & Brown (2003)		x				x	x
Wong & Hughes (2006)	x					x	x
Denesse n et al (2009)		x				x	
Amatea et al. (2013)		x			x	x	x
Measures on Educators' Self-efficacy Related to FSP							
Gibson & Dembo (1984)	x					x	
Tschann en-Moran &Woolf olk (2001)	x	x				x	

Garcia (2004)		x								x		
Manz et al. (2009)					x					x		
Amatea et al. (2013)				x				x		x		x
Measures on Educators' CLD Competencies												
Marshall (1996)	x		x								x	
Ponterotto et al. (1998)	x							x			x	
Spanierman et al. (2011)	x		x					x			x	

APPENDIX C. NATIONAL PTA STANDARDS FOR FAMILY-SCHOOL PARTNERSHIPS

National PTA Standards

Standard 1: Welcoming all families into the school community.

- Families are active participants in the life of the school, and feel welcomed, valued, and connected to each other, to school staff, and to what students are learning and doing in class.

Standard 2: Communicating effectively.

- Families and school staff engage in regular, two-way, meaningful communication about student learning.

Standard 3: Supporting student success.

- Families and school staff continuously collaborate to support students' learning and healthy development both at home and at school, and have regular opportunities to strengthen their knowledge and skills to do so effectively.

Standard 4: Speaking up for every child.

- Families are empowered to be advocates for their own and other children, to ensure that students are treated fairly and have access to learning opportunities that will support their success.

Standard 5: Sharing power.

- Families and school staff are equal partners in decisions that affect children and families and together inform, influence, and create policies, practices, and programs.

Standard 6: Collaborating with the community.

- Families and school staff collaborate with community members to connect students, families, and staff to expanded learning opportunities, community services, and civic participation.

Adapted from National PTA. (2007). National standards for family-school partnerships: What parents, schools, and communities can do together to support student success. Retrieved from http://s3.amazonaws.com/rdcms-pta/files/production/public/National_Standards.pdf

APPENDIX D. NASP POLICY STATEMENT ON FSP ROLES

NASP Policy Statement on Educator, Family, and School Psychologist Roles in FSP

I. The role of educators in FSP.

- Providing a positive environment
- Supporting the efforts of families and educators
- Working with families from diverse backgrounds
- Promoting a view of education as a shared responsibility

II. The role of families in FSP.

- Coordinating learning at home.
- Supporting learning at school.
- Engaging with educators at school.
- Actively partnering with school personal.

III. The role of the school psychologist in FSP.

- Recognizing and promoting the need to address concerns across the different contexts within which a child exists
- Implementing systematic, evidence-based models for school–family consultation and family interventions
- Establishing or participating in current school-based teams consisting of parents, educators, and community members that assess needs, develop priorities and plans, and implement joint efforts to improve educational outcomes for students
- Serving as liaisons to support two-way communication and coordination among homes, schools, and communities
- Partnering efforts occur between families and educators throughout screening, early intervention, and special education processes by effectively including families in their student's assessment, planning, interventions, and progress monitoring
- Providing professional development opportunities for families and educators on the positive effects of partnering and current research on the most effective collaborative processes and on evidence-based programs in academic, behavioral, and mental health interventions and programs.
- Supporting the sustainability of partnering practices through ongoing monitoring and accountability for efforts.

Adapted from National Association of School Psychologists. (2012). School-family partnering to enhance learning: Essential elements and responsibilities [Position Statement]. Bethesda, MD: Author.

APPENDIX E. ASCA POLICY STATEMENT ON SCHOOL COUNSELORS' ROLES IN FSP

ASCA Policy Statement on School Counselors' Roles in FSP

- Promote student academic, career and social/emotional development.
- Inform the school community about relevant community resources.
- Actively pursue collaboration with family members and community stakeholders.
- Remove barriers to the successful implementation of school-family-community partnerships (e.g., mistrust and miscommunication between parties, resistance to the concept and practice, transportation and childcare issues, accessible meeting times).
- School counselors serve as an advocate, leader, facilitator, initiator, evaluator and collaborator to create, enrich and evaluate the effect of these partnerships on student success within the comprehensive school counseling program.

American School Counselor Association. (2016). The school counselor and school-family community partnerships [Position Statement]. Retrieved from https://www.schoolcounselor.org/asca/media/asca/PositionStatements/PS_Partnerships.df

APPENDIX F. BARRIERS FOR FAMILIES, EDUCATORS, AND THE FAMILY-SCHOOL RELATIONSHIP

Families		Educators	
Structural	Psychological	Structural	Psychological
Lack of role models, information and knowledge about resources.	Feelings of inadequacy; low sense of self-efficacy.	Lack of funding for family outreach programs.	Ambiguous commitment to working with parents as partners.
Lack of supportive environment and resources (e.g., poverty, limited access to services)	Adapting a passive role by leaving education to schools.	Lack of training for educators on how to create and sustain partnerships and families.	Use of negative communication about students' school performance and productivity.
Economic, emotional, and time constraints.	Linguistic and cultural differences, resulting in less "how to" knowledge about school policies and practices and the parental role in education.	Limited knowledge of data-based approaches.	Use of stereotypes about families, such as dwelling on family problems as an explanation for student's performance.
Child care and transportation.	Suspicion about the treatment from educators.	Time constraints.	Stereotypic views of people, events, conditions, or actions that are not descriptive of behavior, but portray a casual orientation.
	Perceived lack of responsiveness to parental needs or desires.		Doubts about the abilities of families to address schooling concerns.
			Wary of interacting with families or fear of conflict.
			Narrow conception of the roles families can play related socializing learners.

Family-School Relationship			
Structural	Psychological	Emotional	Attitudinal
Limited time for communication and meaningful dialogue	Partial resistance toward increasing home-school cooperation.	Tendencies to personalize anger-provoking behaviors by the other individual.	A blaming and labeling attitude permeates the home-school atmosphere.
Communication primarily during crises.	Misunderstanding differences in parent-educator perspectives about children's performance.	Jealously and fear of loss.	A win-lose rather than a win-win attitude in the presence of conflict.
Limited contact for building trust within the family-school relationship.	Psychological and cultural differences that lead to assumptions and "build walls"	Resentment.	Lack of belief in a partnership orientation to enhance student learning/development.
Lack of routine communication system.	Limited use of perspective taking or empathizing with the other person.	Guilt.	Blaming.
Limited understanding of the constraints face by the other partner.	Limiting impressions of child to observations in only one environment.	Fear of others' role, of antagonizing the other.	Aloofness and false professionalism.
Administrative policies.	Assumption that parents and teachers must hold identical values and expectations.		Defensiveness.
Busyness	Failure to view differences as strengths.		Vulnerability to criticism.
	Previous negative interactions and experiences between families and schools.		Lack of trust.
	Failure to recognize the importance of preserving the family-relationship across time.		

Adapted from Christenson, S. L. (2004). The family-school partnership: An opportunity to promote the learning competence of all students. School Psychology Review, 33(1), 83-102.
Gestwicki, C. (2015). Home, school, & community relations: A guide to working with families (9th ed.). Boston, MA: Cengage Learning.

APPENDIX G: FSPCS VERSION ONE

Directions: Please check how you feel at this point in time.	*Strongly Disagree*	*Moderately Disagree*	*Disagree slightly more than agree*	*Agree slightly more than disagree*	*Moderately Agree*	*Strongly agree*
	1	2	3	4	5	6
1. Family attitudes towards school are determined by their background characteristics.						
2. Families who support education are most likely to come to school meetings.						
3. Students are more apt to be successful in school when they have help at home.						
4. Family circumstances negatively affect students in today's classrooms.						
5. Awareness of school programs is directly related to family socio-cultural and economic status.						
6. Some families are more motivated to support their child's learning and schooling.						
7. Families should be a part of all decisions about their child's schooling.						
8. There are numerous ways for families to be involved in their child's education.						
9. Mutual partnerships between families and schools are crucial to a child's education.						
10. Families have critical information to share about their children.						
11. Families must be members of all essential school committees.						
12. Families must learn how to advocate for their children's education.						
13. My professional responsibilities include students and also their families.						

14. I am encouraged to build strong ties with community family oriented programs.						
15. Collaboration with families to support children is crucial to my success.						
16. I play a major role in forging family-school partnerships.						
17. Communication with families is a large part of my job.						
18. I am expected to offer families resources to support their child's success						
19. I feel comfortable providing families parenting and child rearing support.						
20. I am prepared to collaborate with families to foster a child's school performance.						
21. I am familiar with effective practices, strategies and programs to increase family involvement.						
22. I understand cultural factors that affect family systems, structures, and practices.						
23. I am comfortable explaining students' school performance and behavior to parents.						
24. I have the ability to initiate and sustain positive family school partnerships.						

APPENDIX H. COGNITIVE INTERVIEW RECRUITMENT EMAIL

Dear Preservice Educator,

My name is Carly Sorenson and I am a Ph.D. candidate from the Child, Family, and School Psychology program at the University of Denver. I am writing to invite you to participate in a cognitive interview on survey questions I developed related to preservice educators' perceptions of roles, responsibilities, and barriers to implementing family-school partnerships (FSP); attitudes about the importance of collaborating with families; and beliefs about their efficacy related to FSP. The purpose of the cognitive interview is to determine if there is any confusion in vocabulary or phrasing of the survey questions. Since FSP is critically important in increasing student achievement and social-emotional development, this instrument seeks to gain insight into preservice educators' perceptions, attitudes, and beliefs related to FSP activities. So that training program faculty can determine if preservice educators need further support to develop confidence and behaviors that can increase their effectiveness with families.

If you decide to participate in this study, you will be asked to sit with me and complete a self-report 6-point scale survey of 52 questions, seven (5) of which are open-ended. I will observe you as you take the survey and may ask you follow-up questions. I will record your responses in a password protected Microsoft Word document, which will be destroyed upon completion of my research. The cognitive interview will take between 30 to 60 minutes and will occur at a location that is convenient for you. The interview may be scheduled after work or on a weekend, depending on your scheduling preference. At the end of the interview, you will be offered a $15 Starbucks gift card.

Please note, this is completely voluntary. Your participation is completely voluntary and you can choose to or choose not to participate in the cognitive interview. If you'd like to participate or have any questions about the study, please contact me at carly.sorenson@du.edu or 303-913-8136. You may also contact my faculty sponsor, Dr. Gloria Miller, at Gloria.Miller@du.edu or 303-871-3340. Thank you for considering participating.

Sincerely,
Carly Sorenson

APPENDIX I. COGNITIVE INTERVIEW INFORMATION SHEET

University of Denver
Information Sheet for Exempt Research

TITLE: Development and Validation of the Family-School Partnering and Collaboration Scale
Principal Investigator: Carly Sorenson
Protocol #: 1131207
DU IRB Exemption Granted:11/19/2017

You are being asked to be in a research study. This form provides you with information about the study. Please read the information below and ask questions about anything you don't understand before deciding whether or not to take part.

You are invited to participate in a research study about preservice educators' perceptions of roles, responsibilities, and barriers to implementing family-school partnerships (FSP); attitudes about the importance of collaborating with families; and beliefs about their efficacy related to FSP. If you agree to be part of the research study, you will be asked to sit with the Principal Investigator (PI) while taking a survey. While you take the survey, the PI will observe you as you take the survey and may ask you follow-up questions. The PI will record your responses in a password protected Microsoft Word document, which will be destroyed upon completion of the research project. By doing this research, we hope to determine if there is any confusion in vocabulary or phrasing of the survey questions.

There are no potential risks or discomforts associated with participation, other than those that you experience in everyday life.

Participating in this study is completely voluntary. Even if you decide to participate now, you may change your mind and stop at any time. You may choose at any time and for any reason to not continue with the interview for any reason.

If you choose to participate, you will receive a $15 Starbucks gift card at the end of the interview.

If you have questions about this research study, you may contact me at carly.sorenson@du.edu or 303-913-8136. You may also contact my faculty sponsor, Dr. Gloria Miller, at Gloria.Miller@du.edu or 303-871-3340.

If you have any concerns or complaints about how you were treated during research participation, you may contact the Chair of the Institutional Review Board for the Protection of Human Subjects, at 303-871-4015 or by emailing IRBChair@du.edu, or you may contact the Office for Research Compliance by emailing IRBAdmin@du.edu,

calling 303-871-4050 or write to the University of Denver, Office of Research and Sponsored Programs, 2199 S. University Blvd., Denver, CO 80208-2121.
The University of Denver Institutional Review Board has determined that this study qualifies as exempt from full IRB oversight.
You may request a copy of this form for your records. If you do not understand any part of the above statement, please ask the researcher any questions you have.
By continuing with this research, you are consenting to participate in this study.

APPENDIX J. ITEMS INCLUDED IN THE COGNITIVE INTERVIEW

Please include any additional information that you think is missing from the definition of family-school partnerships.

FSP will be used to describe all forms of collaborative relationships between families and schools that are goal-oriented and focused on student achievement and social-emotional development. Family-School partnerships are child-focused "wherein families and professionals, cooperate, coordinate, and collaborate to enhance opportunities and success for children and adolescents across social, emotional, behavioral, and academic domains" (Kim, Coutts, Holmes, Sheridan, Ransom, Sjuts, & Rispoli, 2012, p. 3).
Please include any additional information that you think is missing from the definition of perception.

Perceptions: Perceptions are different from attitudes in that they are an individual's recognition and interpretation of sensory information. Unlike attitudes, perceptions do not necessarily include an evaluation component and are more of a general awareness about a certain thing. Whereas, an attitude is the perception in addition to the evaluation (Pickens, 2005). For instance, an educator may perceive that their school administration does not want inclusive classrooms, and he or she may form an attitude that the school administrators are uncaring.
Please include any additional information that you think is missing from the definition of belief and self-efficacy beliefs.

Belief: A personal conviction or implicit assumption that influences an individual's thoughts and actions. According to Pajares (1992), beliefs: tend to be formed early in life and continue into adulthood, are influenced by culture, help individuals understand the world around them, are connected with knowledge, strongly influence perception, and are "instrumental in defining tasks and selecting the cognitive tools with which to interpret, plan, and make decisions regarding such tasks" (p. 325). For example, an educator may believe that a quiet classroom is necessary for optimal student learning.
Self-efficacy beliefs: Self efficacy beliefs are about one's capabilities to achieve a particular goal. These beliefs also can be viewed as one's confidence in having control over motivation, environment, and social capacities (Bandura, 1977). For example, an educator may believe that they are skilled and capable of working with families from diverse backgrounds. Educators who have a high self-efficacy belief about their teaching are less likely to suffer "burn-out" and report higher levels of job satisfaction (Klieme & Vieluf, 2009).

Please include any additional information that you think is missing from the definition of attitude.

Attitude: A feeling or orientation that is affective and is a "learned predisposition to respond to an object or class of objects in a certain way" (Fishbein, 1967, p. 257). Educators "bring to the melting pot of [family-school partnerships] personal attitudes that are deeply rooted within their own historical, economic, educational, ethnic, class and gendered experiences" (Hornby & Lafaele, 2011, p. 45). In addition, according to Christenson and Sheridan (2001) attitudes as they relate to FSP are the underlying values and emotions, educators and families have regarding the roles and responsibilities of schools and families in promoting student learning and social-emotional development. For example, an educator may have a positive or negative attitude towards inclusive classrooms.

Perceptions of Roles, Responsibilities and Barriers to FSP
1. Part of my role is to be an advocate for families and help empower families to advocate for their children.
8. Locating and providing information on services and resources in the community for students and their families is a part of job.
13. My professional responsibilities include students and also their families.
14. I am encouraged to build strong ties with family oriented programs run by community organizations.
16. I play a major role in forging family-school partnerships.
17. Communication with families is a large part of my job.
18. I am expected to offer families resources to support their child's success.
33. I am expected to consult and collaborate with families about specific ways that they can support their child's learning or behavior at school.
41. I am expected to reach out to parents who do not attend scheduled conferences or who do not attend school activities that include families.
43. Part of my role is to teach families about child development, discipline or parenting.
45. I am expected to provide specific activities for parents to do with their children in order to increase student achievement.
6. Families and educators face time constraints that may prevent the development of FSP.
12. Strong family-school partnerships are hindered by a blaming and labeling attitude that permeates the home school atmosphere.
28. If educators are vulnerable to criticism it will prevent FSP from forming.
36. Administrative policies will greatly influence my ability to create strong family-school partnerships.
39. Weak family-school partnerships can occur because of fear of others' (parent/teacher) role and of antagonizing the other.
44. Strong family-school partnerships are hindered by a blaming and labeling attitude that permeates the home school atmosphere.
CLD Items
26. I am encouraged to make special efforts to advocate for CLD students and their families.
30. My background experiences influence how I think about family-school partnering and the level of involvement parent should have in their child's schooling.
What other roles, responsibilities, and barriers to FSP do you see when working in schools?

Attitudes about the Importance of Collaborating with Families
3. Students are more apt to be successful in school when they have help at home.
4. Parent involvement can help educators be more effective with more students.
7. Families should be a part of all decisions about their child's schooling.
9. Mutual partnerships between families and schools are crucial to a child's education.
10. Families have critical information to share about their children.
15. Collaboration with families to support children is crucial to my success.
32. Family involvement enhances school climate.
CLD Item
5. Becoming self-aware about my background beliefs and experiences is important to creating effective FSP.
Are there any other attitudes about the importance of collaborating with families that you think are important to recognize?
Beliefs about their Efficacy Related to FSP
19. I feel comfortable providing families parenting and child rearing support.
20. I am prepared to collaborate with families to foster a child's school performance.
21. I am familiar with effective practices, strategies and programs to increase family involvement.
22. I understand cultural factors that affect family systems, structures, and practices.
23. I am comfortable explaining students' school performance and behavior to parents.
24. I have the ability to initiate and sustain positive family school partnerships.
29. I am comfortable in my ability to conduct effective conferences or interviews with parents
34. I am very knowledgeable about the advantages and disadvantages of family involvement in school activities of their children.
35. I am comfortable in my ability to plan and implement effective parent workshops.
CLD Items
2. I am confident in my ability to engage and build partnerships with families from CLD backgrounds.
27. I am very knowledgeable about successful strategies for involving CLD parents in school activities.
40. I am confident in my ability to partner with CLD families to implement interventions at school and home.
Are there any other self-efficacy beliefs relating to FSP that you think are important to address in the survey?
Demographics
Which program are you enrolled in?
What is your gender?
What is your age?
What is your ethnicity?

APPENDIX K. ITEMS INCLUDED IN THE FINAL VERSION OF THE FSPCS AND THE ITEMS PRE-ASSIGNED TO EACH DOMAIN

Demographic Items
University Type
Public
Private
Program
Child, Family, & School Psychology
Counseling
Curriculum & Instruction
Early Childhood Special Education
Educational Leadership & Policy Studies
Library & Information Science
Research Methods & Statistics
Teacher Preparation Programs
Social Work
Other
Gender
Female
Male
Non-binary
Prefer not to answer
Age
20-24 years of age
25-30 years of age
31-36 years of age
37-41 years of age
42+ years of age
Ethnicity
White
Black or African American
Latino
Asian

American Indian or Alaska Native

Other

Prefer not to answer

How far along in their graduate program

Just entered

About halfway done

Almost completed

Type of FSP activities they have engaged in

Written communication

Meeting with parents who have children with special needs

Parent teacher conferences

Phone calls with parents

Home visits

Advisory committees that include parents

Working on a team with school staff and families to foster student achievement

Conducting parent education workshops

Working with parent volunteers

Teaching parents and students how to access community resources

Training staff on how to conduct effective FSP activities

Assisting parents, family, and community members in organizing support programs students

Other FSP activities

Parent

Yes, I have children who are typically developing

Yes, I have children, one of whom has special needs

No

Sibling, close relative, or child with special needs

Yes

No

FSP Items
1. Part of my role is to be an advocate for families and help empower families to advocate for their children.
2. Locating and providing information on services and resources in the community for students and their families is an important part of my job.
3. My professional responsibilities include assisting students and also their families.
4. I am encouraged to build strong ties with family oriented programs run by community organizations.

5. I play an integral role in forging family-school partnerships.
6. Communication with families is a large part of my job.
7. I am expected to offer families with individualized support and resources to facilitate their child's success.
8. I am expected to consult and collaborate with families about specific ways that they can support their child's learning or behavior at school.
9. Part of my role is to teach families about child development, discipline or parenting.
10. I am expected to regularly provide specific activities for parents to do with their children in order to increase student achievement.
11. Families and educators face time constraints that may prevent the development of FSP.
12. Strong family-school partnerships are hindered by a blaming and labeling attitude that permeates the home school atmosphere.
13. If educators are vulnerable to criticism it will prevent family-school partnerships from forming.
14. Administrative policies will greatly influence my ability to create strong family-school partnerships.
15. Weak family-school partnerships can occur because of fear of others' (parent/teacher) role and of antagonizing the other.
16. I am encouraged to make special efforts to advocate for culturally and linguistically diverse (CLD) students and their families.
17. My background experiences influence how I think about family-school partnering and the level of involvement parents should have in their child's schooling.
18. I am expected to know and understand current FSP legislation and how current laws and policies affect my interactions with families.
interviews with parents.
19. I feel comfortable providing families with parenting and child rearing support.
20. I am prepared to collaborate with families to foster a child's school performance.
21. I am familiar with effective practices, strategies and programs to increase family involvement.
22. I understand cultural factors that affect family systems, structures, and practices.
23. I am comfortable explaining students' school performance and behavior to parents.
24. I have the ability to initiate and sustain positive family school partnerships.
25. I am comfortable in my ability to conduct effective conferences or interviews with parents.
26. I am very knowledgeable about the advantages of family involvement in school activities and the possible barriers to family involvement.

27. I am confident that I have the skills and tools to successfully plan and implement effective parent workshops.
28. I am confident in my ability to engage and build partnerships with families from CLD backgrounds.
29. I am confident in my ability to partner with CLD families to implement effective research-based interventions at school and home.
30. I am very knowledgeable about successful strategies for involving CLD parents in school activities.
31. Students are more apt to be successful in school when they have help at home.
32. Family involvement can help educators be more effective when working with students and especially those from CLD backgrounds.
33. Families should be an integral part of all decisions regarding their child's schooling.
34. Mutual partnerships between families and schools are crucial to a child's education.
35. Families have critical information to share about their children, which can assist educators in planning effective interventions for their child.
36. Collaboration with families to support children is essential to my success as an educator.
37. Family involvement enhances school climate and school safety.
38. Becoming self-aware about my background beliefs and experiences is important to creating meaningful family-school partnerships.
39. I attended schools where the majority of students and teachers were predominately white and middle class.

Items Pre-assigned to Perceptions (18 items)

1. Part of my role is to be an advocate for families and help empower families to advocate for their children.
2. Locating and providing information on services and resources in the community for students and their families is an important part of my job.
3. My professional responsibilities include assisting students and also their families.
4. I am encouraged to build strong ties with family oriented programs run by community organizations.
5. I play an integral role in forging family-school partnerships.
6. Communication with families is a large part of my job.
7. I am expected to offer families with individualized support and resources to facilitate their child's success.
8. I am expected to consult and collaborate with families about specific ways that they can support their child's learning or behavior at school.
9. Part of my role is to teach families about child development, discipline or parenting.

10. I am expected to regularly provide specific activities for parents to do with their children in order to increase student achievement.
11. Families and educators face time constraints that may prevent the development of FSP.
12. Strong family-school partnerships are hindered by a blaming and labeling attitude that permeates the home school atmosphere.
13. If educators are vulnerable to criticism it will prevent family-school partnerships from forming.
14. Administrative policies will greatly influence my ability to create strong family-school partnerships.
15. Weak family-school partnerships can occur because of fear of others' (parent/teacher) role and of antagonizing the other.
16. I am encouraged to make special efforts to advocate for culturally and linguistically diverse (CLD) students and their families.
18. I am expected to know and understand current FSP legislation and how current laws and policies affect my interactions with families.
interviews with parents.
36. Collaboration with families to support children is essential to my success as an educator.

Items Pre-assigned to Attitudes (9 items)

17. My background experiences influence how I think about family-school partnering and the level of involvement parents should have in their child's schooling.
31. Students are more apt to be successful in school when they have help at home.
32. Family involvement can help educators be more effective when working with students and especially those from CLD backgrounds.
33. Families should be an integral part of all decisions regarding their child's schooling.
34. Mutual partnerships between families and schools are crucial to a child's education.
35. Families have critical information to share about their children, which can assist educators in planning effective interventions for their child.
37. Family involvement enhances school climate and school safety.
38. Becoming self-aware about my background beliefs and experiences is important to creating meaningful family-school partnerships.
39. I attended schools where the majority of students and teachers were predominately white and middle class.

Items Pre-assigned to Beliefs (12 items)

19. I feel comfortable providing families with parenting and child rearing support.
20. I am prepared to collaborate with families to foster a child's school performance.

21. I am familiar with effective practices, strategies and programs to increase family involvement.
22. I understand cultural factors that affect family systems, structures, and practices.
23. I am comfortable explaining students' school performance and behavior to parents.
24. I have the ability to initiate and sustain positive family school partnerships.
25. I am comfortable in my ability to conduct effective conferences or interviews with parents.
26. I am very knowledgeable about the advantages of family involvement in school activities and the possible barriers to family involvement.
27. I am confident that I have the skills and tools to successfully plan and implement effective parent workshops.
28. I am confident in my ability to engage and build partnerships with families from CLD backgrounds.
29. I am confident in my ability to partner with CLD families to implement effective research-based interventions at school and home.
30. I am very knowledgeable about successful strategies for involving CLD parents in school activities.

APPENDIX L. RECRUITMENT EMAIL AND ANNOUNCEMENT

Date

Dear University of Denver faculty member:

I am a Ph.D. candidate in the Child, Family, and School Psychology program and I am requesting your assistance. I am ready to start recruitment for my dissertation study and I am wondering if you could pass along my recruitment announcement to your students.

I will be developing and validating a survey on preservice educators' perceptions, attitudes, and beliefs about family-school partnerships. As such, I am seeking preservice educators from all programs in the Morgridge College of Education who intend to work in schools. Participation will involve a 15-minute online survey for preservice educators and participants will receive a $5 Starbucks gift card upon completion.

Below is more detailed information about the study, along with the survey link.

Thank you for your assistance.

Sincerely,

Carly Sorenson

Carly Sorenson, Ed.S., NCSP
Ph.D. Candidate
Child, Family, and School Psychology
University of Denver

303-913-8136

Research Study Seeking Participants from the Morgridge College of Education

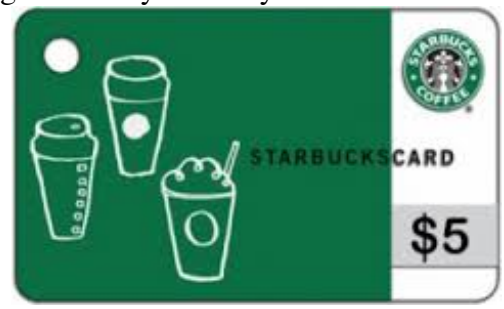
TITLE: Development and Validation of the Family-School Partnering and Collaboration Scale
Principal Investigator: Carly Sorenson
Protocol #: 1131207
DU IRB Exemption Granted: 11/19/2017

Are you student in the Morgridge College of Education and intend to work in schools upon completion of your degree?

If so, please consider helping a fellow grad student out and complete a 15-minute survey on your perceptions, attitudes, and beliefs about family-school partnerships.

Your help will make it possible for me to get my
(How good would that make you feel?)

The survey is completely anonymous and you will receive a $5 Starbucks gift card upon completion, in case taking the survey caused you to become thirsty or tired.



If you are interested in learning more please click on the link below or contact me.

Your participation is greatly appreciated!

Carly
Carly Sorenson, Ed.S., NCSP
Ph.D. Candidate
Child, Family, and School Psychology
University of Denver

303-913-8136

APPENDIX M. INFORMED CONSENT FORM

Field Study Information Sheet
University of Denver

Information Sheet for Exempt Research
TITLE: Development and Validation of the Family-School Partnering and Collaboration Scale
Principal Investigator: Carly Sorenson
Protocol #: 1131207
DU IRB Exemption Granted: 11/19/2017

Purpose:

You are being asked to be in a research study on preservice educators' perceptions, attitudes, and beliefs about family-school partnerships (FSP). This form provides you with information about the study. This study has been approved by the Institutional Review Board (IRB) at the University of Denver.

Procedures:

If you choose to participate in this study, you will be asked to complete an online survey. Within the survey you will find questions regarding your perceptions, attitudes, and beliefs about FSP. Completion of this survey should take approximately 10-15 minutes. Your participation is completely voluntary. You can withdraw at anytime and discontinue the survey without penalty. If you discontinue participation, any information already collected will be discarded.

Risks & Benefits:

There are no potential risks or discomforts associated with participation, other than those that you experience in everyday life, because the survey data is completely anonymous and the topic is not sensitive. Benefits include the opportunity
to reflect on your understanding and awareness of FSP and the opportunity to advance research in the area of family-school partnerships.

Confidentiality

All information obtained from this survey is anonymous. Identifying information such as your name, e-mail address, or computer IP address will not be attached to your responses on the survey. My faculty sponsor, Gloria Miller, PhD, and I will be the only individuals to view the data. All data will be maintained for three years on a password protected website. After this time has elapsed, all data will be destroyed. This project has been approved by the University of Denver Institutional Review Board (IRB). Members of the IRB and the University of Denver who are responsible for monitoring this study may inspect these records.
Please note that absolute anonymity cannot be guaranteed due to the limited protections of Internet access; however, all precautions have been taken to ensure anonymity. Please be sure to close your browser upon completion of the survey to prevent anyone from being able to see what you have been doing.

Compensation:

Upon completion of the survey, you can choose to receive a $5 Starbucks gift card. Your email address will be collected on a separate survey, so it will not be connected to your survey data. The drawing will occur in Spring 2018 after the data has been collected. Winners will be notified via the email that they provide.

Contact Information:

If you have questions about this research study, you may contact Carly Sorenson at carly.sorenson@du.edu 303-913-8136 or the faculty sponsor, Gloria Miller, at Gloria.Miller@du.edu 303-871-3340.

If you have any concerns or complaints about how you were treated during research participation, you may contact the DU Human Research Protections Program by emailing IRBAdmin@du.edu or calling 303-871-2121 to speak with someone other than the researchers.

The University of Denver Institutional Review Board has determined that this study qualifies as exempt from full IRB oversight.

If you want a copy of this consent for your records, you can print it from the screen. If you would like documentation linking you to this research study, please email your request to the Principal Investigator at carly.sorenson@du.edu.

Do you consent to participate in the study?

- I agree
- I disagree

APPENDIX N. RETAINED ITEMS AND ITEMS REMOVED

FSPCS Items Retained (30 items)
1. Part of my role is to be an advocate for families and help empower families to advocate for their children.
2. Locating and providing information on services and resources in the community for students and their families is an important part of my job. interviews with parents.
3. My professional responsibilities include assisting students and also their families.
4. I am encouraged to build strong ties with family oriented programs run by community organizations.
5. I play an integral role in forging family-school partnerships.
6. Communication with families is a large part of my job.
7. I am expected to offer families with individualized support and resources to facilitate their child's success.
8. I am expected to consult and collaborate with families about specific ways that they can support their child's learning or behavior at school.
11. Families and educators face time constraints that may prevent the development of FSP.
12. Strong family-school partnerships are hindered by a blaming and labeling attitude that permeates the home school atmosphere.
13. If educators are vulnerable to criticism it will prevent family-school partnerships from forming.
15. Weak family-school partnerships can occur because of fear of others' (parent/teacher) role and of antagonizing the other.
16. I am encouraged to make special efforts to advocate for culturally and linguistically diverse (CLD) students and their families.
20. I am prepared to collaborate with families to foster a child's school performance.
21. I am familiar with effective practices, strategies and programs to increase family involvement.
22. I understand cultural factors that affect family systems, structures, and practices.
23. I am comfortable explaining students' school performance and behavior to parents.
24. I have the ability to initiate and sustain positive family school partnerships.
25. I am comfortable in my ability to conduct effective conferences or interviews with parents.
26. I am very knowledgeable about the advantages of family involvement in school activities and the possible barriers to family involvement.

27. I am confident that I have the skills and tools to successfully plan and implement effective parent workshops.
28. I am confident in my ability to engage and build partnerships with families from CLD backgrounds.
29. I am confident in my ability to partner with CLD families to implement effective research-based interventions at school and home.
30. I am very knowledgeable about successful strategies for involving CLD parents in school activities.
31. Students are more apt to be successful in school when they have help at home.
32. Family involvement can help educators be more effective when working with students and especially those from CLD backgrounds.
33. Families should be an integral part of all decisions regarding their child's schooling.
34. Mutual partnerships between families and schools are crucial to a child's education.
35. Families have critical information to share about their children, which can assist educators in planning effective interventions for their child.
36. Collaboration with families to support children is essential to my success as an educator.
37. Family involvement enhances school climate and school safety.

Items in the Perceptions Domain (11 items)

1. Part of my role is to be an advocate for families and help empower families to advocate for their children.
2. Locating and providing information on services and resources in the community for students and their families is an important part of my job. interviews with parents.
3. My professional responsibilities include assisting students and also their families.
4. I am encouraged to build strong ties with family oriented programs run by community organizations.
5. I play an integral role in forging family-school partnerships.
6. Communication with families is a large part of my job.
7. I am expected to offer families with individualized support and resources to facilitate their child's success.
8. I am expected to consult and collaborate with families about specific ways that they can support their child's learning or behavior at school.
11. Families and educators face time constraints that may prevent the development of FSP.
16. I am encouraged to make special efforts to advocate for culturally and linguistically diverse (CLD) students and their families.
36. Collaboration with families to support children is essential to my success as an educator.

Items in the Perceptions of Barriers Domain (3 items)
12. Strong family-school partnerships are hindered by a blaming and labeling attitude that permeates the home school atmosphere.
13. If educators are vulnerable to criticism it will prevent family-school partnerships from forming.
15. Weak family-school partnerships can occur because of fear of others' (parent/teacher) role and of antagonizing the other.
Items in the Attitudes Domain (6 items)
31. Students are more apt to be successful in school when they have help at home.
32. Family involvement can help educators be more effective when working with students and especially those from CLD backgrounds.
33. Families should be an integral part of all decisions regarding their child's schooling.
34. Mutual partnerships between families and schools are crucial to a child's education.
35. Families have critical information to share about their children, which can assist educators in planning effective interventions for their child.
37. Family involvement enhances school climate and school safety.
Items in the Beliefs Domain (10 items)
21. I am familiar with effective practices, strategies and programs to increase family involvement.
22. I understand cultural factors that affect family systems, structures, and practices.
23. I am comfortable explaining students' school performance and behavior to parents.
24. I have the ability to initiate and sustain positive family school partnerships.
25. I am comfortable in my ability to conduct effective conferences or interviews with parents.
26. I am very knowledgeable about the advantages of family involvement in school activities and the possible barriers to family involvement.
27. I am confident that I have the skills and tools to successfully plan and implement effective parent workshops.
28. I am confident in my ability to engage and build partnerships with families from CLD backgrounds.
29. I am confident in my ability to partner with CLD families to implement effective research-based interventions at school and home.
30. I am very knowledgeable about successful strategies for involving CLD parents in school activities.
Items Removed (9 items)
9. Part of my role is to teach families about child development, discipline or parenting.

10. I am expected to regularly provide specific activities for parents to do with their children in order to increase student achievement.
14. Administrative policies will greatly influence my ability to create strong family-school partnerships.
17. My background experiences influence how I think about family-school partnering and the level of involvement parents should have in their child's schooling.
18. I am expected to know and understand current FSP legislation and how current laws and policies affect my interactions with families.
19. I feel comfortable providing families with parenting and child rearing support.
29. I am confident in my ability to partner with CLD families to implement effective research-based interventions at school and home.
38. Becoming self-aware about my background beliefs and experiences is important to creating meaningful family-school partnerships.
39. I attended schools where the majority of students and teachers were predominately white and middle class.