Decision-making in Early Childhood/Early Childhood Special Education Educator Preparation When Addressing Evidence-based Practice: How Are We Doing?

By

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Jennifer M. Amilivia

Ph.D., University of Kansas 2020

M.Ed., University of Michigan 2014

BGS, University of Michigan, 2012

B.A., University of Michigan, 2009

Submitted to the graduate degree program in Special Education and the Graduate Faculty of the University of Kansas in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

Chair: Suzanne Robinson. Ph.D.

Jose Martinez, Ph.D.

Sean Smith, Ph.D.

Barb* Bradley, Ph.D.

Susan Palmer, Ph.D.

Lisa Wolf-Wendel, Ph.D.

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The dissertation committee for Jennifer M. Amilivia, M.Ed. certifies that this is the approved version of the following dissertation:

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Chair: Suzanne Robinson. Ph.D.

DEDICATION

To my beautiful children, Nathan and Idalia.

All of your lives I have been working towards my college degrees.

Nathan with you in college and Idalia a sophomore in high school—my education journey has come to an end with my PhD.

Thank you for being my strength and driving force to keep going.

I am living proof that you can overcome any obstacle that is placed in front of you.

Never stop fighting.

Abstract

The definition of evidence-based practice has specific implication on how educators in partnerships with families make joint decisions about evidence-based practices. This dissertation utilized a survey design to obtain early childhood program faculty members perception on decision-making competence. The purpose of this study was to identify (a) the extent to which program faculty identified early childhood competencies of a six-step, collaborative decision-making model as important, and (b) the current status of training of preservice early educators for these decision-making competencies. The six-steps were grounded on the principle of building and maintain trusting, respectful, reciprocal relationships with families. In addition to the six-steps decision-making process, competencies were analyzed to highlight the necessary knowledge and skills beginning-level educators need to obtain through their early childhood education program.

Overall, early childhood faculty members agreed that having a set of competencies focusing on an educator-family decision-making process is important. The data illustrated a high level of importance for all seven competencies. Moreover, the findings from the current study support the early childhood profession's position on evidence-based practices (i.e., conceptualized as a verb) vs. evidence-based practice (i.e., conceptualized as a noun). The high level of agreement on all the competencies associated with the six-step decision-making model affirms the notion that families should be joint partners in the decision-making process about interventions/strategies educators implement. With little variability across participants' survey responses, the data confirmed the competencies associated with the six-step decision-making process are important skills that beginning-level educators need upon completion of their educator preparation program.

The data illustrated that early educator preparation programs meet expectations in the extent to which the program addressed all of the competencies. The data highlighted that course assignments, lectures, and readings was the most common means of addressing the competencies. The overall respondents' responses for partially meeting expectations and/or not all meeting expectations averaged 17%. This data indicated there may be different competency skill requirements at different institutions. The data indicated that the limited number of credit hours offered through their educator preparation program of study was a challenge that most programs encounter (30% of respondents). These findings reaffirm literature on the content early childhood educator preparation programs cover. Analysis of the qualitative data highlighted methods programs implemented to increase preservice educators' knowledge and skills for partnering with families. In summary, some preservice educators may benefit from learning about the following competencies: 1) the opportunity to consistently engage with parents during their field experiences; 2) the ability to gather and share research-based practices they have identified for use in the classroom as well as in the child's home with the parents; and 3) the way to build family partnerships while specifically including the family context.

Keywords: decision-making model; early childhood professional standards; early childhood competencies; family partnerships; preservice educator preparation

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Chapter 1: Background and Context

What is evidence? What benefit is there to sharing evidence? Questions like these need to be in the forefront of educators' minds when serving families and children with disabilities. Using evidence as a means to increase educational outcomes for all students was foundational to the Every Student Succeeds Act (ESSA). This is evident within the federal mandate, in part, because the emphasis is on the use of "evidence-based activities, strategies, and intervention" (Every Student Succeeds Act [ESSA], 2015; U.S. Department of Education, 2016, p. 2). Thus, the benefit of sharing evidence and gathering evidence is to advance the learning and development of all young children (Dunst & Trivette, 2009; Odom &Wolery, 2003). However, understanding the effectiveness of specific practices and successfully choosing and implementing interventions with sufficient evidence about proven educational outcomes remains challenging for early childhood education professionals (Cross & Conn-Powers, 2014; What Works Clearinghouse, 2017a; What Works Clearinghouse, 2017b).

To help educators identify evidence for practices, the early childhood profession needs to establish competencies to ensure preservice educators have enough knowledge and skills to identify, select, and implement evidence-base practices. A six-step process was designed focusing on the interactions between educators and families. The six-step process illustrates how communication occurs between educators and families. This six-step process is based off building and maintaining, trusting, respectful reciprocal relationships. The six-steps include: (1) conducting informal and formal assessments and sharing information; (2) identifying and developing outcomes and goals; (3) gathering and sharing information about interventions and strategies; (4) assessing the alignment with the fields accumulated knowledge; (5) collaborating to develop an individualized plan; and (6) implementing the individual plan, collecting data, and

continuous monitoring. Thus, the purpose of this study was to identify (a) the extent to which program faculty identified competencies of a six-step, collaborative decision making model as important, (b) the current status of training of preservice early educators for these decision-making competencies, and (c) faculty strategies to overcome their perceived challenges to address the decision-making competencies in their educator preparation programs.

To gain an understanding of evidence-based activities, strategies, and interventions, a distinction must be made between the use of evidence-based practices as it was defined by Whitehurst (2006) and highlighted in the No Child Left Behind Act (NCLB, 2002) versus evidence-based practice as defined and used by the Early Childhood Education Profession. The NCLB Act refers to evidence-based practices as those which are identified through rigorous research methodology. For example, What Works Clearinghouse, an initiative of the Institute of Education Sciences, is dedicated to reviewing research on different interventions and strategies to identify what works. On the other hand, the early childhood education profession views evidence-based practice as a decision-making process where educators and families make joint decision about evidence-based practices (Buysse, Wesley, Snyder, & Winton, 2006; Buysse & Wesley, 2006; Snyder & Ayankoya, 2015; Snyder, 2006). This distinction between evidence-based practices and evidence-based practice was made to help facilitate conversations between educators and families. The definition of evidence-based practice was an attempt to promote discussion between educators and families about the supporting evidence of practices and to determine the appropriateness of the practice. Furthermore, clarification must be made regarding models used to identify evidence-based activities, strategies, and interventions and models used to make joint decisions about selecting and implementing evidence-based practices. The models

that will be discussed later in the chapter provide a rationale for the development of a decision-making process and competencies that were designed for this study.

This chapter outlines background content for the present study by discussing the contexts and key components of evidence-based practices. The background information focuses on three different topics: the emergence of evidence-based practices in education (i.e., K-12) and evidence-based practice in early childhood education; the models for making decisions based on evidence; and an introduction to a six-step decision-making process and associated competencies beginning early childhood educators need to address the family's priorities and concerns about their child's needs and strengths. The chapter concludes with an overview of the statement of the problem, research purpose, and research questions.

Defining Evidence-based Practices: What Does it Mean for Early Childhood?

The Medical Model

Evidence-based practices first emerged as part of the medical model known as evidence-based medicine (Cook & Odom, 2013; Cook, Tankersley, & Landrum, 2013). The term was designated as a clinical approach to aid professionals in the health-care field to synthesize research evidence for clinical decision-making (Cook et al., 2013; Sackett, Rosenberg, Gray, Haynes, & Richardson, 1996). The definition of evidence-based practices from a medical perspective is, "the integration of the best available research evidence with clinical expertise and patient values" (Sackett et al., 1996, p. 71). The promise of evidence-based medicine was to improve and widen health care across multiple systems (Cook et al., 2013). To mirror the promise of improved systems, federal legislation (i.e., No Child Left Behind [NCLB]) called for the use of "scientifically-based research" as the foundation for education programs and intervention (Greenway, McCollow, Hudson, Peck, & Davis, 2013; Spencer, Detrich, Slocum,

2012; NCLB, 2002). The reauthorization of NCLB (2002) (i.e., Every Student Succeeds Act [ESSA], 2015) replaced the phrase "scientifically-based research" with "evidence-based intervention" as a means to focus on accelerating children's learning (ESSA, 2015). Under ESSA, educational practices required evidence that illustrates its statistically significant effect on producing results and improving outcomes for young children (ESSA, 2015).

A Unified Definition of Evidence-based Practices

With ESSA (2015) directing educators to implement interventions grounded in research, scholars across the education field identified a method to aid in the selection of research-based practices. Scholars found that the benefits of synthesizing the best available research findings in conjunction with professional expertise led to the formation of evidence-based practices tied to decision making processes which match these identified practices to a specific child's needs (Council for Exceptional Children, 2014a; What Works Clearinghouse, 2017b; What Works Clearinghouse, n.d.). Although scholars identified criterion for evidence-based practices, many still struggled with the definition of what constitutes sufficient or convincing evidence. With no agreed upon definition of evidence-based practices, the identification and implementation remain a struggle for many educators.

The progress made by the medical model's approach to evidence-based practices influenced the former director of the Institute of Education Sciences (IES), Grover Whitehurst to generate a definition for evidence-based practices. That is, the initial definition of evidence-based practices was based on the medical model, which highlighted the improvements of performance by health care practitioners leading to positive patient outcomes (see Table 1). The definitions from Whitehurst (2006) and Sackett et al. (2000) (i.e., medical model definition of EBPs) focused on integrating the best research evidence with professional wisdom or clinical

judgement to make decisions about practice (Snyder, 2006). Indeed, the definitions of evidence-based practices made gains in both the medical field and education; however, the early childhood education profession viewed the definition as lacking. Within early childhood education, professionals needed more clarity than that provided by the federal mandates, which did not sufficiently explain how to identify, select and implement EBPs. As such, application of the term was unclear in providing guidance to everyday application of the construct.

Evidence-based Practice in Early Childhood

Knowing the benefits of using evidence, the early childhood education profession endorses the link between the early education program quality and the implementation of EBPs. Nonetheless, the definition of EBPs still eludes many early childhood educators (Farley, Brock, & Winterbottom, 2018). Scholars within the early childhood education profession believe that the definition put forth by Whitehurst (2006) did not uphold the values and beliefs of the field regarding family participation. Table 1 illustrates the definition Whitehurst used to characterize evidence-based practices. The exclusion of families overlooks the critical role that the family plays in the development and learning of young children. Moreover, while ESSA provides information about what constitutes evidence-based practices (e.g., grounded in rigorous experimental quasi-experimental or correlational study), ESSA lacks sufficient detail on how to identify EBPs, thus, making it an ambiguous term used throughout the education field (Farley et al., 2018).

To honor the early childhood education profession's position on family partnerships, Buysse and Wesley (2006) provided a definition for evidence-based practice to meet the profession's values. Thus, Buysse and Wesley (2006) acknowledged that the term evidence-based practice (note that these researchers used "practice" rather than "practices"), as it relates to

the early childhood education profession, is defined as "a decision-making process that integrates the best available research evidence with family and professional wisdom and values" (Buysse & Wesley, 2006; Buysse, Wesley, Snyder, & Winton, p. 3). The definition presented by Buysse and Wesley reinforces the values and beliefs of the early childhood education profession; that is, the definition furthers the belief of individualized instruction within the child's natural environment to support the child's needs and strengths as well as empowering families to make joint decisions with educators (Farley et al., 2018). This definition of EBPs is thus endorsed by the National Association for the Education of Young Children (NAEYC) due to its holistic view of identifying which practice to implement (Farley et al., 2018).

With the increasing implementation of evidence-based practice, the early childhood profession recognized that the identification and implementation of EBPs was not sufficient. That is, the early childhood education profession realized that educators and families need guidance in how to identify, select, and implement EBPs [tying scientific principles to a process that is cognizant of the values, knowledge, and preferences of individual families in how to intervene with their young children]. This realization resulted in the creation of the phrase "evidence-based decision-making." As the definition became widely accepted by the early childhood education profession, the term "evidence-based" was attached to the word "decision-making" thus, creating the term "evidence-based decision-making." The notion of evidence-based decision-making alluded to a decision-making process where educators and families partner to make informed decisions about practice. With this in mind, the shift in the early childhood education profession focused on a decision-making process to identify, select, and implement evidence-based practices. Although the notion of evidence-based decision-making focused in part on a systematic process, it is not supported by rigorous research methodologies

like those used to identify evidence-based practices. To advance the use of evidence-based practice, the early childhood education profession needs to separate "evidence-based" from "decision-making." Meaning, the early childhood education profession needs to focus on the identification of a systematic process that educators and families can follow when selecting EBPs to meet the needs of individual children.

Table 1. Defining Evidence-based Practices and Evidence-based Practice

Citation	Definition
Buysse & Wesley, 2006	A decision-making process that integrates the best available research evidence with family and professional wisdom and values.
Whitehurst, 2006	Integration of professional wisdom with the best available empirical evidence in making decisions about how to deliver instruction.
Sackett et al., 2000	The integration of the best available research evidence with clinical expertise and patient values.

Note: Definitions are pulled from Wesley & Buysse. (2008).

Models for Decision-making Guided by Evidence

The following sections present three models for making decision based on evidence. The models for decision-making focus on the elements that go into identifying evidence-based practices. The following models highlight the actions educators take to select evidence-based practices. The first model illustrates how the person responsible (e.g., educator) is responsible for selecting and implementing the practice, collecting data, and using the evidence to make data-based decisions. The second model illustrates how the combination of three components result in evidence-based decision-making. There is a specific focus on family wisdom and values and professional wisdom and values. However, the model omits how the educator and family communicate to make joint decisions. The third model focuses on educators identifying and implementing the intervention with fidelity. Although the purpose of each model is to help

the educators select an educational practice that meets the needs of the child, the models do not include a clear process on how these features results in decision-making. The information gathered from the three models thus informed the six-step decision making process that was developed for this study. The purpose of the model was to develop a process that illustrates the actions and communication that occurs between educators and families.

Using Evidence as a Guide

In 2016, the US Department of Education published a guidance document to help state education agencies (SEAs), local educational agencies (LEAs), schools, educators, and other stakeholders with information on selecting and implementing evidence-based interventions (U.S. Department of Education, 2016). However, the Department of Education did not mandate or prescribe a model. The document's intent was to provide examples and resources for public and private organizations to consider at their discretion when selecting evidence-based interventions (U.S. Department of Education, 2016). The five-part cycle focused on what SEAs, LEAs, and schools need to accomplish to strengthen the effectiveness of the ESSA. The five-part cycle included (a) identifying local needs, (b) selecting relevant evidence-based interventions, (c) planning for implementation, (d) implementing, and (e) examining and reflecting (see Figure 1). These steps when integrated together accelerated the improvement of and support for positive outcomes for children (U.S. Department of Education, 2016).

Figure 1. Five-part Cycle to Strengthen the Effectiveness of ESSA

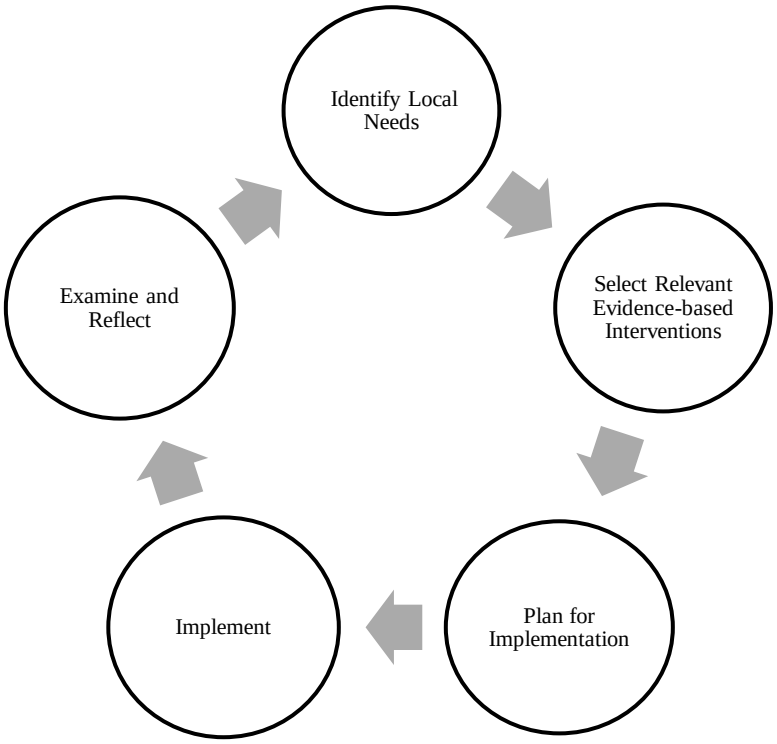


Figure 1. illustrates a model for using, generating, and sharing evidence about effective practices for students to promote positive outcomes. U.S. Department of Education (2016).

In Step One, identify local needs, the SEAs and LEAs consult in a timely manner to discuss a range of data to evaluate the needs of students, schools and educators. The discourse between SEAs and LEAs was meant to aid in the identification of the root cause of those needs. For example, data from student or school assessments can be used to identify needs and goals. In addition, SEAs and LEAs can obtain data from interviews, focus groups, and surveys to gain additional information about local needs. Things to consider when evaluating the data from different sources were identified as priorities, needs, and concerns of stakeholders.

Moving through the cycle to Step Two, select relevant, evidence-based interventions, the SEAs and LEAs review the needs and determine a course of action. That is, stakeholders gather to select an intervention that is based on rigorous and relevant research evidence. Using the

entire body of relevant evidence, an intervention is identified. To identify interventions with strong evidence, ESAs, LEAs, and other stakeholders should consider information from resources (e.g., WWC, IRIS, CEC, ZERO TO THREE, Early On) to assess the intervention's effectiveness. For example, resources like What Works Clearinghouse publishes evidence-based reviews using rigorous standards to evaluate the effectiveness of an intervention (What Works Clearinghouse, n.d.).

Following the identification of an intervention, Step Three, plan for implementation, a plan is designed based on the suggestions from SEAs, LEAs, and other stakeholders. The implementation plan consists of creating a logic model to highlight how the intervention is likely to result in positive outcomes for children. Although a logic model can shed light on what might occur, consideration of measurable goals, roles and responsibilities, length and duration of the intervention, and a plan for monitoring continuous progress need to be laid out in the logic model. After a well thought out plan is developed, Step Four, implementation, can commence. The implementation of the intervention should be based on the agreed upon plans that were developed by the SEAs, LEAs, and other stakeholders. The implementation of the intervention will affect the outcomes of the interventions. Following the implementation plan, the person accountable (e.g., educator, family member, practitioner) is required to collect and monitor the quality of implementation and document any challenges that occurred. The final step of the cycle, Step Five, Examine and Reflect, requires the person(s) responsible for implementing the intervention to conclude whether the intervention is working. As part of Step Five, decision-making is completed by examining how well the intervention worked. Guided by the data about the intervention, one should be able to justify if the intervention is meeting the goals and outcomes and suggest strategies to modify or adapt the intervention (if necessary).

The Three Circles in Evidence-based Decision-making

The early childhood education profession started to implement evidence-based decision-making as a way to transform the services provided to children and their families. The inclusion of evidence-based decision-making as defined by Buysse and colleagues (2006) was a means to address the family's priorities and concerns about their child's needs and strengths. Meaning, the objective of evidence-based decision-making in the early childhood education profession is to improve developmental outcomes of young children through the identification and implementation of evidence-based practices. However, selecting EBPs requires early childhood educators to rely on their professional wisdom and the best research evidence as well as the family's wisdom and values. Identifying what works and under what conditions for young children presents challenges for many early childhood educators.

To gain perspective on selecting EBPs, Buysse and colleagues (2006) suggest the integration of the best research evidence, professional wisdom and values, and family wisdom and values for the identification of evidence-based practices (i.e., noun) (see Figure 2). The first feature of evidence-based practice is identifying the best available research evidence, which depends on the evaluation of research evidence. There are two levels to evaluating research which will assist in the identification of evidence-based practices. The first level of evaluating research relies in part on the quality and quantity of research. Scholars with expertise in various research methodologies use their knowledge and skills to analyze the methodological rigor, trustworthiness, and reliability of the evidence of the practice (Brantlinger et al., 2005; CEC, 2014; Gersten et al, 2005; Horner et al., 2005). The quantity of research refers to the number of high-quality studies that demonstrate the practice's effectiveness. Scholars then synthesize the evidence to determine if there is sufficient evidence demonstrating the effectiveness of the

practice. However, scholars identifying practices must account for the accumulated knowledge of the field when classifying a practice as evidence based.

Figure 2. Three Circles of Evidence-based Decision-making

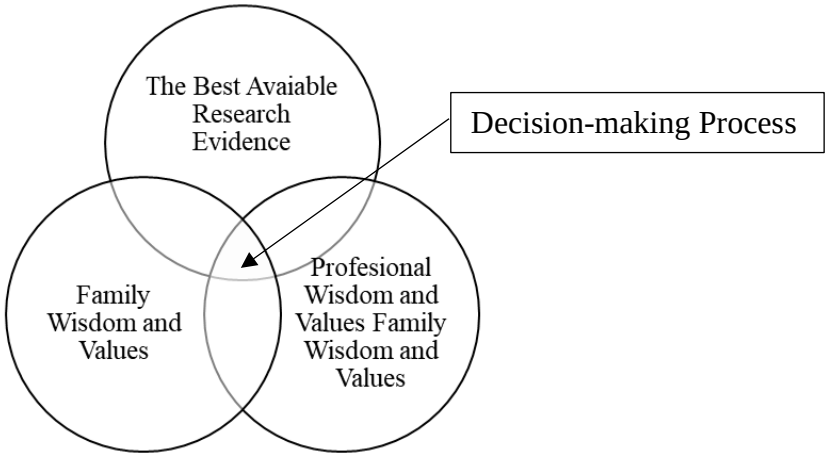


Figure 2. The figure of the Three Circles of Evidence-Based Decision-making is based on the work of Buysse and Wesley (2006).

The second level of evaluating research consists of early childhood educators to consider educational resources to help identify a practice that aligns with the family's priorities and concerns for their child (see Figure 2). Educational resources include websites like What Works Clearinghouse (WWC) and the IRIS Center™, that contain summaries and reviews to identify potential practices. The research summaries offer information on the level of effectiveness and impacts for young children. These summaries are designed to assist early childhood educators in the identification of evidence-based practices. While the identification of a practice is one part of selecting an evidence-based practice, deciding whether to implement the practice depends on the early educator sharing the information with the family. Thus, sharing information with families encourages joint decision-making (Bailey et al., 1986; Dunst, 1996; Dunst & Paget, 1991; Dunst & Trivette, 2009; Dunst, Trivette, & Thompson, 1991).

Sharing information with families can lead to joint decision-making, because the experiences, priorities, and concerns of the family are discussed in relation to potentially useful evidence-based practices (see Figure 2). Families come with a unique perspective of their child's current level of development that is invaluable to the selection and implementation of the practice (Trivette & Keilty, 2017). Indeed, Division for Early Childhood (DEC) Recommended Practices reinforce the uniqueness of families by promoting that all interactions are "sensitive and responsive to the cultural, linguistic, and socioeconomic diversity" of the family (DEC, 2014, p. 10). Thus, understanding the unique characteristics of the family will enable educators to tailor their approaches for the family (Trivette & Keilty, 2017).

Problem-solving Model: Practice-based Evidence

Since the push to use evidence-based practices, scholars have sought to identify a model to ease educators' identification of evidence-based practices. In a recent article, Chorzempa and colleagues (2018) introduced a model that was designed to assist beginning level educators to evaluate the effectiveness of a practice by using their pedagogical knowledge and experience. This problem-solving model was called practice-based evidence (PBE). The function of PBE was to help educators to use their classrooms as a field of inquiry to gather evidence and then utilize a data-based decision-making process (Chorzempa, Smith, & Sileo, 2018). This problem-solving model involved in-service and preservice educators (a) examining the extent to which a practice as identified in the literature as an EBP results in positive outcomes within the educational context or (b) gathering data on an experientially based practice that has minimum research evidence and demonstrating its effectiveness as a case study. Meaning, educators collect data and analyze it in the field to validate the selected practice based on the context of the classroom to provide inquiry-based evidence grounded in their professional wisdom. To begin

the PBE model, in-service and preservice educators begin by identifying educational outcomes for children. These outcomes are based on curriculum or identified child needs based on universal screening.

Following the development of identified educational outcomes, educators determine the appropriate assessment strategies before planning or implementing a practice. The data collected through the initial assessment is used as baseline data on the child's current level of development. Educators use these baseline data to judge the impact of the practice. The in-service and preservice educators next task is to utilize the assessment data and designated outcomes to consider potential practices and select the appropriate practice that matches the needs of the child. To identify possible practices, in-service and preservice educators are encouraged to use current resources to gain additional information on the effectiveness of the practice. For example, in-service and preservice educators can turn to websites like the Early Childhood Technical Assistance Center (ECTA) or the IRIS Center (The Iris Center, 2010) for guidance on selecting evidence-based practices.

After exploring possible interventions that might match the child's outcomes, in-service and preservice educators select a practice. The educator then examines the selected intervention and implements the practice with fidelity. Implementing an intervention to fidelity requires the educator to adhere to the characteristics of the practice. For example, educators will have to adhere to the timelines, group size, directions, procedures, and duration and length of the intervention. If the intervention is not implemented with fidelity, the intervention may not be effective and could result in poor educational outcomes for the child. The final steps in the problem-solving model encourages the in-service or preservice educator to seek feedback on the selection and implementation of the practice. This process is to help the in-service or preservice

educator to evaluate the practice and the implementation of the practice. After PBE is collected, in-service or preservice educators analyze and reflect on the data. The purpose is to determine if the desired child outcome was achieved through the implementation of the practice. Sharing the evidence is only done after the in-service or preservice educator has collected and analyzed the data. The data is then shared with families or other stakeholders.

The Current Status on Decision-making in the Early Childhood Education Profession

With the shift in how evidence-based practices is defined, the early childhood education profession clearly defines evidence-based practice as a systematic process that integrates the best available research evidence, professional wisdom and values, and family wisdom and values combined with a set of practices (Buysse & Wesley, 2006; Buysse et al., 2006). Although, clarification has been made regarding what constitutes evidence-based practices, there has yet been a clear process on how to initiate and execute the decision-making process in conjunction with family members. Early childhood educators need to have knowledge and competencies in a decision-making process before engaging in the process. To increase the selection and implementation of EBPs, a clear model for decision-making needs to be developed. For educators to use a model for decision-making, key features for the model need to embody the values and beliefs of the early childhood education profession.

Statement of the Problem

To summarize, a six-step decision-making model was developed for the current study that can be used by early childhood educators and early childhood special educators (EC/ECSE) as they engage together with families in identifying and implementing evidence-based practices to support young children's growth and development. Furthermore, the lead author in collaboration with experts in personnel preparation identified critical competencies needed by

the educators to implement the model in their practice. The primary purpose of this study was to explore (a) the extent to which program faculty identified competencies of a six-step, collaborative decision-making model as important, (b) the current status of training of preservice early educators for these decision-making competencies, and (c) faculty strategies to overcome their perceived challenges to address the decision-making competencies in their educator preparation programs. The following research questions were addressed:

Research Questions

The following research questions are addressed in this study:

1. To what extent do program faculty agree that the identified competencies are important knowledge and skills needed by beginning level EC/ECSE educators upon completion of their education preparation programs in order to be competent in decision-making?
2. For each competency noted as important in their program, to what degree do the faculty report that their program addresses the competency?
3. For each competency noted as important in their program, what challenges do faculty report facing in addressing the competencies in their program?
4. What strategies have faculty used to overcome challenges to fully address the competencies in their program?

In subsequent chapters, the distinction between evidence-based practices as a noun and evidence-based practices as a verb are presented (Chapter 2). Next, a detailed account of the methodology (Chapter 3) and results (Chapter 4) is presented. The dissertation concludes with a discussion on the implications of the study, limitations, and recommendations for future research (Chapter 5).

Chapter 2: Evidence-based Practice

Evidence-based practices emerged out of the medical field in the late 20th century as an approach to making practice decisions based on research evidence (Cook, Tankersley, & Landrum, 2013). As the age of accountability in education developed, the No Child Left Behind Act (reauthorized in 2015 as Every Student Succeeds Act, ESSA) called for proven education methods to produce better educational outcomes for children (Cook, Tankersley, Cook, & Landrum, 2008; Greenway, McCollow, Hudson, Peck, & Davis, 2013; Spencer, Detrich, & Slocum, 2012). Consequently, efforts focused on increasing the role of evidence-based practices to ensure that educators use the best available evidence to make practice decisions. To further this agenda, both ESSA and the Individuals with Disabilities Education Improvement Act (IDEA, 2004) required educators to use scientifically based research as the foundation for interventions for all students (Cook, Cook, Landrum, & Tankersley, 2008a; Greenway et al., 2013; Odom et al., 2005; Spencer et al., 2012).

As the expectation for educators to use evidence-based practices (EBP) increased, the identification and implementation of effective practices became challenging for many educators, including early childhood/early childhood special education (EC/ECSE) educators (Trivette & Dunst, 2013). Nonetheless, educators are expected to select and implement a particular practice and make decisions as to whether the practice matches the needs of the children and their families they serve. With this in mind, EC/ECSE preparation programs need to consider how preservice educators are trained to identify evidence-based practices, but at the same time, think about how preservice educators' training influences decision-making (Odom, et al., 2005). That is, preparation programs need to determine the knowledge and skills required for preservice educators to effectively identify an evidence-based practice.

In Chapter Two, a nontraditional approach was taken to describe a framework that was developed to illustrate how to identify evidence-based practices. Meaning, a traditional literature review was not conducted; however, literature was used to provide evidence for the framework. Thus, the following section reviews the literature to introduce a new method preparation program to train preservice educators to identify evidence-based practices. Following the introduction of the method, current literature is shared to gain a perspective on current methods of preparing preservice educators to identify evidence-based practices. Next, a discussion of the process to assess whether a practice is research-based is presented. An example will be presented to demonstrate the process used to evaluate individual practices' research base. The final section discusses the implications of preparing preservice educators to identify an evidence-based practice and the impact it can have on their instructional practice.

Training Preservice Educators to Identify Evidence-Based Practices

The goal of teacher education is to prepare well-informed professionals who have strong pedagogical knowledge and skills regarding instructional decisions (Scheeler, Budin, & Markelz, 2016). Reaching this goal requires preparation programs to prepare preservice educators who can (a) understand research evidence and (b) the field's foundational knowledge supporting the practice. Teaching preservice educators to identify, select and implement evidence-based practices calls for innovative preparation methods (Scheeler et al., 2016). Preparation programs that offer innovative preparation methods for identifying evidence-based practices must evaluate course teaching practices and routines, as well as field experience for preservice educators to practice and refine their use of evidence-based practices (Scheeler et al., 2016).

Scheeler and colleagues (2016) discussed the need for preparing pre-service educators to use evidence-based practices. They suggested that educator preparation personnel examine their

knowledge and use of evidence-based practices in college classrooms to seek effective strategies to prepare preservice educators. Purposefully aligning the coursework to teach about evidence-based practices will enable preservice educators to become active consumers of research who can effect change in their teaching practice. To effect this change, Scheeler and colleagues (Scheeler, Budin, & Markelz, 2016) suggested modeling the use of evidence-based practices in college classrooms. As modeling itself is an effective research-based strategy, preservice education personnel should continue to engage in this strategy with adult learners. The benefit of modeling the identification and use of evidence-based practices increases preservice educators' ability to (1) identify children's needs and seek empirical-support to meet those needs and (2) prepare preservice educators for implementation of the practice. In addition to modeling, Scheeler and colleagues recommend providing preservice educators with the opportunity to practice newly acquired skills during field experiences to enable them to move from acquisition to mastery. Thus, if preparation programs provide opportunities for preservice educators to practice identifying and implementing evidence-based practices in the field, educator preparation personnel or mentor teachers can then offer more performance-based feedback on the selection of an intervention that matches the needs of the children and families they will serve.

Although Scheeler and colleagues (2016) offer methods to increase preservice educators' identification of evidence-based practices, the process of teaching preservice educators remains unclear. Scheeler and colleagues provide another means to teach preservice educators to select evidence-based practices. In particular, they propose utilizing innovative tools like Content Acquisition Podcasts (CAPs) (Kennedy, Hart, & Kellems, 2011) and TLE TeacheLivE™ (see Dieker, Rodriguez, Lignugaris-Kraft, Hynes, & Hughes, 2014) as alternative methods; however, there is limited information on how to effectively use these tools in college classrooms.

Ultimately, Scheeler and colleagues (2016) acknowledged preparation programs cannot prepare preservice educators to use every intervention; therefore, they recommended that interventions educator preparation personnel choose to teach preservice educators should be done with depth and accuracy (i.e., with fidelity), and be an excellent example of what constitutes evidence-based practices.

Another study examined the differences between special education and general education educator's knowledge of evidence-based practices. Sciuchetti, McKenna, and Flower (2016) surveyed a sample of 163 special education and general education educators on their knowledge and selection of evidence-based practices. Results were troubling in that special education and general education educators appeared to lack a clear understanding of what makes an evidence-based practice. Findings indicated that respondents specify "research proof" as a defining characteristic of evidence-based practices. However, there was no reference to methodology, quantity, quality, or magnitude in their definitions of evidence-based practices. Although findings indicated a lack of understanding of what constitutes evidence-based practices, comparatively, general educators were found to be less aware of evidence-based practices than special education educators. This finding can be due in part to differences in training requirements and professional standards for special education and general education educators.

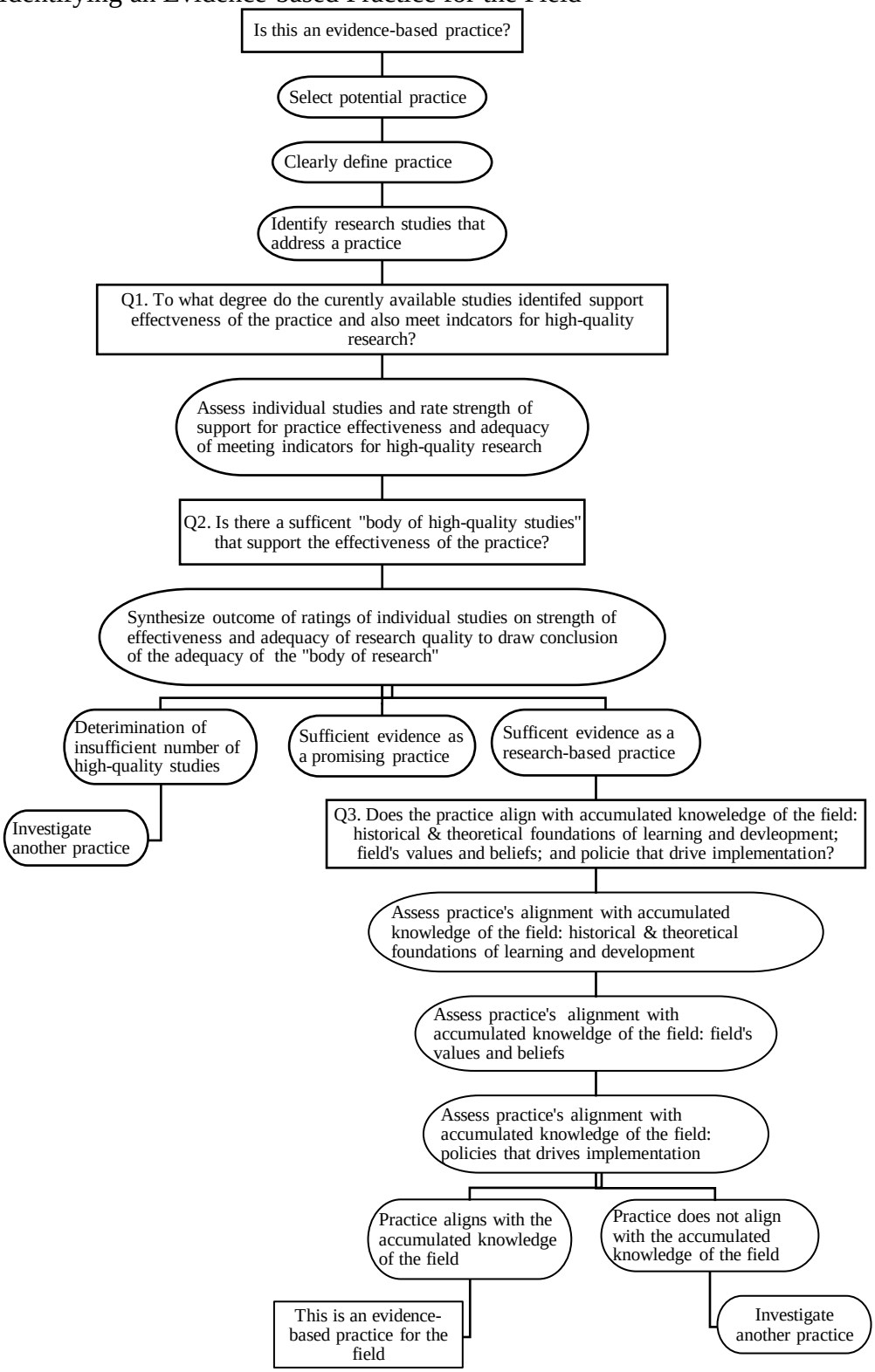
In a similar study, Gable and colleagues (2012) conducted a survey to identify educator perceptions regarding the (a) importance, (b) amount of use, and (c) level of preparation of 20 evidence-based practices. The results indicated that study participants lacked training in effectively implementing evidence-based practices. The findings from the study imply that there is still a substantial gap in research-to-practice for both special education and general education educators regarding educators' use of evidence-based practices. Thus, the study reinforced the

need to increase efforts to prepare preservice educators to identify and implement effective evidence-based practices that match the needs of the child and family. Interestingly, Gable and colleagues (2012) advocated for fundamental change in educator preparation programs due to educators' difficulties with knowledge and selection of evidence-based practices. However, they do not offer a transparent approach to make this change.

Is This an Evidence-Based Practice?

In the following section, this paper offers a method to aid preparation programs to teach preservice educators to identify an evidence-based practice. An evidence-based practice (i.e., interventions or instructional strategies) is one which currently available empirical evidence demonstrates effectiveness for a specific practice; aligns with the accumulated fields (i.e., education, special education, early childhood education) knowledge; and when implemented with fidelity by educators results in positive outcomes (Whitehurst, 2004). As illustrated in Figure 1, the process of identifying a practice as evidence-based requires answering three questions addressing two primary topics: (1) assessing the research evidence for the practice; and (2) evaluating the field's foundational knowledge supporting the practice. Questions 1 and 2, as shown in Figure 3, address the first topic for determining the strength of the currently available research supporting the text. Question 3 of Figure 3 addresses the second topic.

Figure 3. Identifying an Evidence-based Practice for the Field



Assessing the Research Evidence for a Practice

To conclude that there is enough research evidence supporting the effectiveness of the practice as noted above, answers for Questions 1 and 2 in Figure 3 are needed; however, in Figure 3, the first task is actually to select a potential practice. Subsequently, researchers clearly define the practice and include under what conditions it is likely to result in positive outcomes for children and families (Cook et al., 2008a; Cook, Tankersley, & Harjusola-Webb, 2008c; Lanovaz & Rapp, 2016). After a practice has been identified and clearly defined, the next task is identifying research studies supporting that practice. As illustrated in Figure 3, the first three tasks are followed by Question 1. Answering Question 1 requires researchers to assess identified studies considered as high-quality by appraising each study's research rigor.

Determining research rigor requires assessing the quality of individual studies using a set of standards or indicators, such as, the Council for Exceptional Children (CEC) Standards for Evidence-Based Practices (2014a), the What Works Clearing House (WWC) (https://ies.ed.gov/ncee/wwc/), and published articles about research rigor (Gersten et al., 2005a; Gersten et al., 2000; Horner et al., 2005; Odom et al., 2005). These resources are used to evaluate studies based on different quality characteristics that researchers address in various sections of a published research article (e.g., methods section, result section, discussion section). Importantly, the indicators for research differ depending on the methodological approach. For example, articles focusing on specific methodological approaches have been published to aid researchers in the evaluation process: (1) for group and quasi-experimental research (i.e., Gersten et al., 2005a); (2) for single-subject research (i.e., Horner et al., 2005); and (3) for qualitative research (i.e., Brantlinger et al., 2005; Trainor & Graue, 2014). The determination that a practice

meets indicators for high-quality research typically means separating individual studies and rating the effectiveness that supports a practice (see Figure 3).

Following the evaluation of individual studies, one needs to examine the effectiveness of the practice. A practice's efficacy increases when it supports other studies of high-quality (CEC, 2014a; Cook & Cook, 2011), for example, if the practice was appropriately implemented or to fidelity, used appropriate outcome measures, and had few or no participants withdrew from the study. Thus, the strength of a practice's effectiveness increases when results from multiple studies show meaningfully positive effects (CEC, 2014a; Cook & Cook, 2011). Again, as noted in Figure 3, once a determination has been made as to whether research addressing a practice meets indicators of high quality and provides strong support for the effectiveness, the entire "body" (i.e., collected high-quality studies) of research, one moves to synthesize the studies' findings. Synthesizing the body of research involves evaluating the quality of individual studies and then placing each study in one of three groups based on the following determinations: (1) insufficient number of high-quality studies; (2) sufficient evidence as a promising practice; or (3) sufficient evidence as a research-based practice.

A practice is deemed research-based when a sufficient number of studies meet quality indicators for its methodology and demonstrate strong support for the practice (i.e., Brantlinger et al., 2005; Gersten et al., 2005a; Horner et al., 2005; Trainor & Graue, 2014). For example, Gersten and colleagues (2005) suggested that a practice is research-based when it meets all but one essential quality indicator and meets at least four of the desirable quality indicators (see Gersten and colleagues for a full definition of essential and desirable quality indicators). Similarly, Horner et al. (2005) suggested that to consider a practice research-based using single-subject methodology, the practice must be supported by a minimum of five high-quality single-

subject studies that (a) were conducted in at least three different environments by at least three different researchers, and (b) included at least 20 participates across all studies (Cook et al., 2008b; Horner et al., 2005). Furthermore, Brantlinger et al., (2005, p. 203) suggest using "logic and reason to evaluate whether sufficient evidence" can be obtained for the practice through qualitative methodology.

Placing studies into groups can lead to the practice to be determined as a "promising practice;" that is when studies supporting the practice meet only some research quality indicators (see Figure 3). For example, Gersten et al. (2005) recommend that the practice needs at least four acceptable or two high-quality studies supporting the practice and have a 20% confidence interval for the weighted effect size that is greater than zero to be considered a promising practice.

Finally, for some practices, the decision may be to "investigate another practice," which occurs when a practice currently does not have enough high-quality research evidence supporting its effectiveness **(**Cook et al., 2008; Gersten et al., 2005). As noted in Figure 3, determining if a particular practice is research-based is a complicated process requiring knowledge of the practice, the current supporting research, and how the available studies rate on indicators of high-quality research. Bringing the information together, researchers can determine to what extent the practice has a research-base, a determination that contributes to determining if it is evidence-based.

Assessing the Knowledge of the Early Childhood Education Profession

An additional consideration to determine if a practice is evidence-based is assessing the extent to which the practice aligns with the EC/ECSE accumulated knowledge of the field. The term field in this section refers to the early childhood education profession. As noted in Figure

3, this step is completed by answering the question: Does the practice align with the accumulated knowledge of the field (i.e., early childhood education profession)? In this context, the accumulated knowledge includes three components: (1) the historical and theoretical foundations of learning and development; (2) the values and beliefs of the field; and (3) the policies that drive implementation. Addressing these three components provide critical information about current strategies, principles, and practices. Thus, to determine the evidence-base requires one to assess the practice against the expectations inherent in each component in turn. It is essential, however, to note that while the alignment process defines each component as though it is discrete, in reality, they do have overlap. Determining which component of the early childhood education profession's accumulated knowledge has a particular source of information is less important than ensuring that the alignment process addresses all components. In the following sections, a discussion on the components of the field's knowledge will be presented. Specifically, a definition is provided as well as potential sources and examples for obtaining information about the field's knowledge.

Historical and theoretical foundations of learning and development. As seen in Figure 3, the first component of the field's accumulated knowledge is the historical and theoretical foundations of learning and development. To determine the alignment of a practice with the historical and theoretical foundations, one must recognize that the writings and work of many individuals through history have contributed to contemporary ideas about young children and early childhood education. Human development theories are used to describe what happens as individuals move from infancy through adulthood, identifying significant events commonly experienced by all people, and explaining why changes occur as they do. While the field follows the theories and teachings of some theorists more than those of others, it is essential to

understand that theory provides a framework within which the early childhood education profession view children and how they learn.

Theories such as Vygotsky's social constructivism, which is a critical theoretical foundation, for example, provide a framework for educators. Mainly, Vygotsky's zone of proximal development (ZPD) provides an essential conceptual frame for assessing the appropriateness and instruction practice (Bruner, 1984). Vygotsky described ZPD as what children can do without help and what a child can go with support. Thus, the concept of ZPD becomes a source of information one can use to assess the alignment of a practice. To use ZPD as a source requires educators to know the actual developmental level of a child's problem-solving and the potential developmental level of problem-solving with an adult's guidance (Gestwicki, 2011). That is, one needs to determine if the practice will meet the child at their present developmental level and support scaffolding for moving the child to the next developmental step or level. By assessing a practice's alignment with historical and theoretical foundations, one is ensuring that the practice is suited to the learning and development of children and promotes positive outcomes.

Field's values and beliefs. In moving to this second component for answering the second question on alignment with the field's accumulated knowledge (See Figure 3), one must look to the shared values and beliefs of the members of the field. Specifically, values and beliefs defined for this purpose refer to the accumulated information about high-quality services provided to young children and families. Professional organizations like DEC and NAEYC have contributed position statements and recommended practices for instructional practices that guide the field of early childhood education and early childhood special education. The DEC Recommended Practices (2014) was developed to provide educators and families information

about improving outcomes for children. Likewise, NAEYC established Developmentally Appropriate Practices to offer early educators with a framework for best practices (Copple & Bredekamp, 2013).

Again, position statements and recommended practices developed by professional organizations are sources for obtaining information, which form the foundation of the field's values and beliefs, for example, in the Position Statement on Inclusion, which was a joint effort between DEC and NAEYC (2009). The position statement established the values and beliefs regarding inclusive practices: (a) access, (b) participation, and (c) supports. Another example is the separate position statements written by DEC (2010) and NAEYC (1995) addressing responsiveness to culturally and linguistic diversity. These two position statements on cultural and linguistic diversity established an important shared belief that "individuals who work with children must respect, value, and support the culture, values, beliefs, and languages of each home and promote the meaningful, relevant, and active participation of all families" (DEC, 2010, p. 1). Thus, as one answers the question as to whether an individual practice aligns with the field values and beliefs, one looks to the relevant recommended practices and papers of the field.

Policies. As noted in Figure 3, the final step of determining of a practice is evidence-based is to decide if the practice aligns with current policies. In this context, policies are defined as the collection of laws and rules that govern the operation of the field and serve to guide instructional decisions. Policies establish guidelines for practice and accountability to ensure that all children and their families have access to and receive high-quality educational opportunities. Policies include federal and state laws and their regulations, federal and state policy statements and standards, program/school regulations, and program and personnel preparation standards.

Two examples of federal laws and their regulations for assessing alignment with the policy are IDEA (2004) and ESSA (2015). One purpose of IDEA (2004) is to "ensure that educators and parents have the necessary tools to improve the educational result for children with disabilities" (Public Law 101-476). Reviewing the information for IDEA allows researchers to determine if the practice will improve educational outcomes for children. Similarly, with ESSA (2015), the components that address early education requirements for states provide essential information regarding expectations for high-quality early learning experiences.

An example of federal policy statements as sources for determining a practice's alignment with the policy is the joint policy statement on early childhood inclusion from the Health and Humans Services (HHS) and Office of Special Education Programs (OSEP) (2015). This statement provides specific recommendations and expectations about inclusion for children with disabilities in early childhood programs. An example of state standards that would be important to consider is the state's early learning standards. The purpose of a state's early learning standards is to outline the expectations for what preschool-age children should know or be able to do. Although they come in a variety of formats, the central premise is that these documents articulate what is taught and what children should learn before kindergarten entry (Scott-Little, Lesko, Martella, & Millburn, 2007).

Equally important in determining if a practice aligns with the policies of current program/school regulations. Programs like Head Start and Child Care programs established standards of high-quality services for children and families. For example, in Head Start Program Performance Standards (2016), a practice should be "based on scientifically valid research, standardize training procedures, and curriculum materials to support implementation (§1302.32

Curricula, p. 28). The information from programs/school regulations is intended to help support the implementation of the practice.

A final potential source for obtaining information about the practice and its alignment with the policy are program and professional standards/guidelines. Program and professional standards/guidelines include both standards for program accreditation and professional preparation standards (i.e., preservice preparation, in-service professionals). For example, the NAEYC program accreditation standards are designed to promote program accountability and to maintain the foundation needed to provide high-quality learning (NAEYC, 2018) consistently. Likewise, DEC (2017) and NAEYC (2009) have established standards for early childhood preparation and early childhood professionals in the field. These professional preparation standards are intended to provide information about the typical expectations for expert knowledge, skills, and dispositions in core areas for early childhood educators. They express what tomorrow's early childhood professionals should know and be able to do. Thus, in summary, as one answers the question as to whether an individual practice aligns with the field's policies, researchers must look to the relevant policies: laws, regulations, and standards.

An Example of Assessing a Practice

The following section describes a process educators can use to answer the questions about whether a practice is evidence-based, as illustrated in Figure 3. The purpose is to demonstrate the process of evaluating a selected practice (i.e., edible reinforcements) using hypothetical information.

Is this an Evidence-based Practice?

As illustrated in Figure 3, to determine if edible reinforcers are an evidence-based practice, there are three initial tasks to complete before addressing the three questions within the

figure (i.e., Q1-Q3). The tasks include: (1) select a potential practice; (2) clearly define the practice; and (3) identify research studies for addressing the practice. The first task is selecting a potential practice to assess, which involves being specific about the targeted outcome area and targeted learner population (CEC, 2014). For example, edible reinforcements will be used to increase verbal responses with young children with autism. Now that a specific practice and outcome are selected, the second task requires one to operationally defined the practice to help identify potential studies to assess. For example, edible reinforcers are described as giving a preferred food item to a child as reinforcement following a desirable behavior to increase the likelihood of desirable behavior.

After the practice is selected and operationally defined, parameters need to be set to guide the search of the literature to complete Task Three. To complete Task Three, one develops search criteria to help identify potential studies to include in the assessment of the practice. Search criteria help narrow the search and identify studies to include and exclude in the evaluation of studies. For example, search criteria may consist of a specific setting, age group of participants, and intervention. When we establish search criteria, a literature search is completed using multiple databases. For example, in the hypothetical example of edible reinforcers, 32 studies were identified using academic databases (e.g., ERIC, Psych Info), public search engines (e.g., Google Scholar), and websites (e.g., What Works Clearing House). Now that we have identified the practice and completed a search of the literature, we move forward with assessing the available studies about edible reinforcers and answering the three questions in Figure 3 (e.g., Q1-Q3).

Question 1

Following the identification of available studies, we take the necessary steps to address Question 1 in Figure 3 (i.e., To what degree do the currently available studies identified support effectiveness of the practice and meet indicators for high-quality research). Answering Question 1 requires using several resources (e.g., indicators of high-quality, WWC, CEC Standards for Evidence-Based Practices, DEC RPs). For example, CEC Standards are a set of quality indicators and criteria to examine the effects of a practice. The quality indicators help review the study characteristics (e.g., setting, methodology) and outcomes (e.g., measures, data analysis). To explain how to use CEC Standards, first, design a matrix for recording the findings of each study. This first matrix is a tool to help organize the data (e.g., measures, participants, methods, analysis, a summary of key findings) from the literature. For example, using Microsoft Excel, a table was designed with each CEC Standard across the top of each column and then individually list the studies within each row. Next, using CEC Standards review the individual studies to see if each meets indicators of high-quality, then record the findings in the table by marking "yes" or "no" in each column.

Likewise, a search can be conducted on WWC's website to identify literature that supports the effectiveness of the practice and those meet indicators for high-quality research. For example, select a topic by clicking on an icon that addresses a specific area (i.e., behavior). Next, choose the intervention results based on topic (i.e., social skill training), and review the research. Then record the findings in the matrix. To assess the quality and effectiveness to support the practice, use resources (e.g., CEC Standards, WWC) to consider the conclusions that were made about the studies' quality. Thus, for the hypothetical example of edibles as reinforcers, a conclusion can be made about Question 1 by stating: After referring to several

resources (e.g., indicators of high-quality research, WWC, CEC Standards, DEC RPs), 18 studies were identified and support effectiveness of the practice and meet indicators for high-quality research.

Question 2

Subsequently, assess a practice by synthesizing the body of high-quality studies. As noted in Figure 3, answering Question 2 (i.e., Is there a sufficient "body of high-quality studies" that support the effectiveness of the practice?) will help determine if there are enough high-quality studies. Synthesizing the body of high-quality studies requires completing the following procedures. First, conduct a search for literature that will help answer the research question. The research question is designed to help find answers about the practice. Thus, for the hypothetical example, the question might be, "What is the effectiveness of edible reinforcers for young children with autism? Next, the studies of edible reinforcers are reviewed and organized into a matrix. Note that in the previous step, studies were checked and identified as high-quality. Using the 18 studies of edible reinforcers, then organize the reviews into another matrix (e.g., measures, participants, methods, analysis, a summary of significant finding). Using the matrix, organize the data, and then synthesize the literature. Synthesizing the literature requires combing the critical elements from all of the studies, for example, studies of edible reinforcers.

Finally, to synthesize the elements of the literature (i.e., studies), compare and contrast, evaluate, and interpret the data were critically implemented. While summarizing the research, determine if there is sufficient evidence as a research-based practice, sufficient evidence as a promising practice, or determine that an insufficient number of high-quality studies exist. In the hypothetical example of edibles as reinforcers, 32 studies were initially identified. After reviewing each study, 18 studies were found to support the effectiveness of the practice and meet

indicators of high-quality research. After organized the 18 high-quality studies into another matrix, an analysis and summary were conducted on the findings of each study. When the analysis of all 18 studies is complete, determine if there is sufficient evidence for the practice. Based on the results of Question 2, it can be concluded that sufficient evidence exists to support the effectiveness of the practice (i.e., edibles as reinforcers).

Question 3

The next step is to determine if the practice aligns with the accumulated knowledge of the field. Again, as noted in Figure 3, Question 3 (i.e., Does the practice align with accumulated knowledge of the field?) addresses the alignment of the practice with the accumulated knowledge of the field, which has three components: (a) historical and theoretical foundations of learning and development, (b) the field's values and beliefs, and (c) policies. Answering Question 3 requires assessing the practice across the information in each of the three components. Again, it is essential to remember that while the alignment process distinguishes each component from another, there are components that overlap.

Moving forward with the alignment process to answer Question 3, start by assessing and checking for alignment between the practice and the historical and theoretical foundations of learning and development. For example, use the concept of positive reinforcement from the theory of behaviorism to assess the alignment of the practice. To determine if the hypothetical practice (e.g., edible reinforcement) aligns with behaviorist theory, first turn to current research on the topic to ensure it meets the expectations of the field. After searching the historical and theoretical foundations of learning and development, it was concluded edible reinforcement does not meet the current research and expectations of the field because it would require withholding food from young children when undesirable behavior is observed (NAEYC, 2009). Thus, an

answer for question 3 reads as it is concluded that edible reinforcers do not align with the historical and theoretical foundations of learning and development.

After assessing the practice with component one (i.e., historical and theoretical foundations of learning and development), next, use the second component of the early childhood education professions accumulated knowledge (i.e., field's values and beliefs) and assess the alignment of the practice. Aligning the practice to the field's values and beliefs requires looking at available sources (e.g., professional organizations, position statements, books, papers). To illustrate, select NAEYC's textbook on Developmentally Appropriate Practices (Copple & Bredekamp, 2013) to assess and check for alignment to the practice of edibles as reinforcers. While reading through the text, information about rewards within mealtime was discovered. For example, the following statement was found, "Caregivers do not use food for rewards or withhold it as punishment" (Copple & Bredekamp, 2013, p. 102). Hence, the information about using food as a reward is found to be in contrast to developmentally appropriate practice.

The third component of accumulated knowledge of the field are policies that drive the implementation of evidence-based practices. To align the use of edible reinforcers with the field's policies, multiple sources; federal and state laws and their regulations; federal and state policies statements and standards; program/school regulations; program and personnel preparation standards are consulted to help assess the practice. For instance, first refer to federal and state laws and regulations to determine if edible reinforcers align with policies. For example, IDEA (2014) Part C Section 303.32 specifies that practices need to be scientifically based as defined in section 9101(37) of the ESSA (2015). To make an informed decision about the practice's alignment with federal and state laws and regulations, refer to the data results from

research syntheses. Based on the information gathered it is found that edible reinforcers align with federal and state laws and regulations because edible reinforcers are scientifically based and align with federal and state policies.

Likewise, program/school regulations are reviewed to determine if the practice aligns with policies. For example, Head Start and childcare programs established professional standards to ensure that all young children receive high-quality care. To demonstrate how to use Head Start regulations regarding edible reinforcers, first, locate the regulation's section on teaching and the learning environment. Reading through the rules, the section titled, Learning through Approaches provided additional information about edible reinforcers. It was discovered that the use of food as a reward or punishment conflicts with Head Starts program policies (Head Start Program Performance Standards, 2016, 1302.31, Teaching, and the Learning Environment, p. 28). To answer the question of whether edible reinforcers align with program/school regulations, it is concluded that the practice does not align.

Investigate Another Practice

To conclude, review the answers to the three initial tasks and three questions in Figure 3. In the hypothetical example, in the first three tasks the following was completed:(1) selected a potential practice (e.g., edible reinforcers); (2) clearly defined the practice (e.g., giving a preferred food item as reinforcement following a desirable behavior); and (3) identified research studies about the practice (i.e.., 32 studies). Furthermore, in Question 1 (see Figure 3), multiple studies (i.e., 18) were identified to support the effectiveness of the practice and that meet the indicator of high-quality research. In answering Question 2, the body of research was synthesized, and sufficient evidence was found to indicate the practice has a research-based with evidence supporting its effectiveness.

Subsequently, in Question 3 (see Figure 3), the three components within the accumulated knowledge of the field (i.e., historical and theoretical foundation of learning and development, field's values and beliefs, policies that drive implementation) were addressed. The first component of the accumulated knowledge of the field led to the decision that edible reinforcers do not align with the historical and theoretical foundations of learning and development. The second component of the accumulated knowledge of the field concluded that edible reinforcers do not align with the field's values and beliefs. The final component of the accumulated knowledge of the field concluded that edible reinforcers do not align with the policies that drive implementation. Although federal and state laws were found to align with the practice because an evaluation from all of the sources within the policy component needs to be considered; thus, an answer can be determined if edible reinforcers are evidence-based practice and a conclusion can be made: A decision was made to investigate another practice, because the practice does not align with the accumulated knowledge of the field.

Conclusion

When it comes to preparing pre-service educators to be consumers of research, the literature emphasizes the knowledge and skills needed to identify an evidence-based practice. With a firm foundation of the empirically supported knowledge base, opportunities to practice, and mastery of selecting interventions, pre-service educators will be equipped with the knowledge and skills needed to meet children's needs. This paper proposes a process to answer three questions addressing two primary topics: (1) assessing the research evidence for the practice; and (2) assessing the field's foundational knowledge supporting the practice. Taking this step-by-step approach to identifying research-based practices increases preservice educators'

awareness of what constitutes an evidence-based practice, thus facilitating decisions made regarding implementation.

Decision-Making in the Early Childhood Profession

Coming together to make informed decisions about a practice enhances services for young children with disabilities. However, implementing appropriate and effective practices depends on the educator's ability to review all of the research evidence and the family context that influences a child's learning and development. As a result, educators view selecting an evidence-based practice as a process—in this case, evidence-based practice describes a decision-making process that encompasses both identifying the EBP and conferring with families - to choose an appropriate evidence-based practice for young children (Buysse, Wesley, Snyder, & Winton, 2006; Buysse & Wesley, 2006; Snyder & Ayankoya, 2015; Snyder, 2006). That is, educators engage in a systematic process to identify, select, and implement evidence-based practice. This process has become known as "evidence-based decision-making." However, the placement of the phrase "evidence-based" before decision-making does not suggest that the decision-making process itself is evidenced-based. Instead, the decision-making process is a step-by-step process that enables educators and families to identify and adopt evidence-based practices that match the needs and strengths of the child. Thus, scholars in the early childhood education profession identify three required components to support educators together with families in selecting appropriate evidence-based practices for young children. The three parts are the best available research evidence, professional wisdom and values, and family wisdom and values (Buysse & Wesley, 2006). The expectation is that educators and families consider information from each component as they make instructional decisions. For example, educators and families search for a practice that has the best available research evidence. To conclude, if a

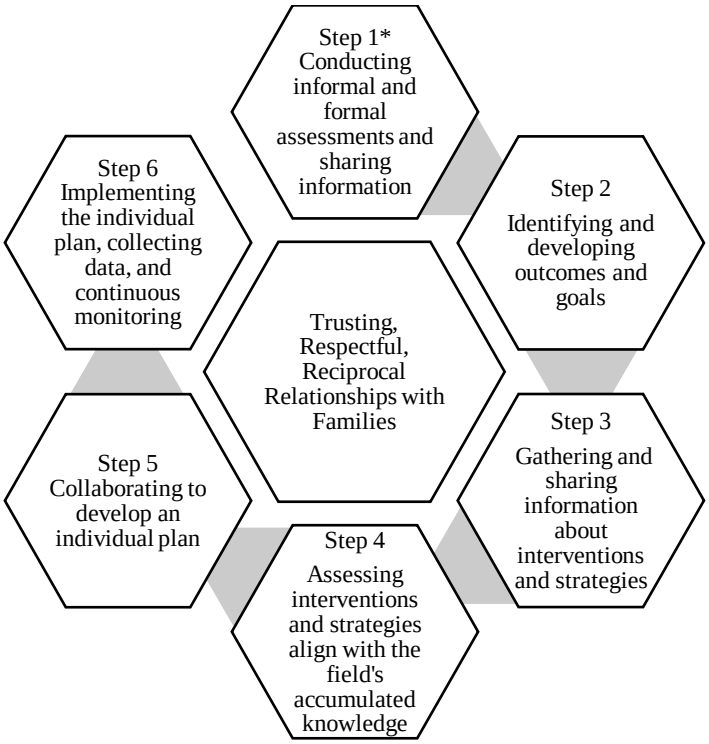
practice has research evidence, educators determine if an intervention has evidence of positive outcomes and demonstrates an impact on desirable outcomes (National Center for Systematic Improvement [NCSI], 2018).

As mentioned previously, the term ‘evidence-based practice’ as used in the early childhood education profession is both a *systematic process* educators and families engage in to make informed decisions regarding [and] *the use of evidence-based practices* (Buysse et a., 2006; Buysse & Wesley, 2006; Snyder & Ayankoya, 2015; Snyder, 2006). The move from EBP as a noun to a verb changes how educators and families select practices for young children by emphasizing the word “process.” That is, the word “process” suggests specific steps to choose a practice. For example, the National Center for Systematic Improvement (NCSI, 2018), suggests the following four steps consider multiple perspectives and sources of evidence: (1) define the question; (2) review the evidence; (3) determine if practice meets the FAIR (i.e., feasible, acceptable, effective, impact, relevant) test; and (4) make an evidence-based decision.

Since the distinction between EBP as a noun versus as a verb was established, the field has continued to investigate the potential steps needed to engage in a decision-making process. Thus, to move the field forward in efforts to identify steps for a decision-making process to help educators and families to select and implement an EBP, a six-step process is proposed. Integrating information from multiple sources (e.g., DEC Recommended Practices, NAEYC Developmentally Appropriate Practices, professional standards), six-steps were developed to highlight how educators and family’s partners within each step of the model. The emphasis on family participation is to reinforce the critical role the family plays in their child's learning and development. Building and maintaining trusting, respectful, reciprocal relationships with families increases the likelihood that children will receive the appropriate supports and resources

that match their individual needs. Although building and maintaining trusting, respectful, reciprocal relationships is not a step in the decision-making process, it is an essential piece that is seen throughout each stage. The six-steps for the decision-making process include: (1) conducting informal and formal assessments and sharing information; (2) identifying and developing outcomes and goals; (3) gathering and sharing information about interventions and strategies; (4) assessing the alignment with the fields accumulated knowledge; (5) collaborating to develop an individualized plan; and (6) implementing the individual plan, collecting data, and continuous monitoring (see Figure 4).

Figure 4. Reciprocal Decision-Making Model Between Families and Educators



Note. *Although the model is a 6-step process, any of the processes may be reciprocal at any step of the decision-making process.

In the following sections, we describe the actions and outcomes of each step. However, to clearly articulate the expected effects required to achieve the intended result for each step, we needed to determine the educator's knowledge and skills (i.e., competencies). Therefore, before describing each step, in the next section, we describe the process used to align critical competencies needed by beginning level EC/ECSE educators to complete each step.

Identifying Competencies for a Decision-making Process

Again, evidence-based practice is a systematic process that requires educators to engage in a series of steps (i.e.., six steps) with families to select a practice. To effectively engage in a decision-making process with families, beginning level EC/ECSE, educators need to attain a specific set of competencies. To clarify, beginning level EC/ECSE should meet professional standards that were created by national organizations (i.e., CEC Initial Personnel Preparation Standards, 2015; DEC Initial Specialty Set, 2017; NAEYC Personnel Preparation Standards, 2009). The standards developed by national organizations are to ensure that EC/ECSE preparation programs addressed specific content about working with young children and their families. Table 1 presents the six steps of the decision-making process and competencies for beginning level EC/ECSE educators. The competencies in Table 2 identify standards from CEC Initial Preparation Standards, DEC Initial Specialty Set, and NAEYC Professional Preparation Standards (CEC, 2015; DEC, 2017; NAEYC, 2009).

Table 2. Steps and Competencies for A Decision-Making Process

Decision-Making Steps	Competencies
Educators, in partnership with families, develop a trusting, respectful, and reciprocal relationship to address the family's priorities and concerns about the child's strengths and needs.	Beginning-level early childhood/early childhood special education educators use knowledge of partnership with families to promote the well-being of young children with exceptionalities including those from diverse backgrounds through trusting, respectful, and reciprocal relationships
Step 1: Educators in partnership with families and other professionals conduct informal and formal assessments in respectful, supportive, and culturally responsive ways to gain a holistic view of the child's present level of development and needs. Educators analyze, interpret, documents, and share strengths-based assessment information with families for the outcome/goal development and intervention planning.	Beginning-level early childhood/early childhood special education educators know and understand the purposes of assessments to choose developmentally, linguistically, and culturally appropriate assessment tools and methods that are responsive to the characteristics of the child, family, and program. Educators, in partnership with families, collect, analyze, and interpret assessment information to develop a shared, holistic understanding of the child's current development, strengths, and needs.
Step 2: Educators and the family work together as a team to identify and develop meaningful outcomes/goals that align with the child's strengths and needs and address the family's priorities and concerns.	Beginning-level early childhood/early childhood special educators in partnerships with families use knowledge of child development and learning and their shared knowledge of the child's current level of development, strengths, and needs to create appropriate outcomes/goals that address the family's priorities and concerns.
Step 3: Educators gather information about interventions/strategies that they or the family has identified to assess whether the practice has sufficient evidence to be considered a research-based or promising practice. The educators share the gathered information with the family in an accessible manner to support joint decision making toward the identification of appropriate interventions/strategies that align with the child's strengths and needs and address the family's priorities and concerns.	Beginning-level early childhood/early childhood special educators use their knowledge of assessing the effectiveness of practices (e.g., research syntheses, summaries, reviews) to identify and select interventions that are considered research-based or promising practices (e.g., dialogic reading). Educators share information with the family in an accessible manner to support joint decision-making that aligns with the child's strengths and needs and address the family's priorities and concerns.
Step 4: Educators assess potential interventions'/strategies' alignment with the accumulated knowledge of the field including (1) the historical and theoretical foundations of learning and development; (2) the values and beliefs of the field; and (3) the policies (i.e., laws and regulations) that drive implementation. Educators then provide the family with comprehensive information in a clear and culturally responsive manner and, as a team selects an intervention that supports the child's achievement of the outcomes/goals, aligns with the child's strengths and needs, and addresses the family's values and priorities.	Beginning-level early childhood/early childhood special educators use their knowledge of (1) Professional Ethical Principles, DEC/NAEYC recommended practices, and Professional Practice Standards to guide their practice; (2) trends and issues in ECE, ECSE, and EI; and (3) policies, laws and regulations, early learning standards and other resources in order to provide the family with current, comprehensible, and unbiased information the family can use to make informed decisions.
Step 5: Educators collaborate with the family to develop individualized plans that support the child's achievement of the outcomes/goals and address the family's values and priorities.	Beginning-level early childhood/early childhood special educators use pedagogical knowledge of learning and development and collaborate with the family to plan and adapt the intervention that supports the child's attainment of the outcomes/goals and addresses the family's values and priorities.
Step 6: Educators implement the individual plan and collect data on the child's progress. Educators in partnership with families plan for continuous modification and adaptations of the intervention based on multiple sources of data collected across a range of the child's and family's daily routines and contexts to support the child's achievement of outcomes/goals.	Beginning-level early childhood/early childhood special education educators use knowledge of data collection methods and data analysis procedures to monitor progress and continuously share this information with families in responsive ways. In partnerships with families, educators make data-based decisions regarding needed instructional modifications.

Selecting competencies required focusing on the elements needed to engage in each step of the decision-making process. The primary author of the current study used professional standards and identified the knowledge and skills beginning educators need at the time of completing their educational program. That is, the primary author needed to determine the essential knowledge and skills from the list of personnel preparation standards that best fit each step in the model (see Table 2). The primary author used the accumulated knowledge of the field (e.g., DEC Recommended Practices, NAEYC best practices, position statements, standards) to identify essential competencies for each step. Once the primary author identified the skills, consensus was established for each step by working with an early childhood program coordinator who is an expert in personnel development. Together, the primary author and program coordinator discussed each step and corresponding competencies. In the following section, the six steps for the decision-making process will be introduced. However, the section begins with a discussion of the knowledge and skills beginning EC/ECSE educators need to build and maintain trusting, respectful, reciprocal relationships with families.

Building and Maintaining Trusting, Respectful, Reciprocal Relationships

Building trusting, respectful, reciprocal relationships requires beginning level EC/ECSE educators to possess a particular set of competencies to engage in a decision-making process. The full description of competencies can be found in Table 2. Before initiating the decision-making process, beginning level EC/ECSE, educators must possess knowledge of collaboration and a disposition to engage in collaborative efforts with families and other professionals. Learning about collaboration helps beginning level EC/ECSE educators understand that collaboration is a process that brings individuals together to share common goals for a child (Horn & Jones, 2005). However, possessing the dispositions for collaboration requires educators

to shift their perspective about family participation. Precisely, beginning level EC/ECSE educators need to understand the family context (e.g., socioeconomic status, language, culture) of the children and families they will serve. Preparing beginning-level EC/ECSE educators in different collaborative approaches will help build an understanding of the family's context, which contributes to fostering relationships with families.

Preparation programs that cover different collaborative approaches are preparing beginning level EC/ECSE educators with the pedological knowledge and skills to promote the well being of children with disabilities. A collaborative approach (e.g., multidisciplinary, transdisciplinary, interdisciplinary teaming) is when professionals and families share roles and work together to develop outcomes and goals for young children (Horn & Jones, 2005). Learning about collaboration gives one insight into building common interests with families and acknowledging the responsibility they will have to communicate with families (NAEYC, 2018).

Likewise, beginning-level EC/ECSE educators must understand how to develop positive relationships with families and learn the family's priorities and concerns about their child's strengths and needs (DEC, 2014). Learning about the family's culture, values and beliefs, and language(s) helps them understand the vital role families play in child development (NAEYC, 2018). Thus, beginning-level EC/ECSE educators need to be competent in supporting and encouraging family participation. For example, family capacity-building is a practice that encourages the participation of families building on their knowledge and skills to promote the development of new skills to enhance parenting self-efficacy (Bailey, Raspa, & Fox, 2012; DEC, 2014). Preparing beginning-level EC/ECSE educators to know and use family practices (e.g., family-centered practices, family capacity-building, family and professional collaboration) helps

them to view families as active partners and understand that the child and services provided to the child cannot be viewed apart from the family context (Bailey et al., 2012).

Step 1: Conducting Informal and Formal Assessments and Sharing Information

In Step 1, the educator, in partnership with families and other professionals conduct informal and formal assessments in respectful, supportive, and culturally responsive ways to gain a holistic view of the child's present level of development and needs. Educators analyze, interpret, document, and share strengths-based assessment information with families for the outcome/goal development and intervention planning (see Table 2). Through assessments, families and professionals share information and ideas that benefit a child's learning and development (DEC, 2007). Assessment practices focus on identifying concerns, appropriate follow-ups, referrals, or identifying other interventions to use (NAEYC/NAECS/SDE, 2002). The objective of the assessment is to observe children in natural settings and situations to identify if further evaluation is needed.

Beginning level EC/ECSE educators need knowledge and skills about conducting assessments and the ability to assess children to learn about the strengths, needs, preferences, and interests of all children, including those from diverse backgrounds (DEC, 2014). In addition to gaining knowledge and skills, beginning level EC/ECSE educators need to understand assessment is a team-based, child/family-centered, and ecologically framed process. That is, the process is designed to address each child's "unique strengths and needs through authentic, developmentally appropriate, culturally and linguistically, and multidimensional assessment methods" (DEC, 2007, p. 11).

Again, assessment is a team-based, child/family-centered process that benefits from the family's experience when inquiries are made about the child's preferences and routines (DEC,

2007). When preparing beginning level EC/ECSE educators, preparation programs must highlight the family's contributions to the assessment process. Families' contributions enhance the description of the child in other settings, suggestions for interaction, facilitate child engagement, and their participation with their child in routines and unstructured play (Bailey et al., 2012). In addition to sharing information, families have the opportunity to identify their preferences for roles and acknowledge their expertise as a participating partner (DEC, 2007). It is essential for the educator to include families at different stages of the assessment process and to ensure a collaborative experience for family members.

Step 2: Identifying and Developing Outcomes and Goals

After the informal and formal assessments and sharing information, educators and the family work together as a team to identify and develop meaningful outcomes and goals that align with the child's strengths and needs and address the family's priorities and concerns (see Table 2). Developing meaningful outcomes and goals requires communication from all team members, including families. Working together, educators and the family discuss the child's learning and developmental status. However, to gain perspective on a child's learning and development, preparation programs need to address historical and theoretical foundations. Historical and theoretical foundations of learning and development provide beginning-level EC/ECSE educators with a frame of reference for typical and atypical early childhood development (DEC, 2017). Indeed, beginning level EC/ECSE educators need to be knowledgeable of children's characteristics and needs, daily experiences, and learning environments (DEC, 2014).

Educating beginning level EC/ECSE educators about historical and theoretical foundations, like human development, help beginning-level EC/ECSE educators understand that young children learn and develop in varying rates and contexts. For example, Erik Erikson's

eight stages of psychosocial development describe how social interactions with others influence one's daily experiences and learning. The idea that children learn through everyday experiences will help beginning-level EC/ECSE educators to gain insight into developing outcomes and goals for young children. Meaning, to have the ability to create appropriate outcomes and goals for young children, educators must understand children's experiences and family interactions.

Additionally, theories of cognitive development, like Piaget's Constructivist theory, illustrate how learning experiences construct meaning in children's lives through different stages. Creating meaningful outcomes and goals, thus, are built off of children's current skill set, and for the goals to be significant, they need to match learning experiences and respect diversity of children and their families (DEC, 2017). Another critical aspect of gaining the knowledge to write appropriate outcomes and goals is understanding the ecology of the family. To understand family ecology, preparation programs should address family system theory. For example, family system theory explains the nature of families, patterns of change, and how changes occur within families (Turnbull et al., 2014). Learning about family theory and research supports the development of outcomes and goals for the family and their child. Meaning that beginning level EC/ECSE educators will have gained the knowledge to encourage and facilitate family and child interactions as the primary context for learning and development (DEC, 2017). Knowing and understanding family characteristics and other factors—family structures, relationships, socioeconomic status, language(s), cultural values, and community resources— contributes to beginning-level EC/ECSE educators' ability to support children's learning and development and value and understand children and families (Turnbull et al., 2014).

Another consideration is Lev Vygotsky's theory of social constructivism. For example, beginning-level EC/ECSE educators should have a strong understanding of Vygotsky's concept

of the zone of proximal development (ZPD), which describes differences between what children can do without help, and what children cannot do. Within the concept of ZPD, Vygotsky describes scaffolding, which refers to the help an educator provides a child within their ZPD. As an educator guides the child through their ZPD, the educator provides less support as the child builds the skills needed to master task (Gestwicki, 2011). This will enable beginning-level educators to think about potential activities and supports that can be given to a child to meet the objective and goal that were developed.

Step 3: Gathering and Sharing Information about Intervention/Strategy

Before sharing information with families, the educator gathers information about the intervention and strategy that they or the family have identified. The educator then assesses whether the practice has sufficient evidence to be considered a research-based or promising practice. Next, the educator shares the gathered information with the family in an accessible manner to support joint decision making toward the identification of appropriate interventions or strategies that align with the child's strengths and needs and address the family's priorities and concerns (see Table 2). Preparation programs which introduce beginning level EC/ECSE educators to scholarly sources (e.g., DEC Recommended Practices, NAEYC Developmentally Appropriate Practices, What Works Clearinghouse) equip them with the knowledge and skills needed to identify research-based or promising practices.

Applying educational sources requires beginning level EC/ECSE educators to know and understand the information within the source. For example, DEC Recommended Practices is a source to guide educators and families about the ways to improve outcomes and goals for young children (DEC, 2014). The DEC Recommended Practices highlight practices known to promote positive results of young children. Moreover, empirical evidence from the field support DEC

recommended practices. To gain competence in scholarly sources, like DEC Recommended Practices, beginning level EC/ECSE, educators should know and understand the foundation on which sources are built. Thus, as educators and families engage in Step 3, beginning-level, EC/ECSE educators need to know and understand the evidence-base and DEC Recommended Practices for infants and young children including those from diverse backgrounds.

Similar to DEC's Recommended Practices, NAEYC's Developmentally Appropriate Practices are grounded in research on learning and development for young children (Copple & Bredekamp, 2013). This source helps beginning-level EC/ECSE educators learn how to make decisions that are developmentally appropriate for young children. Making proper decisions for young children requires educators to use the field's knowledge about how to promote the learning and development of young children. To support beginning level EC/ECSE educators, NAEYC separated developmentally appropriate practices by different stages children experience (i.e., infant and toddler years, preschool years, kindergarten years, primary grades) (Copple & Bredekamp, 2013). Separating the practices by different stages enables beginning level EC/ECSE educators to build the needed knowledge to implement developmentally appropriate strategies and tools for young children.

As noted previously, scholarly sources help beginning-level EC/ECSE educators to identify practices that promote outcomes and goals in young children. Another educational source for gaining knowledge about the field are position statements developed by national professional organizations (i.e., DEC, NAEYC). Position statements developed by national professional organizations provide content on current practices in the field. For example, DEC and NAEYC have published joint and separate reports on inclusion, diversity, and professional standards. These position statements are sources where beginning-level EC/ECSE educators can

obtain information about current strategies and practices recommended by the field. Thus, as educators and families engage in Step 4, beginning-level, EC/ECSE educators must know and understand content knowledge and resources.

Step 4: Assessing the Alignment with the Fields Accumulated Knowledge

As noted in Step 5 (see Table 2), educators assess potential interventions'/strategies' alignment with the accumulated knowledge of the field including (1) the historical and theoretical foundations of learning and development; (2) the values and beliefs of the field; and (3) the policies (i.e., laws and regulations) that drive implementation. Educators then provide the family with comprehensive information in a transparent and culturally responsive manner and as a team selects an intervention that supports the child's achievement of the outcomes/goals, aligns with the child's strengths and needs, and addresses the family's values and priorities (see Table 2). Building on the previous concept of historical and theoretical foundations of learning and development discussed in Step 3, we will review the field's values and beliefs as well as the policies that drive implementation as they relate to the competencies in Step 5.

When assessing the practice's alignment with the accumulated knowledge of the field, we go through a process that allows one to determine whether a practice aligns with the current knowledge of the field. For example, first, we select the practice and decide whether it is aligned with the historical and theoretical foundations of learning and development. After the practice is found to be aligned or not aligned, we move forward with aligning the practice to the field's values and beliefs. The field's values and beliefs represent current trends, issues, and research that promote desirable outcomes and goals in young children. For example, DEC is currently addressing preparation standards for EI/ECSE educators. The work done by DEC is intended to

keep educators abreast with current knowledge and skills that EC/ECSE preparation programs address.

Equally important in assessing the alignment of a practice is examining the policies that influence implementation. Precisely, beginning-level, EC/ECSE educators should be knowledgeable in multiple sources that are developed to help strengthen their knowledge and skills about federal and state laws. For example, The Office of Special Education Programs provides a link to the Individuals with Disabilities Education Act (IDEA, 2004) website where educators have access to information and resources on IDEA. The information on the website allows students, families, and service providers to explore the most current announcements and reports on IDEA. Thus, as educators and families engage in Step 5, beginning-level, EC/ECSE educators should be knowledgeable in trends and issues in early childhood education, early childhood special education, and early intervention and the policies that influence implementation of practices.

After the educator assesses the intervention's or strategy's alignment with the field's accumulated knowledge, the information is shared with the family. It is exchanging information with the family that aids in problem-solving and intervention planning. An essential piece of exchanging information is that it allows families to make informed decisions about the intervention or strategy that will be implemented. This collaborative process' emphasis is on the team process where educators support the family's choices and priorities in the selection of an intervention strategy. Within this process, knowledge and expertise is shared in respectful, supportive, and culturally sensitive ways (DEC, 2014). Thus, preparation programs which address teaming and collaboration practices enhance beginning level EC/ECSE educators'

knowledge and skills in sustaining collaborative partnerships, relationships, and interactions to ensure that the child and the family's outcomes and goals are reached (DEC, 2014).

Step 5: Collaborate to Develop Individualized Plan

In Step 5 (see Table 2), educators collaborate with the family to develop individualized plans that support the child's achievement of the outcomes/goals and addresses the family's values and priorities. As discussed previously (i.e., Step 1), collaboration contributes to building trusting relationships between educators and families. Through this relationship, educators and families can plan, implement, and evaluate developmentally appropriate curricula, instruction, and adaptations based on the knowledge of the individual child, and their family; and know and use the central concepts, inquiry tools, and structures of content areas or academic disciplines (see Table 2). Again, it is essential that educators apply a team model to support the child's learning and development.

Preparation programs which target a team model illustrate the knowledge and skills beginning level EC/ECSE educators need to collaborate with families. Students will learn that working with families requires educators to "systematically and regularly exchange, expertise, and knowledge" (DEC, 2014, p 14). It is during these exchanges of expertise and knowledge educator's and families strengthen team capacity and problem-solving for planning and implementing an intervention (DEC, 2014; NAEYC, 2018). Coming together to share knowledge and expertise enable educators to support accommodations and adaptations as needed to ensure the child's access, participation, and learning across activities and routines (DEC, 2014). By developing an intervention plan, educators and the family together identify skills to target for instruction that promotes learning.

Step 6: Implement the Individual Plan, Collect Data, and Continuous Monitoring

In Step 6 (see Figure 4), educators implement the individual plan and collect data on the child's progress. Educators in partnership with families plan for continuous modification and adaptations of the intervention based on multiple sources of data collected across a range of the child's and family's daily routines and contexts to support the child's achievement of outcomes/goals (see Table 2). When preparation programs address individual planning, data collection, and continuous monitoring, preparation programs are demonstrating the utility of assessment practices. Specifically, preparation programs demonstrate the process of gathering information to make informed decisions. Assessment is a critical component to determine services for children, including those from diverse backgrounds.

Preparation programs, thus, teach beginning level EC/ECSE educators to select assessment materials and strategies that are developmentally appropriate for the child and accommodate the child's individual needs (DEC, 2014). For example, systematic observation is a strategy that allows educators to observe children in different environments (NAEYC, 2009). Systematic observation gives educators insight into the development of young children and how children respond to opportunities and obstacles. Observing young children in multiple settings helps candidates develop a sense of who children are individually and as members of a group (NAEYC, 2009). However, programs must continue to reinforce selecting the appropriate assessment that will address a child's strengths and needs and the family's concerns and priorities.

The information educators collect from families, and through observations of children gives educators insight into the type of assessment that will be appropriate for the child (DEC, 2014). For example, children who are dual language learners with disabilities typically require

an assessment given to them in their home language. Understanding the method by which assessments are given demonstrates an educator's ability to make educational decisions. Again, assessment practices consist of gathering information to make informed decisions. To make informed decisions, beginning level EC/ECSE need to possess the knowledge and skills of multiple methods of assessment and data sources that are appropriate for young children (DEC, 2014). Likewise, regularly monitoring children's progress enables educators and families to observe the ongoing progress of children's skills and monitor the extent to which instruction modification is needed (DEC, 2014; NAEYC, 2018). The purpose of step-six is to continue to monitor the impact of the practice plan and decide if implementation results in appropriate progress towards the outcomes/goals.

Conclusion

The early childhood education profession defines evidence-based practices as a systematic process that utilizes the best available research-evidence, educator's professional knowledge and values, and family's knowledge and values to make informed practice decisions that meet the needs and strengths of the child (Buysse & Wesley, 2006). Since the definition of evidence-based practices was established little progress has been made to identify the specific steps to engage in a decision-making process. The six-step process introduced focuses on building professional partnerships with families. The six-steps include: (1) conducting informal and formal assessments and sharing information; (2) identifying and developing outcomes and goals; (3) gathering and sharing information about intervention/strategy; (4) assessing the alignment with the fields accumulated knowledge; (5) collaborating to develop individualized plan; and (6) implementing the individual plan, collecting data, and continuously monitoring.

Throughout this collaborative partnership, educators and the family's address the family's needs, priorities, and concerns and the child's needs and strengths.

Chapter 3: Method

In the first two chapters, the need for EC/ECSE personnel to implement a process to identify, select, and implement evidence-based practices based on key constructs of effective and responsive early childhood education was justified. These constructs influenced the critical features of a decision-making process focused on evidence-based practices and inclusive of culturally responsive parental or family participation in decisions about their young children's development and educational interventions. Further, the decision-making process was influenced by professional standards that the early childhood education profession identifies as essential knowledge and skills beginning-level educators need upon completion of their educational program. Therefore, the primary purpose of the study was to identify (a) the extent to which program faculty identified competencies of a six-step, collaborative decision making model as important, (b) the current status of training of preservice early educators for these decision-making competencies, and (c) faculty strategies to overcome their perceived challenges to address the decision-making competencies in their educator preparation programs.

The study builds from previous literature that suggested a model to identify and select evidence-based practices and implement them with individual children (i.e., evidence-based decision-making) (Buysse et al. 2006). Specifically, the three circles of evidence-based decision-making identified key features to consider for recognizing and selecting evidence-based practice (NCSI, 2018). Using the definition of evidence-based practice from the early childhood viewpoint, the context of each step in the proposed decision-making model reflected the values and beliefs of the early childhood education profession. The competencies reflected the knowledge and skills identified by the early childhood education profession that educator candidates should obtain through their educational programs. A survey was designed to obtain

information from preparation programs on the identified competencies needed by their educator candidates to effectively engage in the decision-making process. Thus, the study investigated the following research questions:

1. To what extent do program faculty agree that the identified competencies are important knowledge and skills needed by beginning level EC/ECSE educators upon completion of their education preparation programs in order to be competent in decision-making?
2. For each competency noted as important in their program, to what degree do the faculty report that their program addresses the competency?
3. For each competency noted as important in their program, what challenges do faculty report facing in addressing the competencies in their program?
4. What strategies have faculty used to overcome challenges to fully address the competencies in their program?

In this chapter, the methodological procedures for addressing the research questions are reported. The following sections describe the population and sample, survey design, survey pilot, data collection procedures, and data analysis for this study.

Population and Sample

The purpose of this section is to describe the makeup of the population that was selected using the Council for the Accreditation of Educator Preparation (CAEP) website. The sample of this study was drawn from CAEP accredited programs. The demographics of the faculty participants as well as the regional location of the programs are discussed in the following section. By looking at the specific features of the regional characteristics as well as the faculty characteristics in the study, a greater understanding of the types of early childhood preparation programs was explained. The study population is described in the subsequent sections.

Population

The population criteria included four-year baccalaureate or master's early childhood preparation programs that were accredited by the Council for the Accreditation of Educator Preparation (CAEP). Purposeful sampling was conducted to recruit participants for the survey. Specifically, the population for this study was identified by using CAEPs. The preparation programs selected from CAEP's website consisted of four-year accredited baccalaureate and master's degree programs. The programs included early childhood education, early childhood special education, blended (early childhood/early childhood special education), and other (e.g., elementary/early childhood education, children and families, child development). Individuals were contacted via email and asked whether they were the appropriate contact person to complete the survey. If the contact person was not the appropriate contact, they had the opportunity to nominate the correct person by providing an email. The total population included programs across the United States and the U.S. Territories (i.e., Puerto Rico, Virgin Islands). The total potential population for this study was 522 four-year teacher preparation programs. Descriptive statistics were used to establish the frequencies of the population characteristics.

The academic degree variable of the potential programs was defined as: Bachelors (*n* = 322, 63%); Bachelors/Master's (*n* = 147, 28.2%); Masters (*n* = 43, 8.2%). The program variable consisted of the following: ECE (*n* = 348, 66.7%); ECSE (*n* = 68, 13%); Blended (*n* = 38, 7.3%); and Other (*n* = 68, 13%). The region variable consisted of the following: Northeast (n = 116, 22.2%); Southeast = 162 (31%); Midwest (*n* = 148, 28.4%); Southwest (*n* = 44, 8.4%); West (*n* = 33, 6.32%); and U.S. Territories (*n* = 19, 3.54%). Data are displayed in Table 3.

Table 3.
Frequency Distributions – Summary of Total Population Characteristics

Population (N=522)	Degree		Program		Region	
	Bachelors	322, 63%	ECE	348, 66.7%	NE	116, 22.2%
	Bachelors and Masters	147, 28.2%	ECSE	68, 13%	SE	162, 31%
	Masters	43, 8.2%	Blended	38, 7.3%	MW	148, 28.4%
			Other	68, 13%	SW	44, 8.4%
					W	33, 6.32%
					T	19, 3.54%

Note: ECE = Early Childhood Education; ECSE = Early Childhood Special Education; NE = Northeast; SE = Southeast; MW = Midwest; SW = Southwest; W = West; T = U.S. Territories.

Sample Recruitment

Cycle One Survey Distribution**.** Cycle one (C1) of the recruitment process required the researcher to use statistical software (i.e., LimeSurvey) to send email invitations to 522 faculty members at educator preparation programs. Faculty contacts were identified by searching each educator preparation program website to identify the program coordinator or chair of the department. The survey was out for four weeks, with two reminders sent at the end of weeks two and three. During week one, several emails (n = 5) were labeled as spam by the statistical software LimeSurvey (Schmitz, 2003) or bounced back. Spam or bounce back emails were due to incorrect contact information or misspellings in the email address. The researcher made corrections by identifying the correct contact using the educator preparation program's website or by correcting the spelling of the email address. Within the survey, faculty were asked whether they were the correct contact person. If faculty were not the correct contact person, faculty had the opportunity to nominate another faculty within the survey or by emailing the researcher. The number of nominated faculty at the end of week one was n = 3. Auto replay emails were another type of bounce back. The researcher responded to these emails either by contacting the person

listed as an alternate contact or by following-up after the out of office response expired. Auto reply email bounce backs for week one was n = 0.

During week two, the total number of spam and bounce back emails was n = 3. Again, the researcher addressed the spam and bounced backs by identifying the correct contact person. Nominated faculty at the end of week two was n = 2. Auto-reply emails at the end of week two were n = 0. Week three of the open survey spam and bounce backs was n = 2. The total nominated faculty in week three was n = 2. Out of the total number of faculty nominated (e.g., n = 8) only five nominations for another contact were done within the survey. In week three, there was an extreme increase in the number of auto-reply emails with messages indicating that faculty would not be back in office for several weeks. Auto-reply emails at the end of week three were n = 23. During week four there was no change in the number of spam and bounce backs, nominated, or auto-reply emails. Data are displayed in Table 4.

Table 4.
Frequency Distribution -Summary of Cycle One Survey Distribution

Cycle One (N=43)	Spam & Bounce Backs	Nominated	Auto Reply
Week one	6	3	0
Week two	4	3	1
Week three	1	2	23
Week four	0	0	0

A frequency distribution was conducted to report the number of complete and incomplete surveys. At the end of week one, the total of completed surveys was n = 13. Complete surveys indicate that all the survey questions had a response. The number of incomplete surveys was n = 4. Incomplete surveys indicated that most of the survey questions had a response. Data from incomplete surveys was included in the final statistical analysis. Week two complete surveys

were n = 11. Incomplete surveys were n = 9. There was no change in the response total in weeks three and four. The total response rate for C1 was n = 20. Data are displayed in Table 5.

Table 5.
Frequency Distribution – Summary of Cycle One Sample Response Total

Cycle One (N=20)	Complete	Incomplete	Response Total
Week one	9	4	13
Week two	11	9	20
Week three	0	0	0
Week four	0	0	0

Cycle Two Survey Distribution. Cycle two (C2) survey distribution was conducted in the summer semester, which resulted in a low response rate. Due to the low summer response rate, the survey was distributed a second time in the fall semester in order to obtain more responses. Using LimeSurvey (Schmitz, 2003), the researcher resent the email invitation to 522 faculty members. The survey was open for four weeks and then re-opened for targeted recruitment. Target recruitment was conducted over two weeks. Thus, the survey was open for a total of six weeks. Out of the 522 emails sent, only two faculty from C1 completed the survey in C2. The researcher kept the responses from C2 data set and removed the two responses from C1 data set. During C2, the researcher sent out two email reminders at the end of week two and week three. From week one of survey distribution, the number of spam and bounce back surveys were high. Spam and bounce back surveys were n = 24. Nominated faculty at the end of week one was n = 17. Auto-reply surveys at the end of week one was n = 1.

The number of spam and bounce back emails was low at the end of week two. Spam and bounce back emails were n = 2. During week two, there were no new nominations and no auto-reply emails. In week three, there was a small increase in spam and bounce back emails. Spam and bounce back emails were n = 6. There was a slight increase in the number of faculty

nominations. The nominated faculty was n = 7. The number of auto-reply emails increased in week three. Auto-reply emails were n = 13. During week four, there was no spam or bounce back, nominated faculty, or auto-reply emails. Data are displayed in Table 6.

Table 6.
Frequency Distribution -Summary of Cycle Two Survey Distribution

Cycle Two (N= 78)	Spam & Bounce Backs	Nominated	Auto Reply
Week one	24	17	1
Week two	2	0	0
Week three	6	7	13
Week four	0	0	0

At the end of week one, completed surveys were n = 15 and incomplete surveys were n = 17 for a response total of n = 32. The number of survey responses increased after the first email reminder was sent. The increase in completed surveys was due in part to the researcher sending email reminders from her university email account rather than LimeSurvey. In addition, the researcher changed the subject line of the emails to "Early Childhood/Early Childhood Special Education Programs from Survey: Evidence-based Decision-making in Early Childhood/Early Childhood Special Educator Preparation: How Are We Doing?" Making these changes increased the response rate for week two and week three. Complete surveys at the end of week two were n = 44. Incomplete surveys at the end of week two were n = 42. The response total at the end of week two was n = 86. Again, complete surveys reflect the number of surveys that have a response for each question and incomplete surveys reflects the number of surveys that have responses for some (but not all) questions.

The researcher sent out the second reminder email at the end of week three to increase the response rate. Completed surveys at the end of week three were n = 44. The number of incomplete surveys at the end of week three was n = 42. The response total at the end of week three was n = 86. There was a small increase in responses during week four of the survey.

Completed surveys at the end of week four were n = 47. Incomplete surveys at the end of week four remained the same as week three n = 42. The response total for week four was n = 89. Data are displayed in Table 7.

Table 7.
Frequency Distribution – Summary Cycle Two Sample Response Total

Cycle Two (N=89)	Complete	Incomplete	Response Total
Week One	15	13	28
Week Two	44	42	86
Week Three	44	42	86
Week Four	47	42	89

Targeted Recruitment. Targeted recruitment was completed by using preliminary data discussed above. The data from time one and time two displayed a disproportionate representation of early childhood special education programs and blended programs compared to early childhood programs. To overcome disproportionate representation, a total of 219 early childhood preparation programs were targeted. The survey was open for two weeks during target recruitment. In the first week of target recruitment there were five spam and bounced back emails. The number of nominated persons was five in week one. During week one of targeted recruitment, there were eight auto-reply emails that bounced back. In week two of targeted recruitment, there was no change in the repose rate. Data are displayed in Table 8.

Table 8.
Frequency Distribution-Summary Target Recruitment Sample Distribution

(N = 8)	Spam & Bounce Backs	Nominated	Auto Reply
Week One	5	5	8
Week Two	0	0	0

During the first week of targeted recruitment, there were no additional responses to the survey. In week two, there was an increase in the total number of completed surveys (n = 14).

The total of incomplete surveys was five. Thus, the response total was 19 during targeted recruitment. Table 9 presents data for targeted recruitment survey responses.

Table 9.
Frequency Distribution-Summary Target Recruitment Response Total

Target Recruitment (N=19)	Complete	Incomplete	Response Total
Week One	0	0	0
Week Two	14	5	19

Sample Demographics

The faculty who participated in the study were from all regions of the United States and U.S Territories (n = 113). The gender of the participants was as follows: 81.1% (n = 74) were female; 7.1% (n = 6) were male; and 4.8% (n = 6) preferred not to say. The ages of the faculty were as follows: 15.9% (n = 13) were 31-40 years of age; 24.4% (n = 20) were 41-50 years of age, and 59.8% (n = 49) were over 50 years of age. The faculty race consisted of 77.6% (n = 66) White, 10.6 % (n = 9) Hispanic or Latino, 8.2% (n = 7) Black or African American, and 3.5% (n = 3) Asian. The number years as a lead faculty member for their early childhood preparation program was as follows: .9% (n = 1) was less than a year; 17.7% (n = 20) was a lead faculty for 1-3 years; 11.5% (n =13) of the lead faculty had 4-6 years' experience, and 41.6% (n = 47) had 7 or more years.

Faculty reported the following information for their institution: the number of years the program had been a licensure program, early childhood program type, the level of university degree programs offered, type of licensure, and the region in which the program was located. The faculty reported the number of years their program has had a program that leads to teacher/educator licensure. This was identified as follows: 8% (n = 9) had a program leading to licensure for 2-5 years; 9.7% (n = 11) had a program leading to licensure for 6-10 years, and

71.5% (n = 61) of the programs had a program leading to teacher/educator licensure for more than 10 years. The lead faculty/faculty member indicated the type of educational program offered at their university was as follows: 57.3% (n = 43) specified early childhood education; 22.7% (n = 17) stated early childhood special education, and 20% (n = 15) said blended early childhood. The early childhood degrees offered through the university programs was 52.5% (n = 42), Bachelors, 38.8% (n = 31) Bachelors and Masters, and 23.3% (n = 7) Masters only. The most prevalent type of licensure program was reported as Initial Teacher Licensure (78.5%) followed by Teacher Certificate (17.7%), and Endorsement Program (3.8%), respectfully.

The programs location varied across the different regions of U.S. and Territories: 14.1% (n = 12) Northeast; 9.4% (n = 8) Southwest; 38.8% (n = 33) Midwest; 28.2% (n = 24) Southeast; 7.1% (n = 6) West, and 2.4% (n = 2) U.S. Territories—with the two responses representing Puerto Rico. Sample demographics are included in Table 10.

Table 10.
Sample Demographics

Demographic	N	%
Age (N = 82)		
31-40	13	15.9
41-50	20	24.4
Over 50	49	59.8
Gender		
Female	74	81.1
Male	6	7.1
Prefer not to say	4	4.8
Race (N = 85)		
White	66	77.6
Hispanic/Latino	9	10.6
Black/African America	7	8.2
Asian	3	3.5
Program Faculty (N = 81)		
Less than a year	1	.9
1-3 years	20	17.7
4-6 years	13	11.5
7 or more years	47	41.6
Program Licensure (N = 81)		
2-5 years	9	8.0
6-10 years	11	9.7
More than 10 years	61	71.7
Program Type (N = 75)		
Early Childhood Education	43	57.3
Early Childhood Special Education	17	22.7
Blended Early Childhood	15	20.0
Degree Program (N = 80)		
Bachelors	42	52.5
Bachelors and Master	31	38.8
Masters	7	23.3
Licensure Type (N = 79)		
Initial Teacher Licensure	62	78.5
Teacher Certificate	14	17.7
Endorsement	3	3.8
Region (N = 85)		
Northeast	12	14.1
Southwest	8	9.4
Midwest	33	38.8
Southeast	24	28.2
West	6	7.1
U.S. Territories	2	2.4

Survey Design

A Six Step Decision-making Process

A six-step decision-making process was created for this study. The six-steps were based on literature about evidence-based decision-making (Buysse & Wesley, 2006; Buysse et al., 2006). The steps in the model reflected a process educators and families collaboratively complete to select an intervention that meets the family's priorities, routines, and concerns and their child's needs and strengths. The steps in the decision-making process emphasized key knowledge and skills beginning-level educators should possess after completing their educational program. The six-steps focused on integrating the best available research with educator and family wisdom and values. The steps were designed to walk one through how to identify evidence-based practices. The steps were developed by the researcher and the program advisor. The first version of the decision-making process contained eight steps. Conversations between the researcher and program advisor were to establish the order of steps for educators making decisions with families.

The researcher relied on pedagogical knowledge of early childhood education to outline the steps in the decision-making process. Resources like DEC Recommended Practices (2014), NAEYC Developmentally Appropriate Practices (2013), and current literature influenced the content of each step. The researcher then mapped out the process in which educators should make decisions with families. Based on conversations with the program advisor, the researcher listed the order in which the decision-making process proceeded. For example, in the initial eight-step version of the model, the first step was to build trusting and respectful relationships with the families. However, building positive relationships with families is an essential value and belief that is widely accepted and encouraged within the early childhood education

profession (Dunst & Trivette, 2009; Lord-Nelson, Summers, & Turnbull, 2004). Therefore, building trustful relationships needed to be represented throughout the process rather than being an individual step. In fact, it is a crucial aspect of educators making joint decisions with families (Canary & Cantú, 2012; DEC, 2015; DEC, 2014; Dunst & Espe-Sherwindt, 2016).

The concept of building relationships or partnerships with families has been widely studied and promoted in the early childhood education profession (DEC, 2015; Dunst & Trivette, 2009; Epley, Summers, & Turnbull, 2010; McWilliam, Snyder, Harbin, Porter, & Munn, 2000). In the final model of the decision-making process used in the current study, building trusting, respectful, and reciprocal relationships with families was placed in the center of the model to emphasize family's continuous participation throughout the process. The following steps in the final six-step decision-making process highlighted conducting initial assessments, developing goals and outcomes, referring to resources to identify practices, sharing information, planning implementation, continuous monitoring, and modify and adapting the practice.-The researcher had multiple conversations with the program advisor to identify the key features of the decision-making process. Once a process was identified, the researcher moved forward in developing competencies for each step.

Competency Development. Competencies were developed using the Division for Early Childhood's Early Intervention (EI) and Early Childhood Special Education (ECSE) Initial Specialty Sets (2017), Council for Exceptional Children Initial Preparation Standards (2015), and the National Association for the Education of Young Children Professional Preparation Standards (2009). Using an iterative process, competencies for each step in the decision-making process were developed by focusing on the initial preparation standards. To identify competencies, the researcher first reviewed all of the professional standards from the three

national organizations stated above. The content areas from CEC's Initial Preparation Standards included the following: (1) learner development and individual learning differences; (2) learning environments; (3) curricular content knowledge; (4) assessment; (5) instructional planning and strategies; (6) professional learning and ethical practice; and (7) collaboration (CEC, 2015). The initial preparation standards for CEC have a total of seven standards and 28 key elements. The DEC EI and ECSE Initial Specialty Set (2017) knowledge and skills include the following seven content areas: (1) learner development and individual learning differences; (2) learning environments; (3) curricular content knowledge; (4) assessment; (5) instructional planning and strategies; (6) professional learning and ethical practice; and (7) collaboration. The DEC EI/ECSE Initial Set has a total 27 knowledge and 57 skill statements that inform the CEC Initial Preparation Standards.

The NAEYC Standards for Early Childhood Professional Preparation (2009) focused on the following content areas: (1) promoting child development and learning; (2) building family and community relationships; (3) observing, documenting, and assessing to support young children and families; (4) using developmentally effective approaches to connect with children and families; (5) using content knowledge to build meaningful curriculum; and (6) becoming a professional. The NAEYC Standards for Early Childhood Professional Preparation included six standards and 22 key elements that layout components for standard highlighting what beginning-level educators should know, understand, and be able to do (NAEYC, 2009). Through conversations with the faculty advisor, it was decided to pair at least one standard from the CEC Initial Preparation Standards or the DEC EI/ECSE Initial Specialty Sets with one standard from the NAEYC Standards for Early Childhood Professional Preparation. This decision was made because the standards from CEC and DEC specifically address the competencies early

interventionist and early childhood special education educators need, whereas NAEYC focuses on general early childhood education.

After the researcher aligned all the standards with a step in the decision-making process, consensus was reached by meeting with the program advisor. Through a process of elimination, standards were removed from each step that did not belong (i.e., standards were removed when the researcher and program advisor agreed that a standard did not meet the needed knowledge or skills for a step). At the end of the first round of edits, each step had two standards that highlighted the knowledge and skills needed to complete that particular step in the decision-making process. To reduce the number of competencies for each step, the researcher went through the competencies and made additional edits by focusing on the specific wording related to the step. For example, one key element of CEC Initial Preparation Standard for collaboration is as follows: "beginning special education professionals use collaboration to promote the well-being of individuals with exceptionalities across a wide range of settings and collaborators" (2015, p. 9). NAEYC standard two-element 2b is as follows: "supporting and engaging families and communities through respectful, reciprocal relationships" (2009, p. 12).

Competencies were developed by combining the essential knowledge and skills from the above standards (i.e., from CEC Standards, DEC Initial Specialty Set, NAEYC Standards). Next, the researcher restructured each standard to illustrate the competency a beginning-level EC/ECSE educators need to effectively engage in the decision-making process. Meaning, the standards were merged to become a competency for the decision-making; Beginning-level early childhood/early childhood special education educators use knowledge of partnerships with families to promote the well-being of young children with exceptionalities, including those from diverse backgrounds through trusting, respectful, and reciprocal relationships. Thus, the

standards (e.g., CEC Initial Standards, 2015; DEC Initial Specialty Set, 2017; NAEYC Standards, 2009) for each step were combined to produce one competency. The researcher had to obtain consensus on the competencies developed to ensure the merging of the standards represented the knowledge and skills needed for a particular step. In the final step, the researcher and program advisor discussed each competency and made additional edits until agreement was reached. Hence, the researcher and the program advisor agreed on seven competencies for the decision-making process.

Selecting a Measurement Tool

LimeSurvey (Schmitz, 2003) was the measurement tool that was used for this study. LimeSurvey is a statistical analysis software program that allowed the researcher to develop an online survey. LimeSurvey was selected due to its versatility. Specifically, LimeSurvey enabled the researcher to use a method called branching logic or sometimes referred to as skip logic. Branching logic enabled the researcher to ask additional questions based on responses given from participants. For example, participants were asked to rate the degree to which their program addressed competencies for a decision-making process. If participants rated the item as *exceeds expectation* or *meets expectations*, participants were then asked an additional question about strategies used to enable faculty to address competencies in preparation programs. On the other hand, if participants rated the item as *partially meets* or *not at all*, participants were then asked an additional question about challenges they faced in addressing the competency. The benefit of using branching logic was to obtain data on additional questions based on a participant's response to a specific item.

Another reason Lime Survey was selected was because of the security it offered. For example, the data was saved on a secure database housed within the university's server as

opposed to an open or online server. In addition, LimeSurvey sent emails from KU's Life Span Institute, a research facility located on the university's campus, rather than the researcher's email address. LimeSurvey had additional features that streamlined reminder emails and spam or bounced back emails. LimeSurvey had a function to export data to SPSS for data analysis. However, the data from C1 and C2 were downloaded as separate data sets. That is, LimeSurvey did not have a function to combine C1 survey collection with C2 survey collection. The merging of the data was completed in SPSS. A second survey had to be created for C2 in order to send out the survey for another round of data collection.

Although LimeSurvey had some positive features, it ultimately was not a good fit for this study. Specifically, the researcher did not have access to the survey tool. The tool was operated by the research institution on the university campus. Although the data manager provided daily updates, the researcher did not have the opportunity to manage the data or keep track of the progress of the survey. Moreover, the number of spam and bounce back emails was high due to how the tool sent out the survey tool. For example, the subject line of the emails started off with the word "Survey" followed by the title of the study. Rewording the subject line for the emails could have limited the number of spam and bounce back emails received. Although, the measurement tool produced output for SPSS, the output within SPSS did not account for the branching or skip logic. Data analysis was impacted by this feature.

Developing Survey Items and Questions

Designing a survey study provided an opportunity to examine the feasibility of a decision-making process in the real world of practice. The survey had a total of 42 questions. Appendix A provides a paper version of the survey downloaded from LimeSurvey. The survey items for this study were the seven competencies for each step of the decision-making process

with nine demographic questions. The items were arranged using a continuous four-point Likert scale design (i.e., 1 = *Not Important* to 4 =*Very Important*,1 = *Not at all* to 4 = *Exceeds Expectations*). The items for the survey were constructed using professional standards from national organizations (e.g., CEC Initial Standards, 2015; DEC Initial Specialty Set, 2017; NAEYC Standards, 2009) The items were arranged first by presenting the entire competency. For example, *Beginning-level early childhood/early childhood special education educators use knowledge of partnerships with families to promote the well-being of young children with exceptionalities including those from diverse backgrounds through trusting, respectful, and reciprocal relationships.* The response options were presented below each item (e.g., 1 = *Not Important* to 4 = *Very Important*). Once a participant's response was recorded for the first question, a sub-question for the same competency was then asked.

The responses for the sub-question was changed to examine the extent to which the competency was addressed in preparation programs. For example, *indicate to what degree your program prepares beginning-level early childhood/early childhood special education educators to partner with families to promote the well-being of young children with exceptionalities including those from diverse backgrounds*. To obtain a response for this type of question, the response choices had a description or sometimes referred to as an anchor to provide context for each option (See Table 11). For example, the response Exceeds Expectations was described as the following: "program offers an entire course on topic, provides opportunity to work with families and other professionals and to apply skills in field settings." The descriptions varied based on the level of the response. The descriptions for the Likert-scale rating based on a rubric used to assess student teacher's knowledge and skills during field or practicum experience.

Table 11.
Description of Response Choices

Item	Description
Exceed Expectations	Program offers an entire course on the topic, provides an opportunity to work with families and other professionals, and to apply skills in field settings
Meet Expectations	Program addresses the topic during lectures, multiple readings on topic, and offers in-class assignments to practice skills
Partially Meet Expectations	Program addresses topic during a lecture in one course assigns minimal readings on the topic, and offers an assignment to practice skills
Not at All	Program does not address the topic in a lecture nor assigns readings, assignments, or in-class activities to practice skills

Using branching logic (i.e., skip logic) the participants were then asked to provide strategies they used to overcome challenges. This question was attached to the response to what extent faculty addressed competencies in their program. If participant rated the item *2 = Partially Meets* or *1 = Not at all*, then the participants were asked to provide strategies they have used to overcome the list of challenges that were provided. For example,

> *The following challenges have been reported by faculty in the field in addressing competencies they include insufficient faculty experience, insufficient faculty knowledge, insufficient professional development, limit on program credit hours, limit on the number of class sessions, and limit on the number of field experience hours. Please share strategies one might use to try to overcome this challenge.*

After participants provided a written response, they were then asked to select the challenges they face regarding addressing the competencies in their program. For example, *indicate what challenges you face in preparing beginning-level early childhood/early childhood special education educators to partner with families to promote the well-being of young children with*

exceptionalities including those from diverse backgrounds. Participants were asked to select all the options that apply: insufficient faculty experience; insufficient faculty knowledge; insufficient professional development; limit on program credit hours; limit on the number of class sessions; limit on the number of field experience hours, none, and other. However, if participants' rated the item regarding the extent to which programs address competencies *4 = Exceeds Expectation* or *3 = Meets Expectation*, then participants were only asked to provide a written response about strategies one might use to try to overcome challenges addressing the competencies in their program.

Expert Review and Think-a-loud

Before distributing the survey, the researcher established content validity and construct validity of the instrument. To obtain validity evidence for the survey, the researcher distributed the survey to an expert review composed of early childhood/early childhood special education/special education faculty/researcher at several educator preparation programs. The purpose of conducting an expert review and think-a-loud was to obtain content validity evidence to ensure that the survey items addressed the constructs (i.e., the importance of model, addressing model, barriers/challenges of the model) for this study (DeVellis, 2017; Fowler, 1995; Frey, 2015). In the following sections, methods for the expert review and think-a-loud will be discussed. The think-a-loud included four faculty from four-year early childhood educator preparation programs.

Expert Review

The purpose of conducting an expert review was to bring faculty members together to evaluate and discuss the items addressing the competencies for each step in the model. The program advisor moderated the expert review to ensure that all participants had the opportunity

to express themselves. The researcher provided the faculty participants with a handout with a brief description of the study, steps in the model, a list of competencies, and a copy of the decision-making model (see Appendix B). The expert review volunteers evaluated and discussed the survey items to determine if the survey addressed each construct (i.e., the importance of competencies, addressing competencies, challenges of addressing competencies). Thus, the expert reviewers helped obtain evidence for content validity through back-and-forth dialogue. The researcher used an interview protocol to help guide the discussion (see Appendix C). The information obtained from the expert review assisted in the modification of items on the questionnaire.

Procedures for Expert Review. To receive feedback from the expert reviewers, the researcher asked them to evaluate and discuss the survey items. The expert reviewers were selected based on their extensive knowledge about early childhood/early childhood special education practices and research (e.g., inclusion practices, decision-making, diversity, family partnerships). Appendix D presents a profile of the expert reviewers. Email recruitment documents were drafted and sent to the potential expert reviewers (see Appendix E). A Doodle poll link was emailed to the expert reviewers to arrange a date and time for the meeting. When the doodle poll was completed, the final date and time was scheduled.

The expert reviewers had the opportunity to participate in the meeting via face-to-face or using Zoom (i.e., video conference tool). Before the expert review, an email was sent describing the purpose of the study, a protocol for the meeting, and asked for verbal consent to record the meeting. At the time of the meeting, the researcher reviewed the protocol for the meeting and provided the participants with a handout (see Appendix B) with the survey items. The handout was developed for expert reviewers to write down their comments and feedback. At the end of

the meeting, the handouts were collected by the researcher. Those experts who participated by email were provided an electronic copy to the survey on which they provided feedback, which was emailed to the researcher. The researcher reviewed all of the experts' feedback provided during the meeting and edited the survey based on the feedback from the expert reviewers.

Think-A-loud

The think-a-loud was conducted to obtain content validity evidence (Haynes, Richard, & Kubany, 1995). The researcher invited faculty from three different types of personnel preparation programs (Willis, 2004). Faculty represented early childhood unified, early childhood education, and special education personnel preparation programs. Faculty were selected from different types of educational programs to ensure that each type early childhood, early childhood special education, and special education program was represented. A consent letter was attached to the email to allow participants to read and electronically sign. After consent was obtained, the researcher met and discussed the survey items with the three participants separately. The researcher gained feedback on possible revisions to the survey. The information gathered allowed the researcher to make additional edits to the survey.

Procedures for Think-Aloud. To recruit participants for the think-aloud, the researcher sent an email to faculty at different universities inviting them to participate. After receiving consent, the researcher contacted the participants individually and scheduled a time for the think-aloud. Once the researcher scheduled individual meeting times, the participants were provided a link to the survey. During the think-aloud, the researcher and participants evaluated and discussed all items on the survey. Based on the feedback from the participants, survey items were refined or omitted. The results from the think-aloud determined whether all survey items on the instrument reflected the importance of the targeted construct (Haynes et al., 1995).

Survey Procedures

The survey was distributed through LimeSurvey to the entire population (i.e., 522 university contacts). The invitation to the survey was sent via email through the university research center. The email contained a description of the survey as well as the link to the survey. The link gave participants access to the consent form and the survey items. The researcher's contact information was included in the consent form in the event that participants had questions about the survey. The participants had three-weeks to complete the survey. Although LimeSurvey had a feature to schedule email reminders, the researcher completed this step using her personal email.

After reminders were sent, a preliminary analysis was run to determine if the data could be generalized across participants. The researcher used SPSS (IBM, 2017) for statistical analysis. Descriptive statistics were run on the demographic questions to obtain information on the measures of central tendencies (i.e., mean, median, mode, standard deviation). The data analysis from preliminary data indicated that there was a disproportionate representation of early childhood special education programs and regional differences. For example, the number of programs from the Midwest was significantly higher compared to surrounding regions. The preliminary analysis allowed the researcher to select programs for targeted recruitment. Targeted recruitment focused on early childhood education programs only. Again, the researcher emailed the programs individually for targeted recruitment. The survey was open for an additional two weeks. Once all data was collected, SPSS was used for data analysis.

Data Analysis

The researcher used SPSS (Green & Salkind, 2017) to analyze the data reported by participants. Descriptive statistics were used to describe the faculty demographics (i.e., age,

gender, race, years lead faculty) and program demographics (i.e., years program licensed, type of program, degree program, type of license offered, region). After the data were coded and entered into SPSS, descriptive statistics were run to establish the measures of central tendency for each variable (i.e., mean, median, and mode). The researcher described the demographic data using the frequencies and percentages, while the variable data was described using the mean, standard deviation, frequencies, and percentages (Coladarci & Cobb, 2014). When looking at the data set, the researcher looked for variability in responses to determine if inferential statistics needed to be run. The data analysis indicated that there was slight variability between variables; however, there was not enough variability to justify the use of inferential statistics (Babbie, 1990; Creswell & Creswell, 2018; Groves et al., 2009).

Data analysis for qualitative survey responses was completed using thematic and pattern coding (Gibbs, 2008; Lincoln & Guba, 1985; Merriam, 2002; Patton, 2015; Saldaña, 2016). The first cycle of coding consisted of combining qualitative responses from each item into one column in Excel. For example, all qualitative responses from Question 1 was put in one column in Excel. The qualitative responses in each column were read separately, and notes were taken on individual qualitative responses. For example, Question 1 asked about strategies that faculty overcame in their program to address building relationships with families. Next, all of the responses were read and assigned an initial code separately. For example, after reading each qualitative response— "*In assignments, we expect students to support instructional decisions by citing relevant research*"—it was assigned a code. In this example, the response was assigned the code "research skills." After all of the qualitative responses were assigned a code, the second cycle of coding was conducted.

During the second cycle of coding, patterns across all the items from each column were created (Saldaña, 2016). For example, if the initial code "practice" was assigned across items (e.g., items in all Excel columns) it was recorded to represent the overall theme of the items. Thus, creating a new category that was used to describe the qualitative responses in each Excel column. The category assigned was opportunities to practice skills because most of the qualitative responses were labeled "practice" which referred to how programs offered students different opportunities to apply their skills. After the new categories were created, qualitative responses from each question was sorted into the new category. For example, qualitative responses for Question 1 were sorted into the new categories separately. When all the qualitative responses for Question 1 were sorted into the new categories, the qualitative responses from Question 2 were sorted into the new categories. This process was repeated for Questions 3, 4, and 6. Questions 5 and 7 did not have any qualitative responses to report. The data analysis that was used to test the hypotheses is presented in Table 12.

To obtain reliability, an outside reviewer analyzed the raw data. The outside reviewer and research came to agreement about the definitions of the codes and themes. The researcher and outside reviewer then established reliability by arranging those categories and themes into Excel. Individually, the researcher and outside reviewer arranged all faculty responses into each category. Next, the research and outside reviewer discussed the document and came to consensus on the data in each category.

Table 12.
Statistical Analysis

Hypotheses	Faculty Responses Constructs	Statistical Analysis
Research question 1: To what extent do program faculty agree that the identified competencies are important knowledge and skills needed by beginning level EC/ECSE educators upon completion of their education preparation programs in order to be competent in decision-making?		
H_1: Faculty perception of importance for a decision-making model will have a high frequency with some variables while other variables will have a low frequency.	-Faculty attitude toward collaboration and family relationships -Faculty attitude toward identifying and developing outcomes/goals -Faculty attitude toward identifying intervention, research-base, and/or promising practice -Faculty attitude toward assessing intervention's alignment with foundational knowledge -Faculty attitude toward intervention appropriately supporting and matching outcomes/goals -Faculty attitude toward developing an implementation plan with adaptations and modifications -Faculty attitude toward sharing responsibility for implementation and data collection -Faculty attitude toward monitoring progress and making data-based decisions.	Frequency Distribution
Research question 2: For each competency noted as important in their program, to what degree do the faculty report that their program addresses the competency?		
$H_{2a:}$ Faculty's' reporting of currently addressing a decision-making model in their program will have a high frequency with some variables while other variables will have a low frequency.	-Faculty addressing collaboration and family relationships -Faculty addressing identifying and developing outcomes/goals -Faculty addressing identifying intervention, research-base, and/or promising practice -Faculty addressing assessing intervention's alignment with foundational knowledge -Faculty addressing intervention appropriately supporting and that matching outcomes/goals	Frequency Distribution

	-Faculty addressing developing implementation plan with adaptations and modifications -Faculty addressing sharing responsibility for implementation and data collection -Faculty are addressing monitoring progress and making data-based decisions.	
Research question 3: For each competency noted as important in their program, what challenges do faculty report facing in addressing the competencies in their program?		
$H3_a$: Faculty perception of barriers will demonstrate a high attitude level with some variables while other variables demonstrate low attitude levels.	-Faculty attitude toward collaboration and family relationships -Faculty attitude toward identifying and developing outcomes/goals -Faculty attitude toward identifying intervention, research-base, and/or promising practice -Faculty attitude toward assessing intervention's alignment with foundational knowledge -Faculty attitude toward intervention appropriately supporting and matching outcomes/goals -Faculty attitude toward developing an implementation plan with adaptations and modifications -Faculty attitude toward sharing responsibility for implementation and data collection -Faculty attitude toward monitoring progress and making data-based decisions.	Frequency Distribution
Research question 4: What strategies have faculty used to overcome challenges to fully address the competencies in their program?		
$H4$: Faculty use of strategies to address competency challenges will consist of impediments to overcoming challenges due to lack of institutional support and understanding of the significance of implementing, following, and assessing the competencies in their program.	-Faculty attitude toward collaboration and family relationships -Faculty attitude toward identifying and developing outcomes/goals -Faculty attitude toward identifying intervention, research-base, and/or promising practice	Qualitative analysis Thematic and Pattern Coding

	-Faculty attitude toward assessing intervention's alignment with foundational knowledge -Faculty attitude toward intervention appropriately supporting and matching outcomes/goals -Faculty attitude toward developing an implementation plan with adaptations and modifications -Faculty attitude toward sharing responsibility for implementation and data collection -Faculty attitude toward monitoring progress and making data-based decisions.	

Chapter 4: Results

The purpose of this study was to identify (a) the extent to which program faculty identified competencies of a six-step, collaborative decision making model as important, (b) the current status of training of preservice early educators for these decision-making competencies, and (c) faculty strategies to overcome their perceived challenges to address the decision making competencies in their educator preparation programs. The results are both descriptive and quantitative and are presented by research question.

Research Question 1: To what degree do program faculty agree that the identified competencies are important knowledge and skills needed by beginning level EC/ECSE educators upon completion of their education preparation programs in order to be competent in decision-making?

Data analysis for all variables that looked at faculty perception on importance is presented in Table 13. Upon first observation of the data, it must be noted that the survey items at the beginning of the survey were answered at a higher rate compared to survey questions at the end of the study. For example, survey item 1, building and maintaining trusting, respectful, reciprocal relationships, had 96 responses. However, survey item 7 had only 85 responses. This trend was illustrated across all items where earlier survey items were more frequently answer compared to later survey items (see Table 13). The decrease in survey responses can be influenced by two factors. The first factor may be due to the skip logic that was built into the survey. The skip logic was designed to gather additional information about challenges faculty members experience at their institutions that prevented them to effectively address the competencies. The second factor for the decreased responses can be due to incomplete surveys.

That is, faculty members may have stopped filling out the survey and submitted the survey with missing responses.

There was little variation in the responses of faculty perceptions of importance across all survey items. As such, calculated means were all close to the highest possible response (i.e., 4) on the Likert scale. For example, for survey item 1, faculty (n = 96) perceived that building and maintaining trusting respectful, reciprocal relationship with families was a very important competency that beginning level EC/ECSE educators need upon completion of their educational program (M=3.91, SD=.293). The analysis does not present any outliers for this data. The standard deviation indicated minimal spread in the data across all survey items. Meaning, there was a high level of agreement on the importance of the competencies. The data was positively skewed across the variables. Data are presented in Table 13.

Therefore, as indicated by means, faculty respondents indicated that all survey items were important competencies for beginning level EC/ECSE educators to have upon completion of their preparation program. Moreover, as determined by small standard deviations for all survey items, faculty respondents generally agreed that each survey item was important.

Table 13.
Descriptive Statistics for all Variables-Perception of Importance

	N	Min.	Max.	M	SD
Competency Variables					
Building and maintaining, trusting, respectful, reciprocal relationships	96	3	4	3.91	.293
Conducting informal/formal assessments and sharing information	92	3	4	3.87	.339
Identifying and developing outcomes and goals	88	2	4	3.77	.473
Gathering and sharing information about intervention/strategy	87	2	4	3.64	.549
Assessing the interventions alignment with the fields accumulated knowledge	85	2	4	3.74	.467
Collaborate to develop individualized plan	85	2	4	3.84	.404
Implement the individual plan, collect data, and continuous monitoring	85	2	4	3.69	.535

In Table 14, data are presented for all survey items that examined faculty perceptions on how they rate the importance of each competency. This data demonstrated that 90.6% of the participants in the study found teaching about partnerships with families (survey item 1) to be very important knowledge beginning-level EC/ECSE educators need to learn through their early childhood preparation program. The response rate for the importance of survey item 1 was 9.4%. Conducting informal/formal assessments and haring assessment information (survey item 2) was rated as a very important (87%) concept beginning-level EC/ECSE educators need to know upon completing their educational program. Whereas, 13% of faculty members rated survey item 2 as important.

Survey item 3, was reported as very important by 79.5% of faculty members. Whereas, 18.2% of faculty who regarded it as important; and 2.3% of faculty members who believed that using knowledge of child development and learning and the child's current level of development was a moderately important concept beginning-level EC/ECSE educators need upon completing their educational program.

Data analysis showed 67.8% of faculty believed that survey item 4 was a very important skill students need to effectively share information about the intervention and strategy with families. Although 67.8% believed this variable was a very important skill, 28.7% of faculty members thought this item was important. Whereas, 3.4% of faculty members believed that this item was moderately important.

The data for survey item 5 indicated that 75.3% of faculty members perceived educators using their accumulated knowledge of the field—professional, ethical principles, DEC/NAEYC recommended practices, professional practice standards, trends and issues in ECE, ECSE, EI, and policies, laws and regulations, early learning standards and other resources—as very important. The data for survey item 5 indicated that 23.5% of faculty members found this item to be important, while 1.2% believed this item to be moderately important.

For survey item 6, 84.7% of faculty members agreed that it was a very important skill for beginning-level EC/ECSE educators to know and understand. Additionally, 14.1% of faculty members agreed that this item was an important skill beginning-level EC/ECSE educators need, while 1.2% of faculty members believed it was a moderately important skill.

Finally, data for survey item 7 indicated that 72.9% of faculty members agreed that knowledge of data collection methods and data analysis procedures to monitor progress is a very important skill for educators to have. Additionally, 23.5% of faculty members agreed that survey item 7 was important, while 3.5% of faculty members found it to be moderately important.

Table 14
Frequency Distribution for all Variables-Perception of Importance

	N	Very Important (n)	Important (n)	Moderately Important (n)	Not at All (n)
Competency Variables					
1. Building and maintaining, trusting, respectful, reciprocal relationships	96	90.6 (87)	9.4 (9)		
2. Conducting informal/formal assessments and sharing information	92	87 (80)	13 (12)		
3. Identifying and developing outcomes and goals	88	79.5 (70)	18.2 (16)	2.3 (2)	
4. Gathering and sharing information about intervention/strategy	87	67.8 (59)	28.7 (25)	3.4 (3)	
5. Assessing the interventions alignment with the fields accumulated knowledge	85	75.3 (64)	23.5 (20)	1.2 (1)	
6. Collaborate to develop individualized plan	85	84.7 (72)	14.1 (12)	1.2 (1)	
7. Implement the individual plan, collect data, and continuous monitoring	85	72.9 (62)	23.5 (20)	3.5 (3)	

Research Question 2: For each competency noted as important in their program, to what degree do the faculty report that their program addresses the competency?

Data analysis indicated that there was slight variability in the means across survey items (see Table 15). For example, survey item 1a (M = 3.25, SD = .635) and survey 2a (M = 3.29, SD = .672) slightly differ. Interestingly, survey item 6a (M = 3.18, SD = .676) and survey item 7a are the same (M = 3.18, SD = .676). In addition, the standard deviations demonstrated minimal variation across survey items. The data did not present any outliers, and the data was positively skewed across the response of the survey items. Overall, most of the response means indicated that programs partially meet expectations concerning addressing the items in educator preparation programs. Likewise, as indicated by the standard deviation, faculty illustrated general agreement on the extent to which programs meet expectations regarding addressing the survey items in their program. Data is presented in Table 15.

Table 15
Descriptive Statistics for all Competency Variables-Extent Competency Addressed

	N	Min.	Max.	M	SD
Competency Variables					
1a. Building and maintaining, trusting, respectful, reciprocal relationships	95	2	4	3.25	.635
2a. Conducting informal/formal assessments and sharing information	92	2	4	3.29	.672
3a. Identifying and developing outcomes and goals	88	1	4	3.24	.695
4a. Gathering and Sharing Information	85	1	4	2.93	.753
5a. Assessing the interventions alignment with professional, ethical principles, DEC Recommended Practices, and Professional Standards	84	2	4	3.31	.676
5a. Assessing the interventions alignment with the trends and issues in ECE, ECSE, and EI	81	1	4	3.06	.747
5a. Assessing the interventions alignment with policies, laws, and regulations, early learning standards, and other resources	84	1	4	3.01	.703
6a. Collaborate to develop individualized plan	85	2	4	3.18	.676
7a. Implement the individual plan, collect data, and continuous monitoring	85	2	4	3.18	.676

In Table 16, data is displayed for the survey item 1a, Building and Maintaining, Trusting, Respectful, reciprocal relationships. The analysis indicated 35.8% of programs exceed expectations—programs offer an entire course on the topic, provides an opportunity to work with families and other professionals to apply skills in field settings— compared to 53.7% of programs who meet expectations. Programs that meet expectations provide multiple courses, lectures, assign multiple readings on the topic, and offers assignments/in-class assignments to practice skills. Whereas, 10.5% of programs partially meet expectations–program addresses topic during a lecture in one course, assigns minimal readings, and offers an assignment to practice skills.

Analysis of survey item 2a Conducting Informal/Formal Assessments and Sharing Information indicated that 41.3% of programs exceed expectations (N = 93, n = 38), which is

slightly lower than programs that meet expectations (*N* = 92, n = 43, 46.7%). The data found that 12% of programs partially meet expectations.

The data for survey item 3a (Identifying and developing outcomes and goals) showed 37.5% of programs exceed expectations of addressing this topic in their educational program; 50% of programs meet expectations of addressing the topic; and 11.4% of programs partially meet expectations.

The data analysis on the survey item 4a (Gathering and Sharing information about Intervention and Strategy) found that 22.4% of programs exceed expectations in addressing this topic in their education program; 50.6% of programs meet expectations in addressing item 4a; 24.7% of programs partially meet expectations in addressing the topic in their education program; and 2.4% of programs do not address survey item 4a at all in their education program.

There were differences in the data for the variable of survey item 5a.1 assessing the interventions alignment with professional, ethical principles, DEC/NAEYC recommended practices, and Professional Standards. There was a slight difference between programs that exceed expectations (n = 36, 42.9%) and programs that meet expectations (n = 38, 45.2%). The frequency of programs that reported partially meet expectations is low (n = 10, 11.9%).

The data analysis found that 27.2% of programs exceed expectations in addressing survey item 5a.2— assessing the interventions alignment with the trends and issues in ECE, ECSE, and EI. The data also found that 55.6% of programs meet expectations regarding addressing survey item 5a.2; 13.6% of programs partially meet expectations; and 3.7% of programs do not address survey item 5a.2.

The data analysis for survey item 5a.3— assessing the interventions alignment with policies, laws and regulations, early learning standards, and other resources—is displayed in

Table 16. The data demonstrated that 23.8% of programs exceed expectations addressing survey item 5a.3; 54.8% of programs meet expectations; and 20.2% of programs partially meet expectations addressing survey item 5a.3. 1.2% reported not meeting the expectation.

Table 16 presents data analysis on the variable Collaborate to Develop Individualized Plan (survey item 6a). This data indicated that 32.9% of program exceeds expectations on discussing this topic; 51.8% of programs meet expectations on addressing this topic; and 15.3% of programs partially meet expectations in their educational program.

Finally, Table 16 reports the data analysis for survey item 7a implement the individual Plan, Collect Data, and Continuous Monitoring. The data indicated that 32.9% program exceed expectations of addressing this topic in their educational program; 51.8% of programs meet expectations of addressing this topic in their educational programs; and 15.3% of programs partially meet expectations of addressing this topic. Programs that meet expectations provide multiple opportunities for students to attain the knowledge and skills required to engage in implementing, planning, collecting, and monitoring data on children's goals and outcomes.

Table 16
Frequency Distribution for all Variables-Programs Addresses Competency

Competency Variables	N	Exceeds Expectation (n)	Meet Expectation (n)	Partially Meet Expectation (n)	Not at All (n)
1a. Building and maintaining, trusting, respectful, reciprocal relationships	95	35.8 (34)	53.7 (51)	10.5 (10)	
2a. Conducting informal/formal assessments and sharing information	92	41.3 (38)	46.7 (43)	12.0 (11)	
3a. Identifying and developing outcomes and goals	88	37.5 (33)	50.0 (44)	11.4 (10)	1.1 (1)
4a. Gathering and Sharing Information	85	22.4 (19)	50.6 (43)	24.7 (21)	2.4 (2)
5a.1 Assessing the interventions alignment with professional, ethical principles, DEC/NAEYC recommended practices and Professional Standards	84	42.9 (36)	45.2 (38)	11.9 (10)	
5a.2 Assessing the interventions alignment with the trends and issues in ECE, ECSE, and EI	81	27.2 (22)	55.6 (45)	13.6 (11)	3.7 (3)
5a.3 Assessing the interventions alignment with policies, laws, and regulations, early learning standards, and other resources	84	23.8 (20)	54.8 (46)	20.2 (17)	1.2 (1)
6a. Collaborate to develop individualized plan	85	32.9 (28)	51.8 (44)	15.3 (13)	
7a. Implement the individual plan, collect data, and continuous monitoring	85	32.9 (28)	51.8 (44)	15.3 (13)	

Research Question 3: For each competency noted as important in their program, what challenges do faculty report facing in addressing the competencies in their program?

To gain an understanding of faculty challenges/limitations in addressing the competencies for a decision-making process, faculty were provided eight choices to choose from within the survey: (1) insufficient faculty experience; (2) insufficient faculty knowledge; (3) insufficient professional development; (4) limits on program credit hours; (5) limit on the number of class sessions; (6) limit on the number of field experience hours; (7) none; and (8) other. This section presents data for the survey items that had a condition attached to it. Meaning, the above options were only available based on the answer from the previous question.

Results indicated that faculty faced challenges addressing building and maintaining trusting, respectful, reciprocal relations (N = 95, n = 10). Faculty reported facing challenges in

the following areas: 40% of faculty reported insufficient faculty experience; 20% of faculty reported insufficient faculty knowledge on teaching the competency; 20% of faculty said not enough professional development is offered on the topic; 30% of faculty reported that there are not enough credits hours to teach this concept in their program; 40% of faculty said that their program has a limited number of field experience hours; and .7% (N = 95, n = 1) indicated all of the choices were challenges. Only one faculty selected the other category and reported "*access to families*" as a challenge to addressing the competency of building and maintaining trustful, respectful, reciprocal relationships in their program.

Similarly, faculty identified challenges/limitations of addressing the content on conducting informal/formal assessments and sharing information in their early childhood program (N = 92, n = 11). The results were as follows: 36.4% of faculty reported insufficient faculty experience of teaching content on assessment; 9.1% of faculty said insufficient faculty knowledge in preparing pre-service educators to know and understand the purposes of assessment; 9.1% of faculty reported insufficient professional development for them to participate in to learn how to prepare pre-service educators to understand assessment; 18.2% of faculty said the limited number of program credit hours created a challenge to teach content on assessment; 18.2% of faculty reported the limited number of class sessions made it challenging to review content on assessment; 27.3% of faculty reported the limited number of field experience hours pre-service students need to be enrolled presented challenges; only one faculty member indicated that all of the choices were a challenge in preparing beginning-level EC/ECSE educators to know and understand the purposes of assessment. Two faculty selected the option labeled as "other." Of these two faculty members, the first indicated that "insufficient staff hours" was a challenge. The second faculty member noted, "*university coursework can be*

difficult to contextualize without authentic immersion sites, and preservice teachers are not typically invited into the assessment process in their field experiences" as a challenge.

Faculty (*N* = 88, n = 11) reported preparing beginning level ECE/ECSE educators to partner with families to develop goals and outcomes that reflect their concerns and priorities as a challenge. Faculty say the following challenges: 9.1% reported insufficient faculty experience; 18.2% report insufficient faculty knowledge as a challenge; 18.2% reported the limited number of program credit hours was a challenge; 27.3% said the limited number of class sessions was a challenge in covering the content, and 54.5% reported the limit on the number of filed experience hours beginning-level EC/ECSE educators are required to take as a challenge. Five faculty members selected "other" and identified specific challenged their program faces in addressing parting with families to develop goals and outcomes. Some of the faculty describe the challenges as a lack of program planning. For example, one faculty reported "*Our program primarily focuses on teacher preparation K-12. There is lack of programming for B-3*". Likewise, some faculty reported the lack of program planning with mentor teachers and feedback on assignments. For example, one faculty reported "*lack of willingness from schools or cooperating teachers to allow our candidates to participate*" as a challenge.

Likewise, faculty (*N* = 85, n = 23) reported experiencing challenges preparing beginning level EC/ECSE educators to use their knowledge of gathering and sharing information about the intervention and strategy. The following was reported: 13% of faculty reported insufficient faculty experience addressing gathering and sharing information with families as a challenge; 13% of faculty said insufficient faculty knowledge in preparing beginning-level EC/ECSE educators on gathering and sharing information about interventions and strategies with families; 21.7% of faculty reported that insufficient professional development was a challenge in

addressing gathering and sharing information on interventions/strategies; 60.9% of faculty said limited number of program credit hours was as a challenge; 30.4% of faculty reported that the limited number of class sessions was a challenge, and 47.8% of faculty said that the limited number of field experience hours was a challenge. Four faculty members selected "other" and subsequently provided written responses addressing challenges on gathering and sharing information about intervention/strategy. A few of the responses indicated that a lack good models in field settings and embedding opportunities for students to practice this skill during field experiences were a challenge. For example, "*In all honesty, I am not sure many of our local schools do this very well, so it is difficult for our students to see good models*." Another faculty wrote, "*need to figure out how to incorporate into each course and in particular how to create opportunities to embed into field experiences given that they may not see this enacted in the field sites*."

Faculty (N = 85, n = 23) reported the challenges they experience addressing the following: Professional ethical principles, DEC Recommended Practices, professional standards, and Professional standards; current trends and issues in ECE, ECSE, and EI; and policies, laws and regulations; and early learning standards to make decisions. The following was reported on the competency for preparing beginning level EC/ECSE educators to use the accumulated field's knowledge to make informed decisions with families: 8.7% faculty reported insufficient faculty experience in preparing beginning level EC/ECSE educators to use the accumulated knowledge of the field to make informed decisions; 17.4% of faculty said insufficient faculty knowledge; 30.4% of faculty reported insufficient professional development; 56.5% of faculty reported that the limit on program credit hours was a challenge to address this topic; 39.1% of faculty reported that the limit on the number of class sessions was a challenge to address this concept, and 26.1%

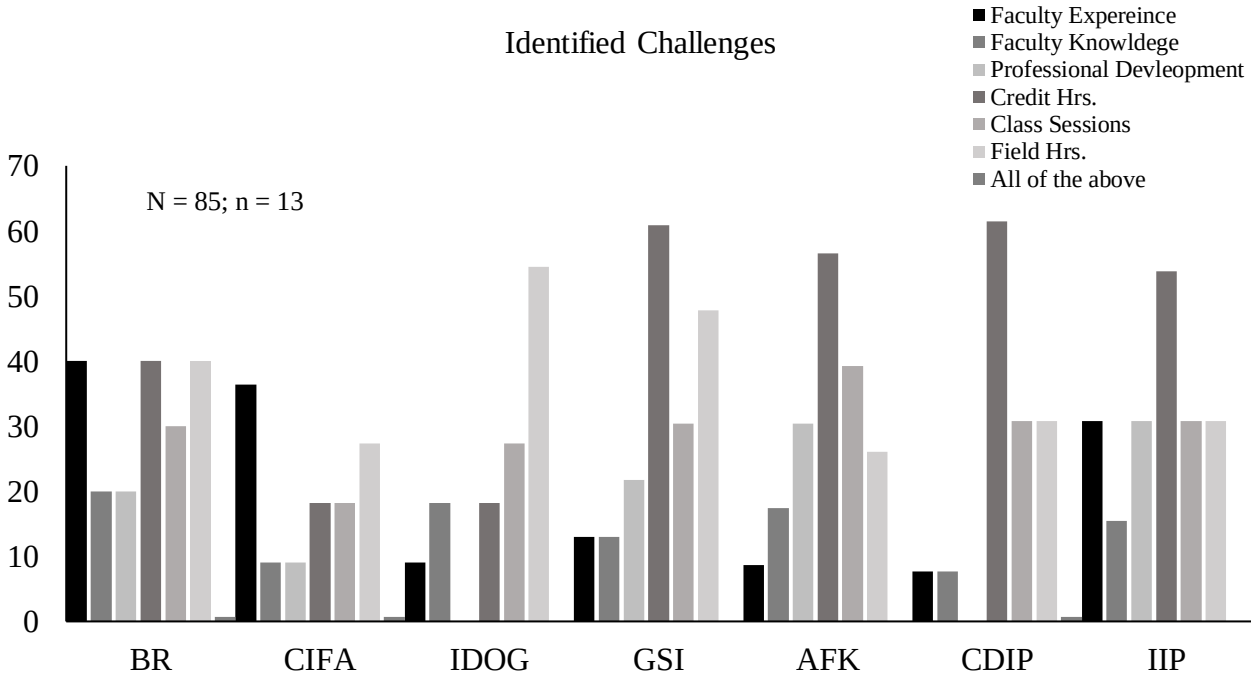
of faculty reported that the limit on the number of field experience hours was challenging. Only two faculty members provided a written response to describe the challenges they face addressing this topic. More specifically, one indicated "*access to families*" was a challenge, while the other faculty respondent suggested that the "*lack of students knowledge and retention*" was a challenge.

Faculty (*N* = 84, n = 12) identified the challenges that they face preparing beginning-level EC/ECSE educators for collaborating with families to plan an individualized plan for their child. The following was reported by faculty: 7.7% of faculty reported insufficient faculty experience in preparing beginning-level EC/ECSE educators to collaborate with families as a challenge; 7.7% of faculty report insufficient faculty knowledge on preparing beginning-level EC/ECSE educators to work with families to plan and adapt the interventions for their child; 61.5% of faculty reported the limit on program credit hours was a challenge to prepare beginning-level EC/ECSE to collaborate with families to plan and adapt an individualized plan; 30% of faculty reported that the limit on the number of class sessions as a challenge; and 30.8% of faculty said that the limit on the number of field experience hours was a challenge. Only one faculty respondent identified all of the above choices were a challenge. Two faculty members provided a written description of the challenges they face, preparting beginning-level EC/ECSE educators to collaborate with families. Again, one faculty indicated the "access to families" was a challenge. The other faculty member who responded stated, "*I think some faculty are concerned that students shouldn't share this information with a family when the family is receiving service through a school system agency*."

Results indicate that faculty (*N* = 85, n = 13) identified challenges preparing beginning-level EC/ECSE educators on implementing the individual plan, collecting data, and continuous

monitoring. The results are as follows: 30.8% of faculty reported that insufficient faculty experiences were a challenge in preparing beginning-level EC/ECSE educators; 15.4 % of faculty said that insufficient faculty knowledge on the topic was a challenge; 30.8% of faculty reported that insufficient professional development was a challenge in preparing beginning-level EC/ECSE educators to implement the individual plan, collect data, and continuously monitor outcomes; 53.85% of faculty indicated that the limit on program credit hours was a challenge addressing the content; 30.8% of faculty reported that the limit on the number of class sessions presented challenges addressing this topic; and 30.8% of faculty indicated the limit on the number of field experience hours was a challenge to prepare beginning-level educators to implement the individualized plan, collect data, and to continuously monitor children's outcomes. Figure 5 illustrates the identified challenges faculty reported by competency.

Figure 5. Identified Challenges Faculty Reported in Addressing Decision-making Competencies



Note: BR = Building and maintaining, trusting, respectful, reciprocal relationships; CIFA = Conducting informal/formal assessments and sharing information; IDOG = Identifying and developing outcomes and goals; GSI = Gathering and sharing information about intervention/strategy; AFK = Assessing the fields knowledge; CDIP = Collaborate to Develop Individualized Plan; IIP = Implement the individual plan, collect data, and continuous monitoring

Research Question 4: What strategies have faculty used to overcome challenges to fully address the competencies in their program? Qualitative Responses

The following section presents the qualitative data analysis based on faculty responses to open ended survey questions. Thematic and pattern coding was conducted to determine the recurring theme from the participants' responses (Saldaña, 2016; Patton, 2015; Gibbs, 2008; Merriam, 2009; Lincoln & Guba, 1985). Data focused on the recurring themes that emerged from the data — the following section discusses the data analysis from five of the survey items. The data were analyzed and reported by survey item separately. Two survey items (Assessing the Alignment with the Fields' Accumulated Knowledge and Implement the Individual Plan, Collect Data, and Continuous Monitoring) did not have any participant qualitative responses. Across each survey item, the following themes were assigned to the comments because these were the most recurring topics that emerged from the data: course materials; opportunities to practice skills; partnerships with schools and families; course offering; program structure; professional development; and faculty expereince. However, not all categories were presented in this report. That is, some categories did not have any responses that fit under some survey items. For example, the survey item building and maintaining, trusting, respectful, reciprocal relationships did not have any faculty responses that fell under the professional development category; the category was not addressed under that survey item.

Building and Maintaining Trusting, Respectful, Reciprocal Relationships

Faculty respondents were asked to identify strategies that they implemented to overcome challenges addressing building and maintain trusting, respectful, reciprocal relationships with families. Sixty-seven faculty respondents provided a qualitative response to the survey item. The following categories were identified for this item: course materials; opportunities to practice

skills; partnerships with schools and families; course offering; program structure; and faculty experience. Faculty reported that including a variety of course materials inside and outside of class can expand the breadth and depth of students' understanding of building relationships with families. For example, one faculty respondent wrote, "*more work outside of class, e.g., online modules required for continuation in the program; heavier reliance on (expensive) proprietary assessments; sequencing more into course*." Faculty believed that increasing the different types of course requirements is one solution to addressing this topic in educator preparation programs.

Another strategy that faculty respondents discussed to foster greater skills in building and maintain relationships are providing opportunities for preservice early educators to practice skills obtained through coursework. Some faculty respondents shared how an increase in the number of field experience hours can support students learning and development. For example, a faculty respondent wrote, "*We have embedded field experiences within the course time, which limits the amount of in-class instruction but provides more opportunities for our candidates to participate in public school classrooms*." Hands on practice enables beginning-level EC/ECSE educators to take content that they learned and apply it in real-world settings. Within these field experience opportunities, beginning-level EC/ECSE educators are to partner with families throughout the course. For example, a faculty respondent shared, "*Strategies that I have used to increase students' field experiences is to require students to work with families as part of assignments over the course of the semester, although not a specific practicum*." Although some faculty respondents believed that collaborating with families at practicum sites can increase preservice early educators' knowledge and skills, other faculty respondents believed that creating meaningful partnerships with the community serve as great opportunities to practice skills. For example, one faculty respondent wrote, "informal partnerships with local district early childhood

service centers" provide beginning-level ECE/ECSE educators breadth and depth of opportunities to practice their knowledge and skills.

Including field experiences in courses was one method that some programs used to address partnerships with families; other programs discussed the benefits of developing a single course that primarily focuses on families. For example, a faculty respondent shared, "*To meet NAEYC and state standards we have a course devoted to it that is part of course load for faculty members*." Dedicating a class to meet standards was one way that some programs were able to address partnerships with families. Those programs which were unable to dedicate an entire course to partnering with families discussed how it is embedded throughout the educator preparation program. For example, a faculty respondent shared, "*Integrating content and addressing competencies in a variety of classes is the major strategy [to address partnering with families]. This 'spiral' approach introduces and develops [early educators'] competence over time.*" By embedding the content across courses, beginning-level educators can build on their knowledge and skills throughout their education preparation programs.

The final strategy faculty respondents discussed on partnering with families was their personal experience with building relationships with families. For example, one faculty member said the following:

> *We hired a faculty member with a family science background who engages in research focused on families. She was instrumental in developing our course on engaging families and serves as course lead. She works with new faculty and adjunct faculty who teach the course.*

Faculty with expertise in the area of families helped some programs ensure beginning-level ECE/ECSE educators were gaining the knowledge and skills they needed by a highly trained

professional. Furthermore, providing guidance to other faculty and adjunct faculty allowed some programs to address this content in more than one course.

Conducting Informal and Formal Assessments and Sharing Information

Faculty members were asked to share their strategies on how their educator preparation program addresses conducting informal and formal assessments and sharing information with families. The total number of faculty who provided a written response was 55. The faculty members responses covered the following themes: course materials; opportunities to practice skills; partnerships with schools and families; course offered; program structure; and faculty experience. Strategies that faculty respondents reported using range from have students complete course readings to requiring students to conduct an assessment. Specifically, faculty shared that preservice educators were required to conduct case studies with a family. For example, one faculty member shared the following:

> *We have our students learn about this topic within readings, in class lectures and embed them in their assignments. For example, they have to conduct assessments (screening, standardized assessments) and to do so, they are required to communicate with families.*

Faculty respondents noted that conducting an assessment with the family's participation enables preservice educators to gain experience in presenting screening data and communicating with families. Interacting with families gives preservice educators the knowledge and skills they need to work effectively with families.

Hands-on experiences were reported as a valuable learning opportunity for preservice educators to practice assessment skills. Another strategy shared by faculty members was requiring preservice educators to collect their own data and reflect on its meaning. For example,

one faculty respondent reported, "*Our students collect their own assessment data and get practice analyzing and reflecting on what it means*." Reflecting on data analysis gives preservice educators the opportunity to discuss and interpret the assessment findings. Likewise, faculty respondents shared how these opportunities to practice skills enabled preservice educators to build partnerships with schools and families. For example, one faculty respondent shared, "*Students work with families to complete informal interviews, RBIs, and other evaluations with children to build rapport, determine the strengths and needs of the child and family, and discuss possible outcomes for the child/family*." Professional partnerships and relationships with schools and families allow for quality field experience opportunities.

Organizing course materials and embedding opportunities to practice skills in the field with families were some of the strategies faculty respondents shared for addressing assessment content. Another strategy some faculty respondents shared was providing a stand-alone course to cover assessment content. For example, one faculty respondent wrote, "*We have a stand-alone course on effective assessment, and we also help our candidates consider processes through multiple lenses across many courses*." Faculty respondents indicated that covering the content in a single course has enabled some programs to teach preservice educators in the college classroom about early childhood assessment and then use it or observe it in their field settings. However, teaching a stand-alone course while also embedding assessment content throughout the program also has proven to be effective strategy for some programs. For example, one faculty respondent shared how his/her education preparation program offers more than one course across their early childhood program. The faculty respondent shared,

> *Instead of offering one course on assessments, we offer three courses across the three age groups (infants/toddlers, pre-school, and K-3) that cover appropriate*

> *assessments and methods at each of those levels. Each class has an embedded CAEP assessment for which the students must select a student (in their practica if possible) for whom they will deliver an appropriate assessment*.

Faculty respondents indicated that for some programs, embedding assessment content in multiple classes not only allows preservice educators to practice their skills, it also enabled programs to meet state requirements. Meeting accreditation standards was a contributing factor to how often the topic of assessment was addressed in these programs. Although meeting program requirements was an important factor, faculty experience with early childhood assessment influenced how programs addressed the content. For example, one faculty noted, "*We have a faculty member whose expertise is assessment*." Faculty assessment expertise was an asset for some programs who needed someone to serve as course leader and mentor to new faculty who teach an assessment course.

Identifying and Developing Outcomes and Goals

Faculty were asked to share strategies that their programs used to address identifying and developing outcomes and goals for young children. The total number of faculty who provided a written response for this question was 37. The themes that were identified under this category include the following: course materials; opportunities to practices skills; partnerships with schools and families; course offerings; program structure; professional development; and faculty experience. Again, faculty respondents described strategies that they used to address how they taught preservice students to develop appropriate goals and outcomes for young children in their courses when access to families was difficult. A few programs described how using video simulations were a means to mimic real interactions with families to determine appropriate family desired outcomes. For example, one faculty respondent said,

> *It is difficult to partner with families and parents as preservice candidates. We use Avatars to mimic parent-teacher conferences and ensure our candidates attend live parent-teacher conferences during student teaching, but much more than that and the candidates are ill-equipped or unable to participate*"

Acknowledging the current challenges of what programs experience helped faculty to share potential changes within their programs to address these challenges. Specifically, faculty described methods of increasing field experience within courses to provide preservice educators more opportunities to practice their skills. Most of the faculty respondents described how practical application activities were embedded throughout course work and then applied in the field to enable preservice students to practice identifying and developing goals/outcome. For example, one faculty shared, "*The inclusive curriculum course has a field experience that enables preservice teachers to apply their learning in the field. The competencies addressed in these courses continue to be developed in subsequent courses*." Thus, this approach fostered preservice educators' practical application by helping them understand the concept of theory to practice.

Although faculty respondents shared the importance of increasing the number of field experience hours, partnering with schools and families within those experiences was a crucial part of providing preservice educators with additional opportunities to practice their skills. For example, one faculty respondent noted, "[We] *have gotten creative with requiring contact hours with families and creating partnerships with local organizations*", which helped preservice educators build rapport with families. Another faculty respondent shared a strategy his/her program uses to foster these skills: "*Through the variety of interviews, both formal and informal, students build rapport with families to determine appropriate family desired outcomes*."

Collaborating with families as part of their educational requirement builds preservice educators' knowledge and skills on developing appropriate goals and outcomes for young children.

Interestingly, some faculty respondents expressed the need to develop or maintain an entire course on working with families to ensure that preservice educators obtained the knowledge and skills needed to develop appropriate goals and outcomes for young children. For example, one faculty respondent said,

> *We have an entire course about working with families as part of the team. We go over abuse/neglect, poverty, diversity, inclusive excellence, communication, and much more. We are adamant about keeping this course as we do not feel you can teach about early childhood without including a heavy emphasis on families as an equal team member*.

Although some faculty respondents emphasized the need to maintain an entire course on partnering with families to determine appropriate family outcomes, other faculty respondents described multiple opportunities that their programs offer. For example, one faculty respondents shared the following:

> *This particular content[developing appropriate family goals/outcomes for young children] is embedded through multiple courses and is truly set up to build the student knowledge and application from one course to the next with the culminating performance teaching portfolio as the demonstration of application in the field.*

Integrating the development of appropriate family goals/outcomes for young children across multiple courses allows preservice educators to build on the previous content throughout their education preparation programs. Faculty respondents reported that this strategy not only

strengthens preservice educators' skills; it also enables them to be confident and competent in their skills.

Most of the faculty respondents shared specific strategies their programs do to foster preservice educators' skills on determining appropriate family goals/outcomes for young children, while a few faculty respondents shared their thoughts about the critical role that faculty expertise plays in their ability to teach preservice educators about developing appropriate goals/outcomes. A few faculty respondents acknowledged that a lack of professional development for faculty was a barrier to addressing content on identifying and developing goals and outcomes. Thus, these faculty respondents believed that "*ongoing professional development and training with P-12 clinical partners*" would increase program faculty respondents' skills and knowledge in addressing the content. Therefore, programs that have faculty respondents who are knowledgeable in this content area can increase the "*incorporation of competencies across courses*".

Gathering and Sharing Information about Intervention/Strategy

A total of 38 EC or ECSE program faculty respondents provided a written response that described the strategies that their program implements to overcome challenges addressing gathering and sharing information about intervention/strategy. The following categories will be discussed: course materials; opportunities to practice skills; and program structure. When faculty respondents were asked to share strategies to overcome barriers to gathering and sharing information about interventions and strategies most faculty respondents described the various course materials used to address the content on the above topic. Specifically, faculty respondents reported including in-class activities, readings, modules, and videos. Faculty respondents indicated that engaging in these activities enabled students to strengthen their skills. For

example, one faculty respondent wrote, "*We use the EBP Iris Modules which address these topics [gathering and sharing information about interventions and strategies with families]*." Another faculty noted, "*From their first class, students are engaged in discussions, lectures, assignments, and experiences in which they are required to learn and utilize EBP*." Including various materials to cover the topic was a strategy used by some programs where access to families was limited.

Faculty respondents believed that their program was able to provide preservice educators with opportunities to practice gathering and sharing information about interventions/strategies by increasing field experiences to foster these skills. For example, one faculty respondent wrote, "*The more field experiences the better*." However, some faculty respondents expressed that the greatest challenge was working with families as team members, and subsequently shared how the content is embedded across their program in multiple courses and lectures. For example, one faculty responded, "*This is a primary part of our teacher preparation program, thus it is integrated across multiple courses, lectures, readings, assignments, etc.*" Although the courses offered differed from program to program, the strategies faculty implemented to enable preservice educators to practice their skills were similar. Many faculty respondents reported that the variety of course materials (e.g., lectures, readings, assignments) provided preservice students the opportunity to practice their skills, while other faculty respondents reported more practical approaches to practice their skills. For example, one faculty respondent wrote, "*We do this through a series of seminars with our students where they discuss their practice dilemmas, and we problem-solve solutions based on the research evidence*." This type of strategy encouraged students to use research as a tool to find solutions. As one faculty respondent noted, "*The interns [student teacher] do engage in action research projects*." Faculty respondents

indicated that preservice educators searching the literature to find research-evidence builds their research skills and knowledge on how to identify appropriate practices to address the family's goal/outcomes for young children.

Collaborate to Develop Individualized Plan

The total number of faculty members who provided a written response that addressed collaborating to develop an individualized plan was 26. Faculty respondents shared strategies that covered the following: course materials; opportunities to practice skills; and partnerships with families. Faculty respondents were asked to share strategies to overcome challenges addressing collaboration with families to develop an individualized intervention/strategy plan for young children. Most of the faculty respondents shared how case study assignments and activities serve as a tool to prepare preservice educators. The use of case studies, parent interview, and simulations of situations of children in crisis help faculty to dialog with preservice educators on how to handle the different situations.

Faculty members also indicated that providing opportunities for students to interact with families through their course work and field experiences increases the students' knowledge and skills. For example, one faculty respondent wrote, "*We have our students work with families in several courses. Students must use pedagogical knowledge as well as family-centered practices to build relationships with families when determining goals and plans of action*." The faculty respondents often described how students practice these skills using a variety of activities in their courses. For example, one faculty respondent wrote, "*We use case study assignments and activities throughout and then use the performance teaching portfolio culminating experience to have them fully implemented*." Including additional assignments and activities enables beginning-level educators to practice their skills. Although assignments and activities were

reported to increase opportunities to practice skills, faculty respondents also reported that practicing skills in the field would allow students to work with families. For example, one faculty respondent noted, "*We have our students work with families in several courses. Students must use pedagogical knowledge as well as family-centered practices to build relationships with families when determining goals and plans of action*."

Conclusion

Overall, the strategies faculty respondents described focused on what their programs do to address decision-making competencies. The strategies shared by faculty respondents highlighted the supports that are needed to ensure that preservice educators are gaining the knowledge and skills from their education preparation programs. The most recurring struggle across programs was partnering with families. The limited access to family participants lowered EC or ECSE program faculty respondents' ability to address the competencies preservice educators need to engage in a decision-making process. Although faculty respondents acknowledged how difficult it may be to partner with families, faculty respondents offered multiple examples on how they overcome addressing competencies for a decision-making process.

Chapter 5: Discussion

The purpose of this study was to identify (a) the extent to which early childhood program faculty identified competencies of a six-step, collaborative decision-making model as important, (b) the current status of training preservice early educators in these decision-making competencies, and (c) faculty strategies to overcome their perceived challenges to address the decision making competencies in their educator preparation programs. A survey was designed for this study and subsequently completed by early childhood program faculty members regarding their early educator preservice education programs with reference to a collaborative decision-making process with families regarding individual child interventions.

For the development of an early childhood, collaborative, decision making process for this study, several procedures were used. First, the decision-making competencies explored in this study were developed using the Council for Exceptional Children's (CEC) Initial Preparation Standards (CEC, 2015), Division for Early Childhood (DEC) Early Intervention and Early Childhood Special Education Specialty Set (DEC, 2017), and the National Association for the Education of Young Children (NAEYC) Standards for Early Childhood Professional Preparation (NAEYC, 2009).

Additionally, the development of a decision-making process focused on the early childhood definition of evidence-based practice (Buysse et al, 2006; Buysse & Wesley, 2006; Snyder & Ayankoya, 2015; Snyder, 2006). The conceptualization of the decision-making process was drawn from the components that contribute to the three circles of evidence-based decision making (see Figure 2) described by the National Center for Systematic Improvement (NCSI, 2018). The concepts within the three circles spoke to what families and educators need to consider for identifying and selecting research-based practices to effectively meet the needs of

individual children. The model of evidence-based decision-making included a conceptual framework that addressed the best available research evidence, family wisdom and values, and professional wisdom and values (Buysse & Wesley, 2006).

After exploring the three circles of evidence-based decision-making and other decision-making models (i.e., Five-part Cycle to Strengthen the Effectiveness of ESSA [U.S. Department of Education, 2016], Problem-solving Model: Practice-based Evidence [Chorzempa, Smith, & Sileo, 2018]), it was realized that the models did not include an explanation of how educators and families actually conduct decision-making. For example, the three-circle model does not include ideas of how parents and educators can effectively communicate. The contribution of parents and educators to effectively communicating may have been left out of the model due to the assumption that educators and families are already engaging in effective communication skills. Likewise, the other decision-making models that were explored included a medical model focus rather than an early childhood focus. The medical model may be used more than the early childhood focus model due to practitioners focusing on their expertise being transferred instead of including the family in the decision-making process.

Thus, a decision-making process and associated educator competencies, based on existing standards and expert consultation, were developed to guide EC/ECSE personnel preparation programs in how to prepare educators to partner with families in identifying, selecting, and implementing evidence-based practices. The six decision-making steps were grounded in the principle of building and maintain trusting, respectful, reciprocal relationships with families. The six steps were as follows: (1) conducting informal and formal assessments and sharing information; (2) identifying and developing outcomes and goals; (3) gathering and sharing information about interventions and strategies; (4) assessing the alignment with the field

accumulated knowledge; (5) collaborating to develop an individualized plan; and (6) implementing the individual plan, collecting data, and continuous monitoring. In addition to the six-step, decision-making process, competencies were developed to highlight the necessary knowledge and skills beginning-level educators need to obtain through their early childhood education program. Faculty participants were surveyed about the decision-making competencies.

Data was analyzed of faculty participants' estimations of importance of the decision-making competencies, the extent competencies were addressed, and challenges in addressing the competencies as well as strategies to overcome difficulties addressing the competencies. Participants for this study were early childhood program faculty from four-year, CAEP-accredited programs from the United States and U.S. Territories. This chapter begins with a brief summary of the findings for the current study. Next, I discuss how the results contribute to knowledge and skills early educators need to engage in a collaborative, decision-making process with families focusing on interventions for individual children. The chapter then concludes with a discussion of study strengths and limitations, implications for practice, and implications for future research.

Summary of Findings

The findings from this study demonstrate (a) the extent to which program faculty identified competencies of a six-step, collaborative decision making model as important, (b) the current status of training of preservice early educators for these decision-making competencies, and (c) faculty strategies to overcome their perceived challenges to address the decision making competencies in their educator preparation programs.

The first research question examined faculty members' perceptions of the importance of the collaborative, decision-making process competencies. Overall, early childhood faculty members agreed that the set of competencies associated with the six-step decision-making model

(see Figure 4) is important. These findings supported research about the experiences, skills, and competencies needed by preservice educators upon completion of their educator preparation program (Sewell, 2012). Sewell (2012) indicated that teacher preparation programs can influence the nature of relationships between educators and families by evaluating program requirements to determine if programs are addressing competencies about partnering with families. Specifically, findings of the current study contribute to literature on the need for educator preparation programs to better prepare preservice educators to partner with families. For example, increasing the emphasis on family-centered practices within preparation programs can influence the nature of educator and family's relationships (Sewell, 2012) and have promise to lead to more effective interventions for young children. These findings also aligned with DEC Recommended Practices point of view on educators in partnerships with families making informed decisions (Snyder & Ayankoya, 2015). In addition, the findings of this study reinforce DEC Recommended Practices position that educators have competencies to collaborate with families to achieve outcomes and goals that strengthen the child and family functioning (DEC, 2014).

Moreover, the data illustrated faculty participants' perceptions of a high level of importance for all seven competencies. This confirmed the need for specific, decision-making competencies to be included in early educators' training to promote families' meaningfully participation. These findings support the literature on preparedness training that explored preservice teachers' perceptions and experiences on partnering with families (Blasi, 2002; DEC, 2014; Swell; 2012; Trivette & Keilty, 2017). This high level of congruence in faculty participants' responses regarding the importance of the competencies may be due to many of the

competencies reflecting well-established personnel preparation standards (i.e., CEC, 2015, DEC, 2017, and NAEYC, 2009).

Furthermore, the findings from the current study support the early childhood profession's position on evidence-based practices (i.e., conceptualized as a verb) vs. evidence-based practice (i.e., conceptualized as a noun). With little variability across participants' survey responses, the data confirmed the competencies associated with the six-step decision-making process are important skills that beginning-level educators need upon completion of their educator preparation program. The high level of agreement on all the competencies associated with the six-step decision-making model affirms the notion that families should be joint partners in the decision-making process about interventions/strategies educators implement. This is in contrast to the idea of evidence-based practices as a set of empirically-sound interventions that educators should implement to fidelity (Cook, Tankersley, Landrum, 2013a) regardless of, for example, child background or aspects of the interventions that lack cultural congruence with the family. Families being a partner in the decision-making process also aligns with the field's values and beliefs on family-capacity building (DEC, 2014). As such, educators' partner with families to select, implement, and modify an evidence-based practice to meet child and family needs (Farley et al., 2018). Research and the field's best practices support the position that strong partnerships are integral to increasing positive learning outcomes for young children (Copple & Bredekamp, 2013; DEC, 2014; NAEYC, 2009; Ratcliff & Hunt, 2009).

Although the importance of building relationships was highly rated by faculty participants, there was a small difference in responses between survey item 1 compared to the survey item about gathering and sharing information about the intervention and strategy (survey item 4) with families: fewer faculty responded that this item was important compared to survey

item 4. The lower perceptions of importance can (in part) be attributed to the number of participants who answered the question. The number of faculty members who responded to survey item 1 was slightly higher than the number of faculty members who responded to survey item 4. This finding reinforces the need for preparation programs to increase family involvement within courses (Swell, 2012; Ratcliff & Hunt, 2009). The difference in perceptions of importance responses also could have been due to the preservice teachers' communication skills being deemed less appropriate for parent-educator communication at the early stage of their career compared to the other decision-making competencies. Nevertheless, the difference in faculty participants' importance responses for survey item 4 still demonstrated that faculty members agree that the competency is important.

One trend found when analyzing research question one which would warrant further research was the large percentage of respondents who did not feel competency survey items 3, 4, 5, and 7 in the study to be very important (See Table 14). For example, 79.5% of respondents agreed that identifying and developing outcomes and goals was very important whereas 20.5% of the respondents agreed that identifying and developing outcomes and goals was important/moderately important. Additionally, 67.8% of respondents agreed that gathering and sharing information about the intervention/strategy was very important compared to 32.1% of the respondents who agreed that gathering and sharing information about intervention/strategy was important. Likewise, 75.3% of respondents agreed that assessing the intervention/strategies aligned with the field accumulated knowledge to be very important whereas 24.7 % of respondents agreed that it was important. Finally, 27% of the respondents did not find implementing the individual plan, collecting data, and continuous monitoring to be very important. These results may be due to the focus of the early childhood program's focus on

either birth to age five verses birth to age eight. These results may also be due to other competing competencies that were not researched in this study. Finally, these results may be indicative of basic course and program requirements being a major focus for educator training programs instead of the major focus being on meeting and/or exceeding the established CAEP teacher training accreditation standards.

Research question 2 examined the extent to which early educator preparation programs addressed the decision-making competencies using the following participant survey ratings: (1) exceed expectations; (2) meet expectations; (3) partially meet expectations; and (4) not at all. Programs that were rated by faculty as exceeding expectations on decision making competencies offer an entire course on the decision-making competencies, provide preservice educators an opportunity to collaborate with families and other professionals and to apply their decision-making competence skills in field settings. Programs that meet expectations address the topic during lectures, multiple readings on the topic, and offers in-class assignments to practice skills. Programs that were rated by faculty as partially meeting expectations on decision making competencies address the decision-making competencies during a lecture in one course, assign minimal readings on the topic, or offer an assignment to practices their decision-making competence skills. The survey response, "not at all" was defined as programs not addressing the competencies in a lecture, assigned readings, assignments, or in-class activities to practice skills.

In response to the second research question, overall the data illustrated that early educator preparation programs included in the current study meet expectations in the extent to which the program addressed all of the competencies. The data highlighted that course assignments, lectures, and readings were the most common means of addressing the competencies. These findings add to the literature on the value of content and coursework that is provided to foster

preservice educator's knowledge base needed to partner with families and children with diverse needs (Chang, Early, & Winton, 2005). Specifically, Swell illuminated the need to "increase the emphasis on family-centered learning opportunities beyond a single course" (Swell, 2012, p. 261). However, although the competencies were being covered in faculty participants' program curricula, the amount of time spent addressing these competencies differed across programs. This difference in time spent on the competencies may be due to a lack of child age and developmental focus within the programs. For example, some programs were strictly early childhood (birth to age five years old) whereas other programs focused on early childhood up to age eight years which would then include elementary curricula meant to address elementary state standards. Indeed, despite best practices (e.g., DEC Recommended Practices, 2014), family participation may be less emphasized for families as their children increase in age. Thus, family-professional partnerships may have less emphasis in educator preparation programs when other competencies for older children are included. The literature illustrates that preparation programs prepare preservice educators to address the need of a wide age of child ranges (e.g., infants through elementary age), which contributes to the depth of how content is covered (Fowler, 2016; Early & Winton, 2001). For example, an entire course could be dedicated to a specific competency (e.g., assessment) or only a few class sessions. However, some faculty members reported that their programs exceeded expectations by pairing a field experience with coursework.

An interesting trend was found when analyzing research question 2 data (See Table 16). For each of the competency survey items, there was an average of 51.13% of respondents who reported meeting but not exceeding competencies within their programs. The overall respondents' responses for partially meeting expectations and/or not all meeting expectations

averaged 17%. This data indicated there may be different competency skill requirements at different institutions. One university may have strengths in teaching some competencies, while not addressing other competencies. In addition, the university may be more focused on meeting the accreditation standards instead of focusing on the competency skills students may need. The quality of preservice educators meeting the competencies may be challenged by lower expectations as established by differing state endorsement requirements.

Again, the data from the current study illustrates that faculty participants rated their programs as meeting expectations regarding the depth to which decision-making competencies are addressed. However, research suggests that programs need to live up to the promise of producing quality educational experiences (Ritblatt, Garrity, Longstreth, Hokoda, & Potter, 2013), for example, to promote effective family-educator partnerships. Specifically, research suggests that the early childhood profession needs a shared vision of teaching quality and early childhood focus (DEC, 2017b; Stayton, 2015; Ritblatt et al., 2013). As such, the field needs to develop EC/ECSE personal preparation standards and competencies that should be embedded throughout teacher preparation programs (DEC, 2017b; Stayton, 2015; Cochran et al., 2012; Stayton, Smith, Dietrich, & Bruder, 2012). The high-level of participants' agreement on the decision-making competencies make the case for educator preparation programs to develop a clear vision of good teaching that creates "learning experiences in both coursework and field placements" (Ritblatt et al., 2013, p. 48) such that, for example, family-educator partnerships can be realized. In this way, programs are likely to exceed rather than meet expectations for the extent to which decision-making competencies are addressed.

The third research question examined the challenges faculty encounter at their institutions and the strategies faculty members used to overcome challenges. The data indicated that the

limited number of credit hours offered through their educator preparation program of study was a challenge that most programs encounter. This finding illustrated a faculty perspective that training preservice educators to gather and share information about research-based practices with families and associated decision-making competencies was difficult due to lack of time within the program. These findings reaffirm literature on the content early childhood educator preparation programs cover. That is, research shows that programs cover a vast number of content areas (Early & Winton, 2001; Fromberg, 1999), which may result in inadequately addressing particular competencies. With a set number of credit hours per course, faculty members struggle deciding what content to cover in their educator preparation programs (Chu, 2016).

Another challenge reported by faculty members in the current study was pairing coursework regarding collaborating with families in decision making with a field experience. Notably, faculty members reported that providing educators with the opportunity to effectively collaborate with families was challenging to achieve during field experiences. This may be attributed to how coursework and field experiences are designed (Voss & Bufkin, 2011; Early & Winton, 2001). That is, some programs design courses to focus on certain content areas in conjunction with field requirements. However, some programs may not require or provide the opportunity for preservice educators to partner with families during field experiences. These findings confirm what we know regarding building preservice educators' knowledge and skills on family-centered practices (Hansuvadha, 2009; Bruder & Dust, 2005): training on family-centered practices still needs to be embedded in "preparation programs so that children and families can benefit from the best research, practices and personnel we can offer" (Bruder & Dunst, 2005, p. 32).

When analyzing data from research question 3, it was observed that 40% of faculty reported insufficient faculty experience; 20% of faculty reported insufficient knowledge on teaching the competency; 20% of the faculty reported not enough faculty development on the competencies. These results may be indicative of faculty not having enough teaching experience related to the competencies prior to teaching preservice educators. Following their faculty assignment, they are then required to teach preservice educators how to meet early childhood competencies that they may not have had personal experience with. Thus, faculty would identify the need for more training as well as having a lack of knowledge of the competencies as well. It is not uncommon for faculty assignments to include teaching content one did not have expereince teaching prior to their faculty assignments.

The last research question for the current study addressed strategies faculty members identified to overcome their challenges with addressing the competencies for a decision-making model. Analysis of the qualitative data highlighted methods programs implemented to increase preservice educators' knowledge and skills for partnering with families. For example, one participant stated, "*School systems often frown on interns connecting with parents; they prefer for the lead/mentor teacher to handle all communications*." This statement indicated the challenge the lead teachers have when attempting to include and mentor the intern teacher on how to effectively communicate and partner with parents. Faculty participants' statements like these indicate the importance for program faculty to be educated on the critical role that they play in preservice teachers purposefully engaging in communication and partnerships with families under the direction of their mentor (Branscomb & Ethridge, 2010).

Nonetheless, to increase preservice educators' decision-making skills with families, faculty members recognized the need to pair their coursework with a field experience (N=34).

During field experiences, faculty reported preservice educators had the opportunity to observe how mentor teachers engaged with families. Through this experience, preservice educators had the opportunity to engage in real-world decision-making when working with families. Consequently, preservice educators may be able to better reflect on the effectiveness of their communication during the decision-making process. One faculty participant in the study summarized this discovery when he/she stated, *"We provide opportunities for preservice teachers to interact with families and to engage in field experiences in a variety of educational settings. We also partner with nearby preschools to provide instructor-guided practice."* This finding was in alignment with research on deciding how to solve pedagogical issues and the resources preservice educators use to inform their decision-making (Lloyd, 2019). That is, Lloyd investigated how educators use formal reflective frameworks works to understand how real world decision-making occurs.

In sum, the data collected for the current study identified the recognized importance of several early childhood competency areas that need to be addressed across university early educator preparation programs. In particular, faculty participants' importance ratings indicate that their programs meet rather than exceed expectations for content on competencies related to partnering with families on decision-making for young children's interventions. According to the quantitative and qualitative data analyzed, preservice educators may benefit from a greater focus on the following competencies: 1) the opportunity to consistently engage with parents during their field experiences especially; 2) the ability to gather and share intervention/strategies with families that they have identified for use in the classroom as well as in the child's home with the parents; and 3) the way to build family partnerships while specifically including the family context. The inability to address some of these competencies (e.g., gathering and sharing

information about the intervention/strategy) within the early childhood educator preparation programs may be due in part to the limited number of program credit hours. In addition, these competencies – especially the building and maintaining trusting, respectful, reciprocal relationships competency – are possibly not being adequately addressed, because program curricula do not emphasize the importance of preservice educators fully engaging in the education/school system including their relationships with parents and school personnel.

Study Strengths and Limitations

Following the assessment of three models for decision-making and educator preparation competency standards, a six-step decision-making process was developed which focused on all areas of engagement between educators and families. In addition, this study identified, from a faculty perspective, competencies to increase knowledge and skills of preservice educators. Moreover, the data identified areas where faculty participants believed that additional support is needed by the institutions to address the competencies and decision-making skills for their preservice educators. The findings from this study highlighted the importance a decision-making process has in early educator preparation.

A major strength of this study was the creation of a Reciprocal Decision-Making Model Between Families and Educators. In the decision-making models that were researched, the relationship between families and practitioners was not identified. In the model proposed in this study, trusting, respectful, reciprocal relationships with families is at the center of the six-step decision-making model. For this study, even though the model proposed is a six-step decision-making model, the dynamics of the model are reciprocal. Any of the processes may be reciprocal at any step of the decision-making process (See Figure 4). For example, the educators may be engaging in a home visit while discussing the family's needs and priorities while also

conducting an assessment. At any and all steps of the decision-making process, the relationship with the family is central to its success.

Although there were important findings from this study, several limitations warrant further analysis and caution in data interpretation. First, the benefits of developing a survey was to explore the attitudes, trends, and opinions of a population by studying a sample of that population (Creswell & Cresswell, 2018). However, the sample of the total population for this study was not fully representative of the total population. First, the sample was selected using specific inclusion criteria (e.g., CAEP accredited, 4-year institutions, bachelors/master's programs) that focused on a specific type of early childhood program. Second, the survey was distributed via email which enable the researcher to contact a high number of potential participants. But due to security restrictions on university email servers a high number of emails bounced back or were flagged as spam. Finally, the initial contact person for the survey was not always the appropriate person to complete the survey. When a contact person was not the appropriate person to complete the survey, they had an opportunity to nominate another person from their program within the survey. Although additional faculty were nominated it did not increase the number of participants who completed the study.

Another limitation was that this study found that several states' early educator preparation programs were no longer affiliated with the accrediting body of educator preparation programs (i.e., Council for the Accreditation of Educator Preparation [CAEP]). In the current study, CAEP accreditation was an inclusion criterion; thus, non-CAEP-accredited programs were not included. One potential reason that programs opted to not seek CAEP accreditation could be that states are starting to develop their own accreditation process which changes the requirements for educator preparation programs. Another factor could be the cost of maintaining an accredited

program: Many program faculty members who declined to participate in the study indicated that they were no longer paying the fees, and thereby seeking alternative accreditation certification through the state. Nonetheless, a large number of early educator preparation programs were included in the current study and thus results make important contributions to understanding early childhood preparation programs, particularly those programs that are CAEP accredited.

Another limitation to the current study might be an influence on participants' responses due to current trends and issues within the early childhood education profession. Specifically, professional organizations (i.e., DEC, NAEYC, CEC) are in the process of developing new personnel standards for the early childhood profession (e.g., early childhood, early childhood special education). In addition, the early childhood profession has placed a heavy emphasis on aligning courses with recommended and best practices. These factors could have influenced how participants responded to the survey items. Because there is a push to align courses with recommended practices (thereby including decision-making competencies in program curricula), faculty may have restructured their program prior to participating in the study, thus, contributing to the high rate of agreement on the decision-making competencies across faculty participants. Moreover, the difference between "very important" and "important" on the survey was not distinguishable for the participants. The high rate of agreement could be a result of not clearly defining the difference between "very important" and "important".

One challenge of the current study was effectively exploring the preparation of faculty members to prepare future early educators. The training of early childhood faculty varies program-to-program based in part on the quality and comprehensiveness of the doctoral institution they attended. As such, university preparation programs (naturally including their own faculty) may differentially impact how faculty members prepare their preservice educators

compared to preparation programs at other institutions. For instance, differences in course content can affect preservice educators' ability to teach a specific age group of children (Buettner, Hur, Jeon, & Andrews, 2015). Additionally, differences in faculty expertise may result in preservice educators' strengths and weaknesses in specific skills, such as partnering with families (Maude et al., 2011). Thus, it is critical for programs to align their content with current recommended and best practices. Infusing these practices into all courses, as well as field experiences is likely to produce high quality educators that can effectively teach all young children.

Implications for Practice

The findings from this study presented a method to prepare preservice educators to partner with families to make informed decisions about interventions for individual children (i.e., a six-step decision making model). To support the development of preservice early educators, preparation programs need to include content on collaborative decision-making. Indeed, participants in the current study agreed that competencies associated with the six-step decision-making model were important for early educators. The integration of decision-making content will allow programs to place additional emphasis on partnering with families and on identifying child-appropriate, research-based practices. This integration is essential for preservice educators to meet the individual needs of families and young children. To increase educators' successful practice of making collaborative decisions, programs can include opportunities for preservice educators to partner with families and provide them with training on specific partnership and communication skills (e.g., open-ended questioning, summarizing, paraphrasing; Turnbull et al, 2015). Programs that find a way to meaningfully incorporate more family involvement within courses will give preservice educators a more realistic picture of their future interactions with

families. One of the implications drawn from this study was that education preparation programs should include the goal of pairing course content to field experiences, which research shows (Roggman et al., 2016) is an effective approach to educator preparation.

The data from this study are promising. In this age of standards development, there is an urgent need to develop a program evaluation system to review and improve the content that is being addressed in early childhood programs. A move to establish resources to help faculty members to align course content to recommended practices and competencies is needed. Institutional evaluation of the competencies and the extent to which they are being taught needs to be a value. With institutional evaluation of the competencies and standards, programs can improve educator preparation curricula and field experiences for their preservice educators including their opportunity to meaningfully engage with families in decision making. This study identified areas where preparation programs can strengthen preservice early childhood educators' knowledge and skills. For example, the lower faculty agreement with survey item 4 (i.e., gathering and sharing information about the intervention and strategy) can be an area where preparation programs need to evaluate their curricula to ensure that preservice educators are afforded the opportunity and support to partner with families. Current research in teacher preparation programs has identified this preservice educator skill as important when using and sharing data with stakeholders (Mogharreban, McIntyre, & Raisor, 2010). This study provides institutions the information needed to re-evaluate their undergraduate preservice early education preparation programs as well as their approach to teaching preservice educators how to identify research evidence as part of early childhood courses.

Findings from this study also provided results for program coordinators to consider when redesigning their field experiences. In the current study, the findings on the extent to which

programs address competencies provided evidence on what skills need additional development. The data indicated that most programs meet expectations in addressing the competencies. That is, most programs address the competencies in lectures, readings, and in-class assignments. While most faculty members reported that their program addressed the competencies, programs can look at how to increase preservice educators' knowledge and skills on gathering and sharing information about interventions and strategies with families within field experiences to exceed expectations. Preservice educators can be better prepared to identify research to effectively communicate information to families which will enable them to more effectively select appropriate interventions for young children.

Furthermore, the data from this study suggest that a lack of opportunities for family participation in program curricula remains a barrier to appropriately training preservice educators to partner with families and other professionals. To increase family participation within early educator preparation programs, programs can investigate families' attitudes on being a part of preservice training activities (e.g., course lectures, activities, field experiences). Moreover, programs need to investigate the benefits of including families in courses, lectures, and field experiences. Likewise, programs can investigate the barriers preservice educators face in partnering with families during field experiences. Overall, this study contributes to existing literature on beginning-level EC/ECSE educators' perceptions on their preparedness to collaborate with families (Bingham & Abernathy, 2007; Hansuvadha, 2009) by adding the perspectives of early educator preparation faculty. In addition, this research contributes to what the field currently knows about preparing preservice educators on family-centered practices (Chu, 2016) by focusing on competencies associated with a specific aspect of family-centered

practices: partnering with families during decision making about interventions for individual children.

Implications for Research

A primary contribution of this study was the creation of a six-step decision-making process and competencies that identify the knowledge and skills early educators need to successfully partner with families. As such, the findings from this study have implications for future research on decision-making and collaborating with families. The new, six-step decision-making model proposed by this study needs to be researched to evaluate its effectiveness for improving reciprocal relationships between families and educators. For example, a study in which early educators learn and implement the six -step model with families can provide insight into its effectiveness at improving partnerships and leading to more effective interventions for children.

Findings from this study confirmed that CAEP-accredited faculty agreed with the decision-making competencies that are associated with the six-step decision-making process (see Figure 4). To delve deeper, future research could investigate faculty participants' agreement of the competencies and the model for the six-step process using a mixed-methods approach (Greene, 2007). A mix-methods study would lend itself to rich dialog about what faculty members are currently doing to address decision-making competencies and how to make improvements in educator preparation curricula. Conducting interviews in addition to faculty and preservice educator surveys would allow for comparisons between what faculty believe they are addressing compared to what students report as being addressed in the curricula. In addition, further research should examine the level of agreement from non-CAEP accredited program faculty members using a survey and semi-structured interviews with program faculty to identify

how they are addressing the early childhood competencies. The findings from these types of research can contribute to increased knowledge of the literature on preparation standards and competencies for preservice educators (Stayton, 2015).

Next, findings from this study indicated a need to examine preservice educators' perceptions on their knowledge and skills gained from education programs regarding decision-making with families. This study only addressed the faculties' perceptions. The findings from this study confirmed the importance of a six-step decision-making process from faculty perspectives. The findings also found that faculty members agreed that building partnerships with families was important. To gain an understanding about how programs address partnerships, future research should examine the specific strategies that programs implement to build partnerships with families from the perspective of preservice educators. Furthermore, preservice educators' attitudes towards partnerships with families warrants further examination (Harvard Family Research Project, 2006; Murry & Mandell, 2004; Ratcliff & Hunt, 2009), particularly with reference to partnering in decision-making regarding interventions for individual children.

Finally, the decision-making models researched in this study did not address diversity within their competencies. However, the researcher for the current study created the Reciprocal Decision-Making Model Between Families and Educators Model (See Table 4) which includes competencies addressing diversity. For example, a feature of Competency Two emphasizes the need for preservice educators to know and understand the purposes of assessments to choose developmentally, linguistically, and culturally appropriate assessment tools and methods that are responsive to the characteristics of the child, family, and program (See Table 2). Future research can continue to investigate the need of having a set of diversity competencies within the early

childhood profession. This research will contribute to the literature on diversity competencies studied by Lim and Able-Boone (2005) who found that building programs focusing on culture diversity and current recommend practices is critical. Developing a study that focuses on preservice educators' perceptions regarding diversity and the family context in decision making would enable the early childhood profession to evaluate preparation programs' training. In addition, research on diversity competencies could allow the early childhood profession to examine how well we prepare preservice educators to collaborate and partner with families from diverse backgrounds. Conducting research in this area may enable programs to examine the experiences, skills, and competencies beginning-level EC/ECSE educators need to ensure quality educator training is taking place in programs (Ritblatt et al., 2013).

Conclusion

The analysis of multiple decision-making models for this study resulted in the creation of a Reciprocal Decision-Making Model Between Families and Educators. Unlike the decision-making models from earlier literature, this decision-making model has trusting, respectful, reciprocal relationships with families at the center of the six-step decision-making model.

An analysis of quantitative and qualitative data from the current study suggests several early childhood competency areas that need to be addressed across university early educator preparation programs. In summary, some preservice educators may benefit from learning more about the following competencies: 1) the opportunity to consistently engage with parents during their field experiences; 2) the ability to gather and share research-based practices they have identified for use in the classroom as well as in the child's home with the parents; and 3) the way to build family partnerships while specifically including the family context. A needed emphasis on these competencies in university educator preparation programs may be contributing to less-

prepared preservice educators which may have a direct impact on the education of the young child (Buettner et al., 2016; Gillourakis, Pretti-Frontczak, Cook, 2005).

This study identified the need for CAEP-accredited universities to evaluate which early childhood competencies need to be included or better addressed within their early childhood programs. Finally, this study points to the need for non-CAEP accredited university early educator preparation programs to evaluate the ways in which these early childhood competencies are being taught and/or addressed within their programs.

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Appendix A: Decision-Making in Early Childhood/Early Childhood Special Educator Preparation: How Are We Doing?

Thank you for taking the time to complete this survey. The survey has 40 questions and should take approximately 10 to 15 minutes of your time. The survey consists of Likert scale items and open-ended questions. Your participation will help a doctoral candidate complete their dissertation research.

Thank you so much!

There are 42 questions in this survey

Consent
We have identified, using the CAEP national database of accredited programs, your university's educator preparation program as a program preparing early childhood and/or early childhood special educators (EC/ECSE). In order to better understand how we are doing in preparing EC/ECSE educators in implementing a decision-making process for selecting appropriate evidence-based interventions we are asking for your input via an online survey.
The specific purpose of this study is to understand the current status of evidence-based decision-making competence for ECE/ECSE educators in educator preparation programs. Specifically, we are wanting to better understand preparation programs' perceptions of the importance of addressing competencies for implementing evidence-based decision-making, the extent to which competencies for evidence-based decision-making are addressed, the challenges encountered addressing the competencies, and strategies faculty implement to overcome challenges encountered. We want to assure you that your responses will be treated confidentially. You will not be asked to provide your name or the name of your university at any point during the survey. Therefore, your individual responses cannot be linked to you or your university. An identifying number will be assigned to each survey in order to maintain anonymity.

If you are not the appropriate contact person, we invite you to nominate another person.
Are you the appropriate person to complete this survey?

Please choose **only one** of the following:
[ ] Yes
[ ] No

You indicated that you are not the appropriate person to answer these questions. We ask that you provide the email address **of the person who oversees early childhood/early childhood special education courses and/or programs at your institution**.

Only answer this question if the following conditions are met:
Answer was 'No' at question '1 [Not Appropriate]' (If you are not the appropriate contact person, we invite you to nominate another person. Are you the appropriate person to complete this survey?)

Please write your answer here:

If you have any questions, complaints, or if you feel you have been harmed by this research, please contact.

Jennifer Amilivia
Department of Special Education
University of Kansas
(313) 377-5993

This survey should take approximately 10-15 minutes to complete. Participation in this study is voluntary. You can choose not to finish the survey or omit any question you prefer not to answer without any negative consequences.

We sincerely appreciate your time and assistance.

Jennifer M. Amilivia
Doctoral Candidate
Department of Special Education
University of Kansas
jmamilivia@ku.edu
(313) 377-5993

Eva Horn, Ph.D.
Professor
Department of Special Education
University of Kansas
evahorn@ku.edu
(785) 864-1979

Choose "Yes" below to begin the survey.
Please choose **only one** of the following:
[] Yes
[] No

In the following sections, you will be presented with 18 questions about competencies early childhood education/early childhood special education educators need upon completion of their educational preparation program. Please answer each question, as it pertains to your program at the current institution where you teach.

Indicate your belief about the importance of the following statement: Beginning-level early childhood/early childhood special education educators use knowledge of partnerships with

families to promote the well-being of young children with exceptionalities including those from diverse backgrounds through trusting, respectful, and reciprocal relationships.

Choose one of the following answers.

Please choose **only one** of the following:
[] Very Important
[] Important
[] Moderately Important
[] Not Important

Indicate to what degree your program prepares beginning-level early childhood/early childhood special education educators to partner with families to promote the well-being of young children with exceptionalities including those from diverse backgrounds.

Only answer this question if the following conditions are met:
Answer was greater than or equal to ' Moderately Important' at question '4 [Q1]' (Indicate your belief about the importance of the following statement: Beginning-level early childhood/early childhood special education educators use knowledge of partnerships with families to promote the well-being of young children with exceptionalities including those from diverse backgrounds through trusting, respectful, and reciprocal relationships.) *and* Answer was 'Yes' at question '3 [Consent]

Choose one of the following answers

Please choose **only one** of the following:
[] Exceeds Expectation: Program offers an entire course on topic, provides opportunity to work with families and other professionals, and to apply skills in field settings.
[] Meets Expectation: Program addresses topic during multiple lectures, assigns multiple readings on the topic, and offers assignments/in-class assignments to practice skills.
[] Partially Meets Expectations: Program address topic during a lecture in one courses, assigns minimal readings, and offers an assignment to practice skills.
[] Not at All: Program does not address the topic in a lecture nor assigns readings, assignments/in-class assignments, or opportunities to apply in field settings to practice skills.

The following challenges have been reported by faculty in the field in addressing competencies: they include insufficient faculty experience, insufficient faculty knowledge, insufficient professional development, limit on program credit hours, limit on the number of class sessions, and limit on the number of field experience hours.

Please share strategies you may have used to overcome these challenges.
Only answer this question if the following conditions are met:
Answer was 'Yes' at question '3 [Consent]' Choose "Yes" below to begin the survey.)

Please write your answer here:
[] Yes

Indicate what challenges you face in preparing beginning-level early childhood/early childhood special education educators to partner with families to promote the well-being of young children with exceptionalities including those from diverse backgrounds.

Only answer this question if the following conditions are met:
Answer was less than or equal to 'Partially Meets Expectations: Program address topic during a lecture in one courses, assigns minimal readings, and offers an assignment to practice skills.' at question '5 [Q1A]' (Indicate to what degree your program prepares beginning-level early childhood/early childhood special education educators to partner with families to promote the well-being of young children with exceptionalities including those from diverse backgrounds.) *and* Answer was 'Yes' at question '3 [Consent]'.

Check all that apply
Please choose **all** that apply:

[] Insufficient faculty experience
[] Insufficient faculty knowledge
[] Insufficient professional development
[] Limit on program credit hours
[] Limit on the number of class sessions
[] Limit on the number of field experience hours
[] None
Other: [ ]

Indicate your belief about the importance of the following statement: Beginning-level early childhood/early childhood special education educators know and understand the purposes of assessments to choose developmentally, linguistically, and culturally appropriate assessment tools and methods that are responsive to the characteristics of the child, family, and program. Educators in partnership with families collect, analyze, and interpret assessment information to develop a shared, holistic understanding of the child's current development, strengths, and needs.

Only answer this question if the following conditions are met:
Answer was 'Yes' at question '3 [Consent]' Choose "Yes" below to begin the survey.)
Choose one of the following answers

Please choose **only one** of the following:
[] Very Important
[] Important
[] Moderately Important
[] Not Important

Indicate to what degree your program prepares beginning-level early childhood/early childhood special education educators to know and understand the purposes of assessments as well as partnering with families to collect, analyze, and interpret assessment information to understand the child's current development, strengths, and needs.

Only answer this question if the following conditions are met:
Answer was greater than or equal to ' Moderately Important' at question '8 [Q2]' (Indicate your belief about the importance of the following statement: Beginning-level early childhood/early childhood special education educators know and understand the purposes of assessments to choose developmentally, linguistically, and culturally appropriate assessment tools and methods that are responsive to the characteristics of the child, family, and program. Educators in partnership with families collect, analyze, and interpret assessment information to develop a shared, holistic understanding of the child's current development, strengths, and needs.) *and*
Answer was 'Yes' at question '3 [Consent]' Choose "Yes" below to begin the survey.)

Choose one of the following answers
Please choose **only one** of the following:
[] Exceeds Expectation: Program offers an entire course on topic, assigns assignments and activities to practice skills, and provide opportunities to apply in field setting.
[] Meets Expectations: Program addresses topic during multiple lectures, assigns multiple readings, and offers assignments/in-class assignments to practice skills.
[] Partially Meets Expectation: Program address topic during a lecture in one courses, assigns minimal readings, and assigns an assignment to practice skills.
[] Not at All Program does not address the topic in a lecture nor assigns readings, assignments/in-class assignments, or opportunities to apply in field settings to practice skills.

The following challenges have been reported by faculty in the field in addressing competencies: they include insufficient faculty experience, insufficient faculty knowledge, insufficient professional development, limit on program credit hours, limit on the number of class sessions, and limit on the number of field experience hours.

Please share strategies you may have used to overcome
these challenges.

Only answer this question if the following conditions are met:
Answer was 'Yes' at question '3 [Consent]' Choose "Yes" below to begin the survey.)

Please write your answer here:
[]
Indicate what challenges you face in preparing beginning-level ECE/ECSE educators to know and understand the purposes of assessments as well as partnering with families to collect, analyze, and interpret assessment information to understand the child's current development, strengths, and needs.

Only answer this question if the following conditions are met:
Answer was less than or equal to 'Partially Meets Expectation: Program address topic during a lecture in one courses, assigns minimal readings, and assigns an assignment to practice skills.' at question '9 [Q2A]' (Indicate to what degree your program prepares beginning-level early childhood/early childhood special education educators to know and understand the purposes of assessments as well as partnering with families to collect, analyze, and interpret assessment

information to understand the child's current development, strengths, and needs.) *and* Answer was 'Yes' at question '3 [Consent]'

Check all that apply
Please choose **all** that apply:

[] Insufficient faculty experience
[] Insufficient faculty knowledge
[] Insufficient professional development
[] Limit on program credit hours
[] Limit on the number of class sessions
[] Limit on the number of field experience hours
[] None
[] Other:

Indicate your belief about the importance of the following statement: Beginning-level early childhood/early childhood special educators in partnerships with families use knowledge of child development and learning and their shared knowledge of the child's current level of development, strengths, and needs to create appropriate outcomes/goals that address the family's priorities and concerns.

Only answer this question if the following conditions are met:
Answer was 'Yes' at question '3 [Consent] Choose "Yes" below to begin the survey.)

Choose one of the following answers
Please choose **only one** of the following:
[] Very Important
[] Important
[] Moderately Important
[] Not Important

Indicate to what degree your program prepares beginning-level early childhood/early childhood special education educators in partnerships with families to use knowledge of child development and learning and their shared knowledge of the child's current level of development, strengths, and needs to create appropriate outcomes/goals that address the family's priorities and concerns.

Only answer this question if the following conditions are met:
Answer was greater than or equal to ' Moderately Important' at question '12 [Q3]' (Indicate your belief about the importance of the following statement: Beginning-level early childhood/early childhood special educators in partnerships with families use knowledge of child development and learning and their shared knowledge of the child's current level of development, strengths, and needs to create appropriate outcomes/goals that address the family's priorities and concerns.) *and* Answer was 'Yes' at question '3 [Consent]'Choose "Yes" below to begin the survey.)

Choose one of the following answers
Please choose **only one** of the following:

[] Exceeds Expectation: Program offers an entire course on topic, provides opportunities to work with families and other professionals, and opportunity to apply skills in field settings.
[] Meets Expectation: Program addresses topic during multiple lectures, assigns multiple readings on the topic, and offers assignments/in-class assignments to practice skills.
[] Partially Meets Expectations: Program address topic during a lecture in one course, assigns minimal readings, and offers an assignment to practice skills.
[] Not at All Program does not address the topic in a lecture nor assigns readings, assignments/in-class assignments, or opportunities to apply in field settings to practice skills.

The following challenges have been reported by faculty in the field in addressing competencies: they include insufficient faculty experience, insufficient faculty knowledge, insufficient professional development, limit on program credit hours, limit on the number of class sessions, and limit on the number of field experience hours.

Only answer this question if the following conditions are met:
Answer was 'Yes' at question '3 [Consent]'. Choose "Yes" below to begin the survey.)

Please write your answer here:
[]
Indicate what challenges you face in preparing beginning-level ECE/ECSE educators to partner with families to develop goals that reflect the family's concerns and priorities that meet the child's current level of development, strengths, and needs.

Only answer this question if the following conditions are met:
Answer was less than or equal to 'Partially Meets Expectations: Program address topic during a lecture in one course, assigns minimal readings, and offers an assignment to practice skills.' at question '13 [Q3A]' (Indicate to what degree your program prepares beginning-level early childhood/early childhood special education educators in partnerships with families to use knowledge of child development and learning and their shared knowledge of the child's current level of development, strengths, and needs to create appropriate outcomes/goals that address the family's priorities and concerns.) *and* Answer was 'Yes' at question '3 [Consent])

Check all that apply

Please choose **all** that apply:
[] Insufficient faculty experience
[] Insufficient faculty knowledge
[] Insufficient professional development
[] Limit on program credit hours
[] Limit on the number of class sessions
[] Limit on the number of field experience hours
[] None
[] Other:

Indicate your belief about the importance of the following statement: Beginning-level early

childhood/early childhood special education educators use their knowledge of assessing the effectiveness of practice (e.g., research syntheses, summaries, reviews) to identify and select interventions that are considered research-based or promising practices (e.g., dialogic reading). The educators share information with the family in an accessible manner to support joint decision-making that aligns with the child's strengths and needs and address the family's priorities and concerns.

Only answer this question if the following conditions are met:
Answer was 'Yes' at question '3 [Consent])

Choose one of the following answers

Please choose **only one** of the following:
[] Very Important
[] Important
[] Moderately Important
[] Not Important

Indicate to what degree your program prepares beginning-level early childhood/early childhood special education educators to use their knowledge of assessing the effectiveness of a practice to identify and select appropriate interventions that are considered research based or promising practices.

Only answer this question if the following conditions are met:
Answer was greater than or equal to ' Moderately Important' at question '16 [Q4]' (Indicate your belief about the importance of the following statement: Beginning-level early childhood/early childhood special education educators use their knowledge of assessing the effectiveness of practice (e.g., research syntheses, summaries, reviews) to identify and select interventions that are considered research-based or promising practices (e.g., dialogic reading). The educators share information with the family in an accessible manner to support joint decision-making that aligns with the child's strengths and needs and address the family's priorities and concerns.) *and*
Answer was 'Yes' at question '3 [Consent])

Choose one of the following answers
Please choose **only one** of the following:
[] Exceeds Expectation: Program addresses topic during multiple course lectures, assigns multiple readings on topic, and offers assignments/in-class assignments to practice skills.
[] Meets Expectations: Program addresses topic during multiple lectures, multiple readings on topic, and offers in-class assignments to practice skills.
[] Partially Meets Expectations: Program addresses topic during a lecture in one courses, assigns minimal readings on the topic, and offers an assignment to practice skills.
[] Not at All: Program does not address the topic in a lecture nor assigns readings, assignments, or in-class activities to practice skills.

The following challenges have been reported by faculty in the field in addressing competencies: they include insufficient faculty knowledge, insufficient professional development, limits on

program credit hours, limit on the number of class sessions, and limit on the number of field experience hours.

Please share strategies you may have used to overcome these challenges.

Only answer this question if the following conditions are met:
Answer was 'Yes' at question '3 [Consent])

Please write your answer here:
[]

Indicate what challenges you face in preparing beginning-level early childhood/early childhood special education educators to use their knowledge of assessing the effectiveness of a practice to identify interventions that are considered research-based or promising practices to select appropriate interventions.

Only answer this question if the following conditions are met:
Answer was less than or equal to 'Partially Meets Expectations: Program addresses topic during a lecture in one courses, assigns minimal readings on the topic, and offers an assignment to practice skills.' At question '17 [Q4A]' (Indicate to what degree your program prepares beginning-level early childhood/early childhood special education educators to use their knowledge of assessing the effectiveness of a practice to identify and select appropriate interventions that are considered research-based or promising practices.)
and Answer was 'Yes' at question '3 [Consent])

Check all that apply
Please choose **all** that apply:
[] Insufficient faculty experience
[] Insufficient faculty knowledge
[] Insufficient professional development
[] Limit on program credit hours
[] Limit on the number of class sessions
[] Limit on the number of field experience hours
[] None
[] Other:

Indicate your belief about the importance of the following statement: Beginning-level early childhood/early childhood special educators use their knowledge of (1) Professional Ethical Principles (e.g., CEC, DEC, NAEYC), Division for Early Childhood Recommended Practices, and Professional Practice Standards to guide their practice; (2) trends and issues in ECE, ECSE, and EI; and (3) policies, laws and regulations, early learning standards and other resources in order to provide the family with current, comprehensible, and unbiased information the family can use to make informed decisions

Only answer this question if the following conditions are met:

Answer was 'Yes' at question '3 [Consent])
Choose one of the following answers

Please choose **only one** of the following:
[] Very Important
[] Important
[] Moderately Important
[] Not Important

Indicate to what degree your program prepares beginning-level early childhood/early childhood special educators use their knowledge of Professional Ethical Principles (i.e., CEC, DEC, NAEYC), Division for Early Childhood/National Association for the Education of Young Children recommended practices, and Professional Practice Standards to guide their practice; policies, laws and regulations, early learning standards and other resources in order to provide the family with current, comprehensible, and unbiased information the family can use to make informed decisions.

Only answer this question if the following conditions are met:
Answer was greater than or equal to ' Moderately Important' at question '20 [Q5]' (Indicate your belief about the importance of the following statement: Beginning-level early childhood/early childhood special educators use their knowledge of (1) Professional Ethical Principles (e.g., CEC, DEC, NAEYC), Division for Early Childhood Recommended Practices, and Professional Practice Standards to guide their practice; (2) trends and issues in ECE, ECSE, and EI; and (3) policies, laws and regulations, early learning standards and other resources in order to provide the family with current, comprehensible, and unbiased information the family can use to make informed decisions) *and* Answer was 'Yes' at question '3 [Consent])

Choose one of the following answers

Please choose only one of the following:
[] Exceeds Expectation: Program offers an entire course on topic, provides opportunity to work with families and other professionals, and to apply skills in field settings.
[] Meets Expectation: Program addresses topic during multiple lectures, assigns multiple readings on the topic, and offers assignments/in-class assignments to practice skills.
[] Partially Meets Expectations: Program address topic during a lecture in one courses, assigns minimal readings and offers an assignment to practice skills.
[] Not at All: Program does not address the topic in a lecture nor assigns readings, assignments/in-class assignments, or opportunities to apply in field settings to practice skills.

Indicate to what degree your program prepares beginning-level early childhood/early childhood special educators to use their knowledge of trends and issues in ECE, ECSE, and EI in order to provide the family with current, comprehensible, and unbiased information the family can use to make informed decisions.

Choose one of the following answers

Please choose **only one** of the following:
[] Exceeds Expectation: Program addresses topics in multiple course lectures, assigns multiple readings on topic, and offers assignments/in-class assignments to practice skills.
[] Meets Expectation: Program addresses topics topic during multiple lectures, multiple readings on topic, and offers in-class assignments to practice skills.
[] Partially Meets Expectation: Program addresses topic during a lecture in one courses, assigns minimal readings on the topic, and offers an assignment to practice skills.
[] Not at All: Program does not address the topic in a lecture nor assigns readings, assignments, or in-class activities to practice skills.

Indicate to what degree your program prepares beginning-level early childhood/early childhood special educators to use their knowledge of policies, laws and regulations, early learning standards and other resources to provide the family with current, comprehensible, and unbiased information the family can use to make informed decisions.

Choose one of the following answers
Please choose **only one** of the following:
[] Exceeds Expectation: Program addresses topics in multiple course lectures, assigns multiple readings on topic, and offers assignments/in-class assignments to practice skills.
[] Meets Expectation: Program addresses topics topic during multiple lectures, multiple readings on topic, and offers in-class assignments to practice skills.
[] Partially Meets Expectation: Program addresses topic during a lecture in one courses, assigns minimal readings on the topic, and offers an assignment to practice skills
[] Not at All: Program does not address the topic in a lecture nor assigns readings, assignments/in-class assignments to practice skills.

The following challenges have been reported by faculty in the field in addressing competencies: they include insufficient faculty knowledge, insufficient professional development, limits on program credit hours, limit on the number of class sessions, and limit on the number of field experience hours. Please share strategies you may have used to overcome these challenges.

Only answer this question if the following conditions are met:
Answer was 'Yes' at question '3 [Consent])

Please write your answer here:
[]

Indicate what challenges you face in preparing beginning-level early childhood/early childhood special educators use their knowledge of (1) Professional Ethical Principles, DEC Recommended practices, and Professional Practice Standards to guide their practice; (2) trends and issues in ECE, ECSE, and EI; and (3) policies, laws and regulations, early learning standards and other resources in order to provide the family with current, comprehensible, and unbiased information the family can use to make informed decisions.

Only answer this question if the following conditions are met:
-------- Scenario 1 --------

Answer was less than or equal to 'Partially Meets Expectation: Program embeds topics and aligns courses with professional ethical principles (i.e., NAEYC), professional practice standards (i.e., NAEYC), throughout academic program.' at question '21 [Q5A1]' (Indicate to what degree your program prepares beginning level early childhood/early childhood special educators use their knowledge of Professional Ethical Principles (i.e., CEC, DEC, NAEYC), Division for Early Childhood/National Association for the Education of Young Children recommended practices, and Professional Practice Standards to guide their practice; policies, laws and regulations, early learning standards and other resources in order to provide the family with current, comprehensible, and unbiased information the family can use to make informed decisions.) *and* Answer was 'Yes' at question '3 [Consent])

-------- or Scenario 2 --------
Answer was 'Yes' at question '3 [Consent]' (If you have any questions, complaints, or if you feel you have been harmed by this research, please contact Jennifer Amilivia, Department of Special Education, University of Kansas, at (313) 377-5993. This survey should take approximately 10-15 minutes to complete. Participation in this study is voluntary. You can choose not to finish the survey or omit any question you prefer not to answer without any negative consequences. We sincerely appreciate your time and assistance. "Yes" below to begin the survey.) *and*
Answer was less than or equal to 'Partially Meets Expectation: Program addresses topic during a lecture in one courses, assigns minimal readings on the topic, and offers an assignment to practice skills.' at question '22 [Q5A2]' (Indicate to what degree your program prepares beginning-level early childhood/early childhood special educators to use their knowledge of trends and issues in ECE, ECSE, and EI in order to provide the family with current, comprehensible, and unbiased information the family can use to make informed decisions.)

-------- or Scenario 3 --------
Answer was 'Yes' at question '3 [Consent] *and* Answer was less than or equal to 'Partially Meets Expectation: Program addresses topic during a lecture in one courses, assigns minimal readings on the topic, and offers an assignment to practice skills' at question '23 [Q5A3]' (Indicate to what degree your program prepares beginning-level early childhood/early childhood special educators to use their knowledge of policies, laws and regulations, early learning standards and other resources to provide the family with current, comprehensible, and unbiased information the family can use to make informed decisions.)

Check all that apply
Please choose **all** that apply:
[] Insufficient faculty experience
[] Insufficient faculty knowledge
[] Insufficient professional development
[] Limit on program credit hours
[] Limit on the number of class sessions
[] Limit on the number of field experience hours
[] None
[] Other:

Indicate your belief about the importance of the following statement:
Beginning-level early childhood/early childhood special education educators use pedagogical knowledge of learning and development and collaborate with the family to plan and adapt the intervention that supports the child's attainment of the outcomes/goals and addresses the family's values and priorities.

Only answer this question if the following conditions are met:
Answer was 'Yes' at question '3 [Consent]')

Choose one of the following answers
Please choose **only one** of the following:
[] Very Important
[] Important
[] Moderately Important
[] Not Important

Indicate to what degree your program prepares beginning-level early childhood/early childhood special education educators to use pedagogical knowledge of learning and development to collaborate with families to plan and adapt the intervention that supports the child's attainment of the outcome/goals and addresses the family's values and priorities.

Only answer this question if the following conditions are met:
Answer was greater than or equal to ' Moderately Important' at question '26 [Q6]' (Indicate your belief about the importance of the following statement: Beginning-level early childhood/early childhood special education educators use pedagogical knowledge of learning and development and collaborate with the family to plan and adapt the intervention that supports the child's attainment of the outcomes/goals and addresses the family's values and priorities.) *and* Answer was 'Yes' at question '3 [Consent])

Choose one of the following answers
Please choose **only one** of the following:
[] Exceeds Expectation: Program addresses topics in multiple lectures, assigns multiple readings on topic, offers assignments/in-class assignments to practice skills and provides opportunity to apply in field settings.
[] Meets Expectation: Program addresses topics topic during multiple lectures, multiple readings on topic, and offers in-class assignments to practice skills.
[] Partially Meets Expectation: Program addresses topic during a lecture in one courses, assigns minimal readings on the topic, and offers an assignment to practice skills.
[] Not at All: Program does not address the topic in a lecture nor assigns readings, assignments/in-class assignments, or opportunities to apply in field settings to practice skills.

The following challenges have been reported by faculty in the field in addressing competencies: they include insufficient faculty knowledge, insufficient professional development, limits on program credit hours, limit on the number of class sessions, and limit on the number of field experience hours. Please share strategies you may have used to overcome

these challenges.

Only answer this question if the following conditions are met:
Answer was 'Yes' at question '3 [Consent])
Please write your answer here:
[]

Indicate what challenges you face in preparing beginning-level early childhood/early childhood special educators to use pedagogical knowledge of learning and development and collaborate with the family to plan and adapt the intervention that support's the child's attainment of the outcome/goals and addresses the family's values and priorities.

Only answer this question if the following conditions are met:
Answer was less than or equal to 'Partially Meets Expectation: Program addresses topic during a lecture in one courses, assigns minimal readings on the topic, and offers an assignment to practice skills.' at question '27 [Q6A]' (Indicate to what degree your program prepares beginning-level early childhood/early childhood special education educators to use pedagogical knowledge of learning and development to collaborate with families to plan and adapt the intervention that supports the child's attainment of the outcome/goals and addresses the family's values and priorities.) *and* Answer was 'Yes' at question '3 [Consent])

Check all that apply
[] Please choose **all** that apply:
[] Insufficient faculty experience
[] Insufficient faculty knowledge
[] Insufficient professional development
[] Limit on program credit hours
[] Limit on the number of class sessions
[] Limit on the number of field experience hours
[] None
[] Other:

Indicate your belief about the importance of the following statement: Beginning-level early childhood/early childhood special education educators use knowledge of data collection methods and data analysis procedures to monitor progress and make databased decisions regarding needed instructional modifications in partnership with the child's
family.

Only answer this question if the following conditions are met:
Answer was 'Yes' at question '3 [Consent])

Choose one of the following answers
Please choose **only one** of the following:
[] Very Important
[] Important
[] Moderately Important

[] Not Important

Indicate to what degree your program prepares beginning-level early childhood/early childhood special educators use knowledge of data collection methods and data analysis procedures to monitor progress and make data-based decisions regarding needed instructional modifications in partnership with the child's family.

Only answer this question if the following conditions are met:
Answer was greater than or equal to ' Moderately Important' at question '30 [Q7]' (Indicate your belief about the importance of the following statement: Beginning-level early childhood/early childhood special education educators use knowledge of data collection methods and data analysis procedures to monitor progress and make data-based decisions regarding needed instructional modifications in partnership with the child's family.) *and* Answer was 'Yes' at question '3 [Consent)

Choose one of the following answers
Please choose **only one** of the following:
[] Exceeds Expectation: Program offers an entire course on topic, assigns assignments and inclass assignments to practice skills, and provides opportunities to apply in field setting.
[] Meets Expectations: Program addresses topic during multiple lectures, assigns multiple readings, and offers assignments/in-class assignments to practice skills.
[] Partially Meets Expectation: Program address topic during a lecture in one courses, assigns minimal readings, and assigns an assignment to practice skills.
[] Not at All: Program does not address the topic in a lecture nor assigns readings, assignments/in-class assignments, or opportunities to apply in field settings to practice skills.

The following challenges have been reported by faculty in addressing competencies: they include insufficient faculty knowledge, insufficient professional development, limits on program credit hours, limit on the number of class sessions, and limit on the number of field experience hours.

Please share strategies you may have used to overcome these challenges.
[]

Only answer this question if the following conditions are met:
Answer was 'Yes' at question '3 [Consent])

Please write your answer here:
[]

Indicate what challenges you face in preparing beginning-level early childhood/early childhood special educators use knowledge of data collection methods and data analysis procedures to monitor progress and make data-based decisions regarding needed instructional modifications in partnership with the child's family.

Check all that apply
Please choose **all** that apply:

[] Insufficient faculty experience
[] Insufficient faculty knowledge
[] Insufficient professional development
[] Limit on program credit hours
[] Limit on the number of class sessions
[] Limit on the number of field experience hours
[] None
[] Other:

Demographics

How long have you been a lead faculty member for your early childhood preparation program?
Choose one of the following answers
Please choose **only one** of the following:

[] Less than a year
[] 1-3 years
[] 4-6 years
[] 7 or more years

How long has your program had a licensure program?
Choose one of the following answers
Please choose **only one** of the following:

[] 0-1 year
[] 2-5 years
[] 6-10 years
[] More than 10 years

What type of program is offered at your institution?
Choose one of the following answers
Please choose **only one** of the following:

[] Early Childhood Education
[] Early Childhood Special Education
[] Early Childhood Unified
[] Early Intervention
[] Other

What degree is offered through your program?
Choose one of the following answers
Please choose **only one** of the following:
[] Bachelors
[] Bachelors and Master's
[] Bachelors, Master's, and Ph.D.
[] Master's and Ph.D.

[] Master's only
[] Ph.D. only
[] Other

What type of degree licensure/certificate programs does your institution offer**?**
Choose one of the following answers
Please choose **only one** of the following:

[] Initial Teacher Licensure
[] Teacher Certificate
[] Endorsement
[] Other

In what region of the country is your university or college located?
Please choose **only one** of the following:

[] Northeast (ME, MA, RI, CT, NJ, DE, MD, DC, PA, NY, VT, NH)
[] Southwest (OK, TX, NM, AZ)
[] Midwest (MI, OH, IN, IL, WI, MN, IA, MO, ND, SD, NE, KS)
[] Southeast (WV, DE, VA, NC, SC, GA, FL, KY, TN, AL, MS, AR, LA)
[] West (MT, WY, CO, ID, UT, NV, WA, OR, CA)
[] US Territories (PR, VI)
[] Other

What is your gender?
Choose one of the following answers
Please choose **only one** of the following:

[] Female
[] Male
[] Other
[] Prefer not to say

What is your race?

Check all that apply
Please choose **all** that apply:

[] White
[] Hispanic or Latino
[] Black or African American
[] Native American or Alaska Native
[] Asian
[] Native Hawaiian/Pacific Islander
[] Two or more races (Please list in "other")
[] Other:

What is your age?
[] Under 30
[] 31-40
[] 41-50
[] Over 50

Appendix B: Decision-making Competence

Purpose of the Research Study

Evidence-based decision making is a process that requires educators to engage in a series of steps with families to select a practice. To summarize this study, we have proposed a 6-step decision-making model that can be used by ECE/ECSE educators as they engage together with families in identifying and implementing evidence-based practices to support young children's growth and development (See Figure 1). Using professional standards that were created by national organizations (i.e., CEC Initial Personnel Preparation Standards, 2015; DEC Initial Specialty Set, 2017; NAEYC Personnel Preparation Standards, 2009), we have identified critical competencies needed by the educators to implement the model in their practice. Selecting competencies for each step required that we used an evidenced-based decision-making lens. That is, we needed to identify the essential knowledge and skills from the list of personnel preparation standards that best fit each step in the model for an evidence-based decision-making process. Then we used the accumulated knowledge of the field to identify essential competencies for each step. Once we identified competencies, we then needed to come to a consensus on the competencies for each step. Consensus was reached by coming together and discussing the competencies for each step in the mode. The primary purpose of this study, thus, is to understand the current status of evidence-based decision-making competence for ECE/ECSE educators in educator preparation programs. Specifically, this study will investigate preparation programs' perceptions of the importance of addressing evidence-based decision-making and the required competencies, the extent to which they report addressing the identified competencies for evidence-based decision-making, the challenges encountered in preparing their ECE/ECSE educator candidates for evidence-based decision-making, and strategies that faculty implement to overcome their challenges.

Purpose of Focus Group

The purpose of the focus group is to obtain input from leaders in the field, like you, that have knowledge around "evidence-based decision-making" in ECE/ECSE and in educator preparation about the competencies that we have identified as key competencies needed by beginning level ECE/ECSE as they complete educator preparation programs. During the focus group, we will engage in a conversation about each competency for each step in the decision-making model. Using Table 1, read each step in the decision-making process and the competency listed. Next, conduct an expert review for each competency. As you read the competency for each step, indicate to what extent you believe the competency listed represents the needed knowledge and skills to engage in that step of a decision-making process. Please mark Yes, No, or Partially for each step. A space has been provided for you to make notes about your response. Please complete the expert review before the focus group.

Completing Expert Review

1. Read each competency for each step in the decision-making process.
2. Address the following questions.
3. Address the following question: To what extent dose the competency reflects the knowledge and skills to complete the step in the decision-making process.
4. Mark Yes, No, or Partially.
5. Write any comments you may have in the space provided.
6. Bring handout to Focus Group (handouts do not need to be submitted).

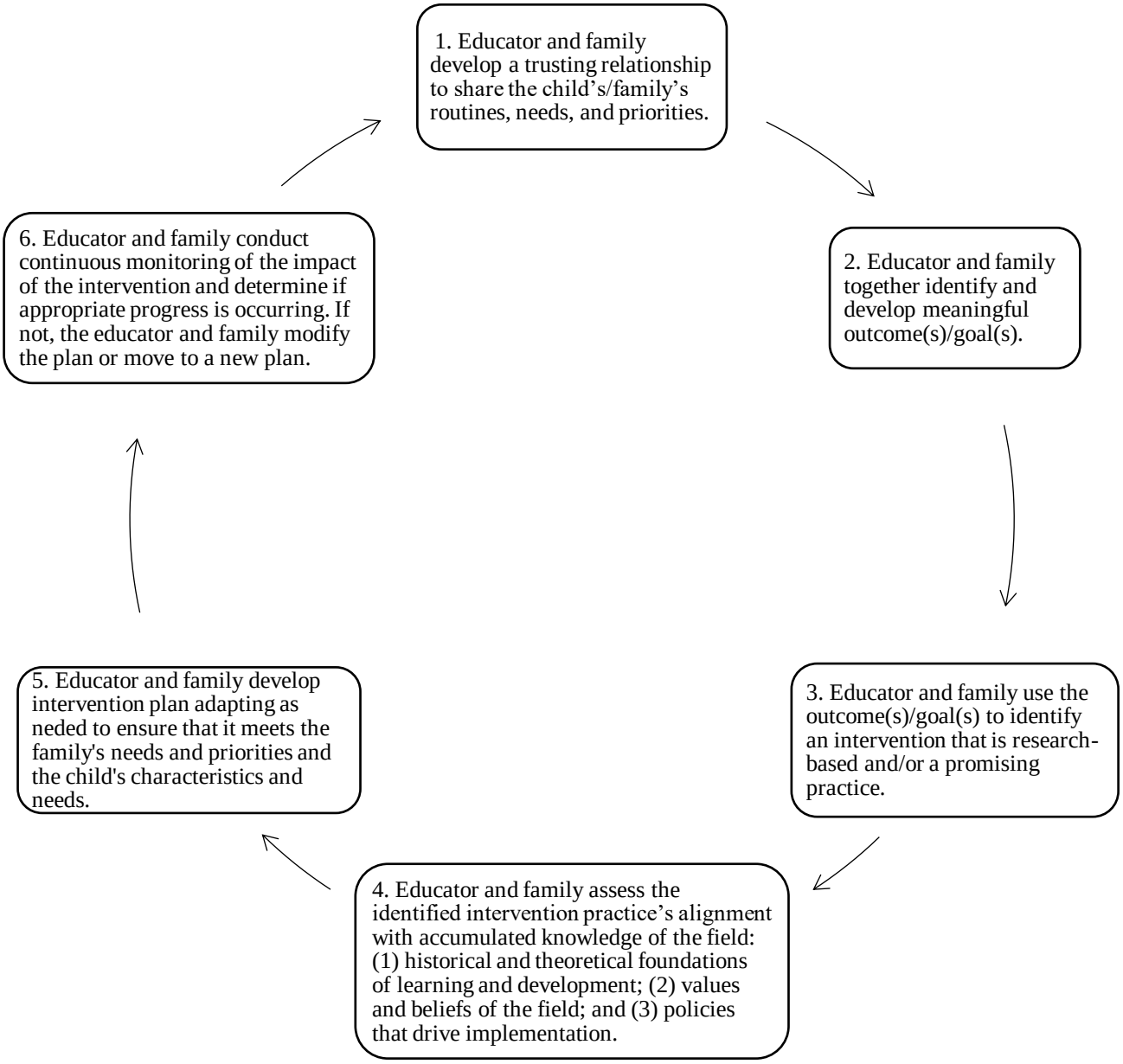
Appendix B Cont. Decision-making Competence

Evidence-Based Decision-Making Steps	Competency	Agreement		
Step 1. Educator and family develop a trusting relationship to share the child's/family's routines, needs, and priorities.	Beginning-level early childhood/early childhood special education educators use collaboration to promote the well-being of young children with exceptionalities and their families through respectful, reciprocal, relationships.	Yes	No	Partially
		Comments		
Step 2. Educator and family together identify and develop meaningful outcome(s)/goal(s).	Beginning-level early childhood/early childhood special educators work with families to develop goals that reflect the family's concerns and priorities that their young child's learning experiences, characteristics, and need.	Yes	No	Partially
		Comments		
Step 3. Educator and family use the outcomes/goals to identify an intervention that is research-based and/or a promising practice	Beginning-level early childhood/early childhood special educators use their knowledge of currently available research syntheses, summaries, and reviews (e.g., What Works Clearinghouse) to identify interventions that are considered research-based and/or promising to select appropriate interventions that reflect family's priorities and align with the child's characteristics and needs.	Yes	No	Partially
		Comments		
Step 4. Educator and family assess the identified intervention practice's alignment with the accumulated knowledge of the field: (1) the historical and theoretical foundations of learning and development; (2) the values and beliefs of the field; and (3) the policies that drive implementation.	Beginning-level early childhood/early childhood special educators use their knowledge of (1) Professional Ethical Principles, DEC recommended practices, and Professional Practice Standards to guide their practice; (2) trends and issues in ECE, ECSE, and EI; and (3) early learning standards and other resources to design, implement, and evaluate interventions for all young children including those from diverse backgrounds.	Yes	No	Partially
		Comments		
		Yes	No	Partially

Step 5. Educator and family develop the intervention plan adapting as needed to ensure that it meets the family's needs and priorities and the child's characteristics and needs.	Beginning-level early childhood/early childhood special educators use their knowledge of development and developmental domains to plan and adapt the intervention based on the family's needs and priorities and the child's characteristics and needs.	Comments		
Step 6. Educator and family conduct continuous monitoring of the impact of the implementation plan and determine if appropriate progress is occurring. If not, educator and family modify the plan or move to a new plan.	Beginning-level early childhood/early childhood special education educators know and use methods of assessment to conduct ongoing assessments to monitor instructional effectiveness to make data-based decisions.	Yes	No	Partially
		Comments		

Appendix B Cont. Decision-making Competence

A Model for a Decision-Making Process



Appendix C: Semi-structured Expert Review Protocol

Materials:

1. Laptop
2. Pen & paper for quick notes
3. Consent form

Prior to Interview:
Go over the informed consent form with participant. Answer any questions related to participation. After receiving consent, turn on recorder and begin interview.

Focus Group questions

1. Please share your feedback on the competency for Step 1. To what extent did the competency reflect the essential knowledge and skills for building a trusting relationship with families.
    a. What suggestions do you have for editing the competency?
2. In Step 2, educators and families together identify and develop meaningful outcome(s)/goal(s), to what extent does the competency reflect the knowledge and skills needed to complete Step 2.
    a. What suggestions do you have for editing the competency?
3. Please share your feedback on the competency for Step 3. To what extent did the competency reflect the essential knowledge and skills needed to use outcome(s)/goal(s) to identify an intervention that is research-based and/or a promising practice.
    a. What suggestions do you have for editing the competency?
4. In Step 4 in the decision-making process the educators and family assess the identified intervention practices alignment with the accumulated knowledge of the filed. To what extent did the competency reflect the knowledge and skills needed to compete Step 4 in the decision-making process.
    a. What suggestions do you have for editing the competency?
5. Please share you feedback on the competency for Step 5. To what extent did the competency reflect the essential knowledge and skills to complete this step in a decision-making process.
    a. What suggestions do you have for editing the competency?
6. In Step 6 in the decision-making process, the educators and family conduct continuous monitoring of the impact of the implementation and determine if appropriate progress is occurring. If not, educator and family modify the plan or move to a new plan. To what extent did the competency reflect the essential knowledge and skills to complete this step.
    a. What suggestions do you have for editing the competency?
7. The handout was about competencies beginning-level ECE/ECSE need to effectively engage in an evidence-based decision-making. Was there anything not included in these competencies that is important to you regarding evidence-based decision-making?

Appendix D: Expert Review Panel Faculty

Jose Martinez is an Assistant Professor in the Department of Special Education at the University of Kansas. Dr. Martinez earned his doctoral degree in Special Education from the University of Florida. Dr. Martinez's research focuses on the identification and evaluation of early intervention strategies designed to prevent and ameliorate social and behavioral challenges in children with developmental delays, the application of meta-analytic methods to systematic literature reviews to identify the most effective treatments for children with developmental delays, and the translation of effective practices for children with developmental delays into useful resources that teachers and families can use to improve the quality of lives of these children.

Dr. Hailey Love's scholarship focuses on high-quality inclusive education across early childhood settings. She has conducted research on inclusive practices, the preparation of inclusive early childhood educators, and environmental features that influence the quality of young children's inclusive experiences. Additionally, Dr. Love's research examines family-professional partnerships particularly between educators and families of color. She hopes her work will help early educators better serve children and families with various abilities, recourses, and needs within high-quality inclusive classrooms. In addition to research, Dr. Love has taught courses in inclusive education, child development, and early childhood education curriculum for young children with disabilities.
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Dr. Amber Tankersley interests focuses of early childhood curriculum. Dr. Tankersley enjoys working with young children and sharing in the responsibility of their early care and education. Dr. Tankersley has worked with preschool age children and has been a director of preschool aged programs. Through working with undergraduate child development majors, Dr. Tankersley shares her experiences to help insure a fresh supply of excited child development professionals.

Zhe Gigi An is an assistant professor at the University of Wisconsin-Madison. Her scholarship focuses on supporting young children's social emotional development and meaningful inclusion. Dr. An has worked with preservice educators in the field to help build their knowledge and skills on working with children

Appendix E: Recruitment E-mail for Expert Review

Hello _____,

I want to invite you to participate in a focus group as part of my dissertation study. My dissertation, titled *Evidence-based Decision-making in Early Childhood/Early Childhood Special Educator Preparation: How Are We Doing?* is a survey study in which I will be asking higher education faculty members to provide us with information on preparing their teacher candidates to engage in a decision-making process. Higher education faculty members will be asked to rate their perceptions on Early Childhood Educators (ECE) and Early Childhood Special Educators (ECSE) competence to implement a decision-making process for selecting appropriate evidence-based interventions for the children and families they serve. Specifically, we are wanting to understand preparation programs' perceptions of the importance of addressing competencies for implementing "evidence-based decision-making," the extent to which competencies for "evidence-based decision-making" are addressed, the challenges encountered addressing the competencies, and strategies faculty implement to overcome challenges.

The purpose of the focus group is to obtain input from leaders in the field, like you, that have knowledge around "evidence-based decision-making" in ECE/ECSE and in educator preparation about the competencies that we have identified as key competencies needed by beginning level ECE/ECSE as they complete educator preparation programs. Before the focus group convening, we will provide you with a handout that includes the purpose of the study, detailed instructions on completing the handout, a table with the six-steps in evidence-based decision-making and competency for each step, and a figure for an evidence-based decision-making process. The focus group will take approximately 45-60 minutes of your time. Scheduling for the focus group will be completed using a Doodle Poll with various dates and times. The time frame for holding the focus group will be within the next two weeks. You have the option of participating in face-to-face or via zoom.

If you are interested in participating, please respond to the email by typing Yes or maybe and providing us with a preferred email for us to use for follow-up with you.

If you have any questions, concerns or simply would like more information, you can contact either of us.

Thank you for your time and consideration.

Researcher's Contact Information:

Appendix F: Recruitment E-mail for Think-a-loud

Hello,

I want to invite you to participate in a Think-aloud as part of my dissertation study. My dissertation, titled *Evidence-based Decision-making in Early Childhood/Early Childhood Special Educator Preparation: How Are We Doing?, i*s a survey study in which I will be asking higher education faculty members to provide us with information on preparing their teacher candidates to engage in a decision-making process. Higher education faculty members will be asked to rate their perceptions on Early Childhood Educators (ECE) and Early Childhood Special Educators (ECSE) competence to implement a decision-making process for selecting appropriate evidence-based interventions for the children and families they serve. Specifically, we are wanting to understand preparation programs' perceptions of the importance of addressing competencies for implementing "evidence-based decision-making," the extent to which competencies for "evidence-based decision-making" are addressed, the challenges encountered addressing the competencies, and strategies faculty implement to overcome challenges.

The purpose of the Think-aloud is to obtain input from leaders in the field, like you, that know educator preparation. Specifically, I will be seeking feedback on the survey's functionality and clarity of the survey items. Before the Think-aloud, I will provide you with the survey link and instructions to complete the survey. The Think-aloud will take approximately 45-60 minutes of your time. Scheduling for the Think-aloud will take place via email with various dates and times. The time frame for holding the Think-aloud will be the week of May 6th. You have the option of participating in face-to-face or via zoom video conferencing.

If you are interested in participating, please respond to the email by typing Yes or maybe and providing us with a preferred email for us to use for follow-up with you.

If you have any questions, concerns or simply would like more information, you can contact either of us.

Thank you for your time and consideration.

Researcher's Contact Information:

Appendix G: Think-aloud Protocol

1. Is the item wording, terminology, and structure of the model clear and easy to understand? Was there any confusion about the model?
    a. **Probing Question**
        i. Please share your thoughts about the competency. Does the competency reflect the knowledge and skills beginning-level ECE/ECSE educators need upon completion of their program?
        ii. What would you change about the item?
2. Please share your thoughts about the rating scale. Does the rating scale provide enough options?
    a. **Probing Questions**
        i. What rating scale do you think would be more appropriate?
3. Is the length of the survey to long or too short?
    a. **Probing Questions**
        i. What suggestions do you have on changing the length of the survey?
4. Overall, how well does the survey represent the construct that is being studied?
    a. **Probing Question**
        i. What suggestion do you have for the survey?