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Creating Caring Qualified Early Childhood Teachers: An Exploration of the Relationship Between Teacher Efficacy and Learner-Centeredness Among Early Childhood Professionals in Arkansas

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Creating Caring Qualified Early Childhood Teachers: An Exploration of the Relationship Between Teacher Efficacy and Learner-Centeredness Among Early Childhood Professionals in Arkansas

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ABSTRACT

The demand for degreed teachers for positions teaching children even younger than preschool age is increasing across the United States. Teacher qualifications vary from state to state, and there is increased emphasis on teacher credentials and education. The current study extends the current literature by examining variables that effect the development of teacher efficacy and aims to determine a relationship between trainability of characteristics of beliefs about learner-centered beliefs/developmentally appropriate practices and teacher efficacy. Participants were 175 teachers working in the state of Arkansas in early childhood programs teaching children birth to 5 years of age. A significant relationship was confirmed between total teacher efficacy and teacher learnered-centeredness with regard to discipline and classroom management, teaching practices, and beliefs about children. However, significant differences in teacher efficacy scores of teachers holding a degree in early childhood education (P-4 licensure) from those without a bachelor's degree were not found. Interestingly, teachers with bachelor's degrees in child development did have significantly higher efficacy scores than did those who held the P-4 license in Arkansas. Results are discussed with the hope that teacher-training programs specific to birth through Kindergarten can target specific trainable variables to improve teacher confidence in their training which will result in higher efficacy and developmentally appropriate teaching practices.

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Chapter 1

Introduction

For years the question of "what makes a good early childhood teacher?" has been the focus of research, discussion, and study by students, parents, and professionals alike. Teacher education or child development programs in colleges and universities are the setting in which future birth-five (B-5) early childhood teachers are prepared to teach. Increasingly, such a degree is required to teach children from preschool to age eight, especially in state funded settings (National Institute for Early Education Research (NIEER), 2012). The demand for degreed teachers for positions teaching children even younger than preschool is also increasing (McMullen, Kazim, & Lash, 2003). Yet across the U. S., teacher qualifications vary from "some have earned college or graduate degrees, while others possess a high school diploma or its equivalent; some have studied early childhood education or child development, while others have not; and some have a great deal of experience working with children, while others do not" (McMullen et al., p. 2). Furthermore, current research validates decades worth of findings that substantiate the positive correlation between higher teacher qualifications and the quality of care afforded to children (Bowman, Donovan, & Burns, 2001; McMullen et al., 2003; National Research Council, 2000). However, despite this demand, many teachers currently in the field feel that while they have national directives that define, promote, or reward the very essence of good teaching, the emphasis is on teacher credentials and education rather than on how well the teacher teaches (National Research Council, 2000).

Over the past few decades, there has been a slow and gradual shift from teacher-centered educational classrooms toward learner centered classrooms (Brown, 2003). Traditional teaching focused on a teacher-centered approach in which students were expected to sit while their

teachers attempted to transfer knowledge through direct instruction and teacher-directed activities (Brown, 2003). In more recent years, a shift has occurred toward a learner-centered approach in which the teacher encourages the students to participate in the experiences and activities, share in the responsibility of their learning, and spend time reflecting and problem solving about the relevance to their individual learning (Tschannen-Moran & Woolfolk Hoy, 2001; Brown, 2003; Dunn & Rakes, 2010). The shift has also occurred in classrooms from birth to Kindergarten although it may not be as quantifiable in birth-to-age-five (B-5) settings (Chaille`, 2008), perhaps because prekindergarten classrooms have traditionally already been based on learner-centered approaches (Bredecamp, 1987; Chaille`, 2008). However, inappropriate teacher-led classrooms did exist. Because the preponderance of teachers of very young children was not highly trained, it stands to reason that they often "borrowed" the sitting-still-at-tables approach from the only experience they had-- their own early days of elementary school.

Key Terms

The following terms are defined as used in this thesis:

Early childhood: The period of life between birth and 8 years of age (NAEYC, 1993). Early Childhood Education includes any part- or full-day group program in a center, school, or home that serves children from birth through age eight, including children with special developmental and learning needs (NAEYC, 1993).

B-5: The period of life between birth and five years of age.

Teacher efficacy: The belief about one's own capabilities to bring about desired outcomes of student learning and engagement (Tschannen-Moran & Woolfolk Hoy, 2001).

DAP: Developmentally Appropriate Practice is the framework defined by NAEYC that outlines practices used by early childhood professionals to promote optimal learning and development for young children (Copple & Bredekamp, 2009).

Teacher Sense of Efficacy Scale (TSES): A measure designed to help identify obstacles teachers face in conducting activities within their classroom and school (Tschannen-Moran & Woolfolk Hoy, 2001).

Learner-centered: The perspective that couples a focus on individual learners with a focus on leaning using the best available knowledge about learning and how it occurs and about teaching practices that are most effective in promoting the highest levels of motivation, learning, and achievement for all learners (McCombs, 2000).

Teacher Belief Q-Sort: A measure of teachers' priorities in relation to disciplinary and classroom management practices, teaching practices, and beliefs about children (Rimm-Kaufman, Storm, Sawyer, Pianta, & LaParo, 2006).

Statement of the Problem

In a classroom with a teacher using the learner-centered approach, the teacher encourages the students to participate in the experiences and activities, share in the responsibility of their learning, and spend time reflecting and problem solving about the relevance to their individual learning (Tschannen-Moran & Woolfolk Hoy, 2001; Brown, 2003; Dunn & Rakes, 2010). Learner-centered teaching practices are influenced by teacher efficacy and teacher learner-centeredness (McCombs, 2002). Similarly, Dunn (2007) found that teachers who reported stronger efficacy beliefs had a greater tendency to move toward learner-centered practices and beliefs. McMullens (1997) also concluded that one's own beliefs about DAP are strengthened by more education and experience. Learner-centered principles apply to all learners, not just

students who are of school age, "but to all learners, cradle to grave" (McCombs, 2002. p. 3). McCombs' (1997) work with the American Psychological Association's (APA) learner-centered principles proved valid for *all* learners. Researchers, teachers, and other education practitioners have validated the learner-centered principles from their own experiences and practices (McCombs, 2002; McMullen, 1999).

Regardless of the terms used—learner centeredness or developmentally appropriate practice-- efficacy is an important component of the practice (Bredecamp, 1987; Brown, 2003; Gebbie, Ceglowski, Taylor, & Miels, 2012; Gestwicki, 2007; McCombs, 2002; McMullen, 1997; & Smith, 2003). Teachers who believe in their training have better results (Cheung, 2008; Dunn, 2007; McCombs, 2002; McMullen, 1997) and positive teaching practices with lower stress levels (Gebbie et al., 2012). In addition to the important connection to student success, teacher efficacy and learner centeredness or beliefs about DAP are trainable characteristics (McCombs, 2002; Brown, 2003; Dunn, 2007). Thus they may be addressed through targeted professional development (Dunn, 2007). By understanding the relationship of these important characteristics in teachers who work with very young children, it may be possible to better prepare early childhood teachers to provide a solid foundation for future success in both developmental and educational paths for their students. However, there is very little information that compares beliefs about DAP and teacher efficacy of professionals teaching very young children.

Purpose of the Study

In Arkansas, disparity in training for early childhood professionals in programs serving children birth to 5 years of age is evident. Until 2003, early care and education programs did not have requirements beyond a high school education or a GED to teach very young children (Arkansas Department of Human Services Division of Child Care and Early Childhood

Education Child Care Licensing Unit, 2011). Prior to state allocated funding, education requirements for direct care workers of young children were solely governed by the state Childcare Licensing Unit, a department of the Division of Childcare and Early Childhood Education. In 2007, the state of Arkansas earmarked more money for preschool programs for children age three to five years whose families met qualifying income-level criteria. Teacher requirements were also mandated for programs receiving state monies. A teacher hired to teach in a public school program for four-year-olds was required to have a bachelor's degree in education and a valid P-4 teacher license in the state of Arkansas. This new mandate applied to teachers who are employed by preschool programs run by public school districts that receive state funding. Private sector early care and education programs and family child care homes funded by the Arkansas Better Chance Programs (ABC) must meet educational requirements of a bachelor's degree in child development or early childhood education (Arkansas Department of Human Services Division of Child Care and Early Childhood Education Child Care Licensing Unit, 2007).

Despite these policy mandates, there is no guarantee that the children in ABC programs requiring the P-4 license are being taught by teachers best prepared to teach the under-age-five population. Therefore, the research questions that explore teacher efficacy of both teachers at the pre-Kindergarten level and those at the primary level are relevant to understanding possible similarities and differences between teachers of both groups. There is no guaranteed connection between the conferring of a formal educational degree and the qualities of teacher efficacy and learner-centered approaches inherent to developmentally appropriate practices as required for optimal learning in the B-5 early childhood classroom (Brown, 2003; Gestwicki, 2007; McCombs, 2002). Research has underemphasized the value of teacher training programs and the

influence that the foundational learning has on a teachers' confidence in becoming an effective teacher (Van Schagen, Johnson, LaParo, & Crosby, 2016).

The purpose of this study was to explore the effects of several variables on the development of efficacy of B-5 early childhood educators who work with children birth to five years of age. These variables have been found to affect the training of teachers in K-12 and college classrooms but have not heretofore been explored with teachers working with very young children (McCombs, 1997, 2000, 2002; McMullen, 1997; Smith, 1993). The current study aims to extend the existing research downward, showing teacher efficacy and teacher-learner centered beliefs are trainable characteristics and affect teacher training into a B-5 early childhood education population. This study is important because a teacher's sense of efficacy can be a predictor of individual beliefs concerning DAP or learner-centered beliefs as well as classroom practices or action (Cheung, 2008; Dunn & Rakes, 2010; McCombs, 1997; McMullen, 1997, 1999). The purpose of determining links in trainability of characteristics of beliefs about DAP and teacher efficacy is to guide the effectiveness of future professional development training programs for teachers who will impact more child initiated, developmentally appropriate environments for teaching young children.

Research Questions

The specific questions to be answered by this study were:

1. Is there a significant relationship between total teacher efficacy of B-5 professionals as measured by the TSES and learner-centeredness with regard to:
    - Discipline practices as measured by scale one of the Teacher Belief Q-sort?

- Classroom practices as measured by scale two of the Teacher Belief Q-sort?
- Beliefs about children as measured by scale three of the Teacher Belief Q-sort?

2. Among professionals working with children in B-5 programs and holding a bachelor's degree or higher in early childhood education in the state of Arkansas, do teacher efficacy scores, as measured by the TSES, differ from those who have not obtained at least a bachelor's degree?
3. Among professionals working in B-5 programs whose highest degree (bachelor's or higher) was in early childhood education or child development, does one degree major produce scores higher in teacher efficacy than the other degree major as measured by the TSES?

Chapter 2

Review of the Literature

The teaching profession and the field of education are evolving and ever-changing. There has been much debate concerning best teaching practices and best learning modalities throughout the history of education (Dewey, 1916; McMullen, 1997, 1999). However, despite the quest for understanding of the approaches, there appears to be an implicit belief that teachers may lack the ability to articulate about, may not be alert to, or may feel uncomfortable discussing their beliefs (Pajares, 1992). McMullen (1997) stated that it is through the evolution and defense of a set of beliefs, supported or refuted by evidence, that a set of beliefs shift from implicit to explicit. Teacher beliefs, according to Pajares (1992), are the precipitating factors that influence classroom practices and decisions of teachers. McMullen's (1997) findings were consistent with those of Pajares but go further to show that education and professional development can influence teacher beliefs about DAP. Challenging the inappropriate beliefs of teachers, teaching them the skills necessary to assess their own beliefs, and guiding them in a purposeful way to successfully articulate and validate their philosophies may be the very tools that teacher educators have to bring about and perpetuate change (McMullen, 1997, 1999). Many researchers (McMullen, 1997, 1999; Pajares, 1992; Smith, 1993) continue to seek answers to these difficult foundational questions.

A shift in teaching needs to occur in the Birth to 5 environment to a learner-centered classroom approach where teachers and children learn together which is more closely in line with DAP. McMullen (1999) argues that DAP is the "politically correct" philosophy approach most widely supported and accepted by professionals in the field. Research (Pajares, 1992) indicates that educators reported belief in highly appropriate practice but have been found to demonstrate

significantly lower levels of appropriateness in classroom practices. This dichotomy has focused attention on the need to modify how teachers learn to teach (McMullen, 1999). Teacher education programs have improved the way in which they instruct and model teaching strategies and behaviors (McMullen, 1997, 1999; Pajares, 1992; Smith, 1993). Pajores (1992) stated that in-service and student teaching experience have been the focal point of research on beliefs because teaching practices and student outcomes are not typically apparent during the teacher education phase. Thus, it is difficult to measure teacher efficacy, which is so fragile at the beginning of the teaching experience. Beliefs concerning one's own capabilities to positively affect student outcomes are in formation at this stage of development. These very beliefs affect teacher behaviors and practices carried out in the classroom (Tschannen- Moran, & Woolfolk Hoy, 2001; McMullen, 1997, 1999; Smith, 1993).

The National Association for the Education of Young Children (NAEYC) in 1986, 1996, and 2009 published position papers recommending a developmentally-based approach to early childhood education (Bredecamp, 1987; NAEYC, 1996, 2009). The premise behind this approach was to determine the developmental ability of a child at a specific age and stage of life and support learning at their individual level through offering materials and experiences that support continued construction of new knowledge (Bredecamp, 1987; Gestwicki, 2007). NAEYC raised concern about the push for academic intentions for preschool, kindergarten, and the primary school grades. Their contention was that inappropriate teaching practices were the common practice used in the teaching of young children. They argued against whole group direct-instruction rather than a focus on play as a means for learning. The position papers clearly negated the effectiveness of predominantly teacher –directed and highly structured usage of abstract materials such as worksheets to transfer knowledge rather than a child-initiated approach

in which children made choices of materials and activities (Bredecamp, 1987; NAEYC 1996, 2009).

Developmentally appropriate practices are based on the constructivist theory of learning in which children are the constructs of their own knowledge through interacting with the materials and the environment around them and based on their own interests and ideas (Chaille`, 2008). Constructivism is the premise behind the selections and the choices made by a teacher and how they set up the classroom learning environment, decide on a curriculum, and embrace the ideas and works of the children. DAP is very child-centered in that it focuses the teachers' decision making processes on what is known about child development and research based theories (Gestwicki, 2007) about how young children learn and the ages and stages of development as well as providing children with a space and enough time to put into practice their ideas (Chaille`, 2008). DAP focuses on the child as the learner or creator of new knowledge (Chaille`, 2008), just as term *learner-centered* focuses on the notion that students lead learning (Emes & Cleveland-Innes, 2003). Both child-initiated and learner-centered terms are, although not defined in Dewey's work, in line with his concept of learning through experience (Delaney, 1999; Emes & Cleveland-Innes, 2003).

Smith (1993) utilized this position statement in the creation of a Primary Teacher Questionnaire to assess teacher beliefs and values held by primary teachers and the degree to which they matched the NAEYC's guiding principles of child-centeredness. His findings support the use of developmentally appropriate practices by both early childhood and elementary school teachers, showing both groups endorsing DAP and relating these indicators to their classroom behavior. As teaching expectations and teacher practices continue to change with time, teachers in primary elementary grades struggle with the ability to manage conflicting

expectations that come from administrators, supervisors, and peers in regard to their classroom behavior as a response to tensions related to "child-centered versus teacher-centered beliefs and practices" (Smith, 1993. p. 27). Similarly, among professionals teaching very young children, teachers reported inconsistency in their ability to carry out beliefs about DAP in their daily classroom practices due to perceptions or feelings of lack of support from administrators, colleagues, and parents (McMullen, 1999). The 2009 NAEYC Position Statement on developmentally appropriate practice states, "…in some states and districts, teachers in publicly funded early childhood settings report that they are allowed far less scope in classroom decision making than they were in the past, in some cases getting little to no say in the selection of curriculum and assessments or even in their use of classroom time" (p. 5). Research done with primary grade preservice and in-service teachers indicated that a teacher's learner-centeredness and efficacy are related teacher characteristics (Dunn, 2008). Learner-centeredness, according to McCombs (2000), "is the perspective that couples a focus on individual learners -- their heredity, experiences, perspectives, backgrounds, talents, interests, capacities, and needs -- with a focus on leaning the best available knowledge about learning and how it occurs and about teaching practices that are most effective in promoting the highest levels of motivation, learning, and achievement for all learners" (p. 1). Teacher efficacy reflects a teacher's confidence in his or her ability to successfully bring about positive student outcomes (Tschannen-Moran & Woolfolk Hoy, 2001; Brown 2003). Student outcomes, such as motivation, educational achievement, and student efficacy, are related to teacher efficacy (Tschannen-Moran & Woolfolk-Hoy, 2001) and teacher learner-centeredness (McCombs, 2002).

McMullen's (1997) research put related concepts in slightly different terms using literature from the preschool level and below. She studied teacher beliefs about developmentally

appropriate practices (DAP) and discussed the difficulty in changing one's beliefs. McMullen noted that teacher beliefs are very rooted beliefs that serve as a sifting mechanism for knowledge; however, knowledge can also guide beliefs. Knowledge about DAP for teaching young children can influence one's prior assumptions or beliefs about teaching. Beliefs about DAP and teacher efficacy have been shown to hold a significant relationship (McMullen, 1997). Teachers with low educational efficacy and weak DAP beliefs are more likely to believe that student learning and success are neither within their control nor due to their influence or the influence of their pedagogy. Teachers with high educational efficacy and who occupy higher DAP beliefs exhibit more confidence in themselves than teachers with lower DAP beliefs and are adept at handling the challenges involved in the ongoing modification that come with an emergent curriculum and characteristics of a learner centered or developmentally appropriate environment (McMullen, 1997). Teacher efficacy and learner-centeredness as trainable characteristics with teachers of the B-5 age group of early childhood professional have not been determined due to a lack of research on this topic with pre-service or in-service B-5 teachers.

McCombs' (2002) research indicated that teacher learner-centeredness and teacher efficacy played an influential role in learner-centered teaching practices. Dunn's (2007) findings were consistent with those of McCombs' (2002) findings that teachers who reported stronger efficacy beliefs had a greater tendency to move toward learner-centered practices and beliefs. McMullens (1997), discussed two types of efficacy which can influence a teacher's beliefs about DAP and implementation of DAP in the classroom. She described educational efficacy as "a teacher's beliefs about their own ability to affect student performance based upon their assumptions about the general relationship between teaching and learning" (p. 58). The other

type of efficacy is personal teaching efficacy that McMullen (1997) stated is "a teacher's general sense of his/her own effectiveness in having an impact on students achievement" (p. 59).

Another connection between teacher efficacy and learner-centeredness is that both are malleable characteristics (McCombs, 2002; Dunn, 2007). Thus, they may be addressed through targeted professional development. By understanding the relationship between these important characteristics in teachers who work with very young children, it may be possible to better prepare teachers planning to teach children birth to kindergarten to provide a solid foundation for future success in both developmental and educational paths of their students.

To summarize, the purpose of this study was to explore teacher efficacy through the lens of various options of training for birth through five teachers. Thus, this research extends research literature by studying this unique population. This study was important because a teacher's sense of efficacy can be a predictor for individual beliefs of learner-centeredness or developmentally appropriate practices as well as learner-centered action (McMullen, 1999; Dunn & Rakes, 2010). Similar studies have been conducted with populations of teachers who teach older age children (McMullen, 1997; Smith, 1993; Cheng, 2008). Thus the existing literature in the field is focused on traditional kindergarten-12 grade in-service and preservice teachers (Witcher et al., 2002). Classrooms serving any of the age groups between birth and 5 years are different in many aspects. The needs of the children in this age group look very different than the needs of children in traditional elementary education environments. The purpose of determining links in trainability of characteristics of teacher-learner centeredness or developmentally appropriate practices and teacher efficacy is to guide the effectiveness of future professional development training programs for teachers who are caring for and teaching our very young children from birth to five years of age. Teacher education and the specialized training the teacher receives in

child development or early childhood education directly relates to the knowledge that is held about developmentally appropriate practice (Snider & Fu, 1990). Thus, further research in teacher efficacy and teacher learner centeredness with teachers of the B-5 years can be molded to specifically support better outcomes for children.

Theoretical Framework

Rooted in the theories of both Jean Piaget and Lev Vygotsky, the theory of constructivism takes the very essence of children's learning and postulates that children "construct their own knowledge through interactions between their own ideas and experiences in the social and physical world" (Chaille`, 2008, p. 5). The construction of new knowledge comes when children interact with and explore their environment while using their ideas. Children's drive to make sense of the world around them and expand their ideas and learning from the constructivist stance is intrinsically motivated (Chaille`, 2008). Thus, extrinsic motivations such as rewards and other reinforcements, or direct instruction as the means for teaching and transferring knowledge, is not, from the constructivist approach, how children learn (Chaille`, 2008).

The overarching guiding theory for this research was Social Learning Theory (Bandura, 1978). In addition, the American Psychological Association's (APA) 14 learner-centered principles were the guide to learner-centered practices as a research-validated framework to support both effective teaching and research.

Social Learning Theory

It is in social learning theory that causal processes are defined in terms of reciprocal determinism, meaning cognition, behavior, and the environment are mutually interactional with one another (Bandura, 1978). Bandura integrated a self-system composed of cognitive structures

and cognitive subfunctions for perception, evaluation, and regulation of behavior (Dunn, 2008; Pajares, 1992). It is this self-system that is the foundation for the current study. The teacher's beliefs are carried out in the classroom environment through his or her implementation and behavior (Tschannen- Moran & Woolfolk Hoy, 2001; McMullen, 1997, 1999; Smith, 1993).

It is Bandura's (1986, 1997) social learning theory that is relevant to the current study because the theory posits that future actions are influenced by both affective and cognitive factors. Because change from a teacher-directed to child-initiated approach to teaching relies heavily on the change agency of a teacher, understanding the variables that bring about this change is crucial. It is the premise of the current research that two such variables are teacher efficacy and beliefs about learner-centered actions. The shaping of beliefs about learner centered teaching is a continuous and ongoing process beginning when a teacher enters an educational program and does not end until the retirement from teaching (Dunn, 2008). Because the foremost antecedent to action is one's beliefs, understanding teachers' beliefs is the key to offering teacher educators one more tool to promote change (Bandura, 1986, 1993, 1997; Pajares, 1992).

The purpose of determining links in trainability of characteristics of teacher-learner centeredness or developmentally appropriate practices and teacher efficacy is to guide the effectiveness of future professional development training programs for teachers who are caring for and teaching our very young children. Teacher education and the specialized training the teacher receives in child development or early childhood education directly relates to the knowledge that is held about developmentally appropriate practice (Snider & Fu, 1990).

Teacher Beliefs & Learner-Centered Education

Developmentally appropriate practice focuses on the child as the learner or creator of new knowledge (Chaille`, 2008), just as term *learner-centered* focuses on the notion that students lead learning (Emes & Cleveland-Innes, 2003). Both child-initiated and learner-centered are terms that align with Dewey's concept of learning through experience (Delaney, 1999; Emes & Cleveland-Innes, 2003). As teaching expectations and teacher practices continue to change with time, teachers struggle with the ability to manage conflicting expectations that come from administrators, supervisors, and peers in regard to their classroom behavior as a response to tensions related to "child-centered versus teacher-centered beliefs and practices" (Smith, 1993. p. 27). Incidentally, despite the quest for understanding of the approaches, there appears to be an implicit belief that teachers may not feel confident or may in fact be uncomfortable discussing their beliefs (Pajares, 1992). McMullen (1997) stated that it is through the evolution and defense of a set of beliefs, supported or refuted by evidence, that a set of beliefs shift from implicit to explicit. Teacher beliefs, according to Pajares (1992), are the precipitating factors that influence classroom practices and decisions of teachers. McMullen's (1997) findings were consistent with those of Pajares but go further to show that education and professional development can influence teacher beliefs about DAP. Challenging the inappropriate beliefs of teachers, teaching them the skills necessary to assess their own beliefs, and guiding them in a purposeful way to successfully articulate and validate their philosophies may be the very tools that teacher educators have to bring about and perpetuate change (McMullen, 1997, 1999).

The American Psychological Association Task Force on Psychology in Education developed a set of 14 learner-centered principles based on generations of literature. This set of

evidence-based principles was intended to serve as a guide for educational reform and practice (APA, 1997). The principles ultimately provide a framework for educational reform for schools and classrooms to shift from traditional teacher-directed classrooms into learner-centered environments (Weinberger & McCombs, 2003). The framework of learner-centered principles is divided into four domains of psychological research relevant to reform: cognitive and metacognitive factors, motivational and affective factors, developmental and social factors, and individual differences (APA, 1997).

The cognitive and metacognitive domain encompass the first six principles: nature of the learning process, goals of the learning process, construction of knowledge, strategic thinking, thinking about thinking, and context of learning (APA, 1997). These six principles detail how learners think and remember. They also explain the mind's process of integrating new experiences with old understandings to create meaning and views of the world (Lambert & McCombs, 1998).

The second domain of the learner-centered principles is motivational and affective influences on learning. This domain contains principles seven, eight, and nine: motivational and emotional influences on learning, intrinsic motivation to learn, and the effects of motivation and learning. Intrinsic motivation is a concept that has emerged from motivation research. It is defined by Ryan and Deci (2000) as the performance of a task for innate satisfaction rather than some external consequence. Factors that contribute to an increase of intrinsic motivation range from attribution theory (when one attributes educational results to factors that he or she can control) (Weiner, 2000), self efficacy (when one believes he or she is capable of attaining a desired goal) (Bandura, 1993, 1977), and goal orientation (when one strives to achieve mastery of a topic rather than earning a grade for recognition) (Dweck, 1986).

The third domain of the learner-centered principles addresses developmental and social factors (APA, 1997; Lambert & McCombs, 1998). Principles ten and eleven are covered in this domain: developmental influences on learning and social influences on learning. Bandura's (1986) reciprocal determinism theory, stresses the importance of environmental influences, such as culture, on learning. These two principles serve as reminders to teachers to be mindful of students' developmental abilities and limitations.

Principles 12, 13, and 14 fall within the fourth domain of learner-centered principles, individual differences (APA, 1997). The three principles of individual differences in learning, learning and diversity, and standards and assessment all relate to the various differences in learning (APA, 1997; Lambert & McCombs, 1998).

This shift to learner-centered beliefs aligns with NAEYC's position statement about developmentally appropriate practices in which the child is the learner or creator of new knowledge (Chaille`, 2008), just as term *learner-centered* focuses on the notion that students lead learning (Emes & Cleveland-Innes, 2003).

Criticism of Learner-Centered Education

For years there has been debate as to the degree of guidance and instructional support needed for optimal student outcomes (Klahr & Nigam, 2004). Misconceptions or confusion related to material is a criticism of learner-centered education. According to Klahr and Nigam (2004), student motivation and increased academic achievement are refutable claims of learner-centered education. While advocates of learner-centered reform argue that learners construct and/or discover their own understandings of materials and are guided by teachers who carefully design instructional support (McCombs, 1997), some research suggests that direct, teacher-

centered instruction is more effective than learner-centered instructional methods (Moreno, 2004).

Another argument presented in a study of third and fourth grade girls (Klahr & Nigam, 2004) is that science learners had a better capacity for transferring what they learned to new contexts when direct instruction by a teacher-centered model was used as compared to a minimally guided method of instruction. Learner-centered reform advocates would agree with this argument in that minimally guided instruction is not an effective educational model, but they would further argue that learner-centered instruction is not minimally guided instruction (Mayer, 2004).

Teacher Efficacy

Teachers must consider their own beliefs and how those beliefs about learner-centered or developmentally appropriate practices are connected to teacher efficacy. For the purpose of this study, teacher efficacy refers to the beliefs that one holds about his or her own capabilities to bring about desired outcomes of student learning and engagement (Tschannen-Moran & Hoy, 2001). Bandura's (1977) cognitive theory has served as the contextual source for teacher efficacy research, in particular, the self-efficacy construct (Tschannen-Moran & Hoy, 2001). Theorists contend that an individual's perceived self-efficacy is a future-oriented belief that one possesses the necessary skills and abilities to produce a successful outcome or to achieve a desired level of attainment (Bandura, 1997, 1993, 1986, 1977; Tschannen-Moran & Woolfolk Hoy, 2001). Bandura also asserted that self-efficacy is task-specific and that effort is motivated by efficacy (1986, 1997, 1993). Thus, an individual's engagement and perseverance in a given task is motivated by a higher sense of efficacy (Dunn, 2007).

Teacher efficacy has been shown to have a direct effect on teacher behavior and motivation (Fives, 2003). Furthermore, it is efficacy that leads a teacher from knowledge to action. Teachers may be more likely to implement learner-centered practices in the classroom when they have a positive self-efficacy (Dunn, 2007). Also, teacher educators may better prepare teachers to use learner-centered practices by building teachers' confidence (Dunn, 2007). Epstein and Willhite (2015) concluded that specific types of learning environments (professional development schools) for teacher training support stronger efficacy for teachers in the areas of classroom management and instruction. Van Schagen Johnson et al., (2016), found similar results in a study conducted with students early practicum experiences of students in a birth to kindergarten education program. Results found a strong correlation between teacher efficacy and the satisfaction the student felt of their practicum experience (Van Schagen Johnson et al., 2016). Because self-efficacy influences behavioral choices, it is encouraging to note the number of ways that self-efficacy can be enhanced (Bandura, 1993). Efficacy training using modeling is a highly effective way to create change in teacher behavior (Dunn, 2007). According to Gist (1989), higher self-efficacy resulted when teacher supported modeling with practice was used versus the use of lecture and practice alone. Bandura (1997) went further to say learner-efficacy increases with both peer and teacher modeling; however, peer modeling is more effective because students/teachers relate to examples that are most similar to them.

Teacher Education

In essence, what teachers belief and how teachers implement developmentally appropriate or learner-centered practices into their classroom, is tied to their training and education experiences. Teacher education programs that train birth through kindergarten teachers are relatively young. Teacher education programs specialized for birth to kindergarten

licensure has recently been added in to some college and university degree programs. The dynamics of the classrooms teaching these very young children have continued to shift over time to include an ever-changing diverse group of students. Teacher stress levels and burnout are higher in classrooms where they encounter challenging behaviors of children (Gebbie et al., 2012). Teachers who were stressed due to these challenging behaviors were observed spending as much or more than 20% of their time engaged in negative interactions versus 5% in positive engaging interactions. Incidentally, that translates into a continuous cycle of challenging behaviors. Thus teachers could benefit from specialized training and education to prepare them with strategies to support these children in the classroom (Gebbie et al., 2012). Early education programs have not developed a uniform set of requirements for education and training of teachers who work in classroom serving children B-5. NAEYC has been the guiding force behind teacher requirements (Sinder & Fu, 1990) education, practical experience, and training for teachers teaching the birth to 5 age groups. Studies have repeatedly supported (McMullen, Alat, & Lash, 2003) the need for specialized education training (Van Schagen Johnson et al., 2016) for teachers working with very young children, but still there is not consistent educational requirements implemented for teachers who work in the early care classrooms across states. Teachers may have a high school diploma or equivalent (GED), a child development associate credential (CDA), an associates degree, or higher to work with young children in the majority of early care settings (McMullen et al., 2003). Furthermore, McMullen et al. (2003) study finds that specialized training and experience are valuable; however, teachers with a four year degree or higher demonstrate stronger DAP beliefs even if their degree is in a nonrelated field. Therefore, the goal may be to get teachers trained either through specialized targeted training or

teacher education programs geared toward educating and preparing teachers for teaching children in the birth to 5 classroom.

Teacher beliefs about learner-centeredness or developmentally appropriate practices and how children learn or create new knowledge, teacher efficacy, and teacher education all influence the implementation of teaching in the classroom. The relationship between these variables is the aim of the current study. The purpose then, of determining links in trainability of characteristics of beliefs about DAP and teacher efficacy, is to guide the effectiveness of future professional development training programs for teachers who will impact more child initiated, developmentally appropriate environments for teaching young children.

Hypothesis 1

The current study hypothesized that a significant positive relationship will exist between teacher efficacy and learner-centeredness with regard to beliefs about discipline & classroom management, with regard to beliefs about teaching practices, and also to beliefs about children.

Hypothesis 2

Secondly, it is hypothesized a significant positive effect will exist between teacher efficacy and level of education specifically between those professionals whose highest degree is early childhood education over those professionals who have not yet obtained a bachelor's degree in this sample of birth to kindergarten teachers.

Hypothesis 3

Finally, it is hypothesized that a significant difference will exist between teacher efficacy and degree major specifically among professionals with a child development having higher TSES scores over professionals with a P-4 early childhood education degree in this sample of birth to kindergarten teachers.

Chapter 3

Methodology

This study was approved by the institutional review board protocol # 12-12-315 and is in compliance with all guidelines for research with human subjects. See appendix F. This section presents the research questions and the methodology utilized to answer the three research questions of this study.

Research Questions

1. Is there a significant relationship between total teacher efficacy of B-5 professionals as measured by the TSES and learner-centeredness with regard to:
    - Discipline practices & classroom management as measured by scale one of the Teacher Belief Q-sort?
    - Teaching practices as measured by scale two of the Teacher Belief Q-sort?
    - Beliefs about children as measured by scale three of the Teacher Belief Q-sort?
2. Among professionals working with children in B-5 programs and holding a bachelors degree or higher in early childhood education in the state of Arkansas, do teacher efficacy scores, as measured by the TSES, differ from those who have not obtained at least a bachelors degree?
3. Among professionals working in B-5 programs whose highest degree (bachelor's or higher) was in early childhood education or child development, does one degree major produce scores higher in teacher efficacy than the other degree major as measured by the TSES?

Study Design

This was a cross sectional study using responses from teachers who teach children birth through five years old. Although early childhood educators work with children birth to eight years of age (NAEYC), this study was confined to teachers in the birth through kindergarten age range to remain consistent with age range covered by the Arkansas Integrated Birth through Kindergarten Teaching License. The study instruments were two surveys, the Teachers' Sense of Efficacy Scale short form (Tschannen-Moran & Woolfolk Hoy, 2001), and the Teacher Belief Q-Sort (Rimm-Kaufman et al., 2006). The participants, instrumentation, procedures, and data analysis are discussed below.

Participants

The sample for this study was a convenience sample of 175 professionals working with children birth to five years (B-5) of age selected from the population of B-5 professionals in Arkansas. The researcher contacted coordinators and directors of programs serving children from birth through age five who were available through an email list provided by Arkansas State University Childhood Services (ASUCS). ASU Childhood Services provides training and technical support to B-5 programs across the state of Arkansas. ASUCS also works closely with the Arkansas Division of Childcare and Early Childhood Education to support the Arkansas Better Chance (ABC) programs which voluntarily participate in Better Beginnings rating system. Due to the close work ASUCS does with the many programs statewide, they maintain all of the programs' data, including contact information for program administration. Using a snowball sampling technique, the researcher asked the administrators to forward the invitation to participate to those teachers who taught in B-5 classrooms in their facilities. These teachers were asked to respond to two surveys and to pass the survey on to other B-5 teachers. They were

notified through the initial email that participation was voluntary and anonymous. As a result of these initial contacts, 219 teachers responded to the surveys, and 175 completed responses. Of the completed respondents, 2.9% were male and 97.1% were female. The ethnic composition of the participants was 95.4% not Hispanic, Latino, or Spanish and 4.6% were of Hispanic, Latino, or Spanish decent. The racial composition of the sample reflected 89.7% Caucasian, 4.0% Black or African American, 2.9% American Indian or Alaska Native, .6% Native Hawaiian or Other Pacific Islander, .6% Multiple Races, and 2.6% Other. The participants were employed in childcare programs categorized as: 1.2% Registered Child Care Family Home, 6.9% Licensed Child Care Family Home, and 91.9% Licensed Child Care Center. Of those, 37.1% work in programs receiving state Arkansas Better Chance funding, while 62.9% do not receive ABC revenue. The teachers who responded to the survey live and work in various size communities: 10.9% work in a towns of 0-2,500 people, 21.1% work in towns with a population of 2,500-10,000, 28.6% work in towns of 10,000-50,000 patrons, and 39.4% of the participants work in a city with a population of 50,000 or more people.

Instrumentation

In order to answer the research questions, two surveys were used; the Teacher Belief Q-Sort and the Teacher Sense of Efficacy Scale (Appendix A and Appendix D respectively).

Teacher Belief Q-Sort.

The Teacher Belief Q-Sort survey assessed learner-centeredness and consisted of three scales. The first scale, Q-Sort 1, measured teachers' priorities about discipline and classroom management. Q-Sort 2, the second scale, assessed priorities about teachers' teaching practices. Lastly, scale three, Q-sort 3, examined teachers' beliefs about children. In the original validation study of the Teacher Belief Q-Sort, the three scales were deemed reliable and valid (Rimm-

Kaufman et al., 2006). The Spearman correlations for the three scales ranged from 0.50 to 0.95 (M = 0.71, SD = 0.11). These correlations were deemed acceptable based on Davis' (1971) standards in which a Spearman correlation of 0.70 - 0.99 was considered very high, and a correlation of 0.50 - 0.69 was considered substantial. Subsequent research has also found this measure to be valid and reliable for teachers (McMullen, 1999; Witcher et al., 2002).

Rimm-Kaufman et al. (2006) explored the validity of the Q-Sort. Content validity for the Q-Sort was established using six content experts not involved in the development of the measure. The content experts were asked to rate the degree to which they agreed that each factor measured the target constructs. The average response for each scale ranged from 4 to 5. The authors considered this a strong indicator of content validity. In addition to content validity, the developers of the Q-Sort recruited an additional ten teachers and asked them to respond to a brief questionnaire requesting a description of their teaching practices and priorities. The teachers were then asked to assess how strongly their practices and priorities matched the three Q-Sort factors. All ten teachers reported a good-to-excellent match between the two.

Teacher Sense of Efficacy Scale.

The Teacher Sense of Efficacy Scale (TSES) assessed teacher efficacy. The TSES consists of three scales: efficacy for student engagement, efficacy for instructional strategies, and efficacy for classroom management. However, for the purposes of this study, only the total score that assessed overall teacher efficacy was used. In the original validation study of the TSES, the measure was deemed valid and reliable based upon a Cronbach's alpha of 0.94 (M = 7.1, SD = 0.94). This exceeded Nunally's (1978) standard of 0.70 for acceptable reliability (Tschannen-Moran & Hoy, 2001). Subsequent research has also found this scale to be valid and reliable for teachers (Cheung, 2008; McMullen et al., 2003).

Teacher information items were included to identify respondents' qualifications and experience working with young children. Teachers were asked to provide information regarding their highest level of education/academic degree completed. The list was as follows: GED, High School Diploma, Associates Degree, Bachelor Degree, Master Degree, Ph.D. They then were asked to identify the specialized degree obtained from the following: Lifespan Development, Child Development or equivalent, P-4 Elementary Education or equivalent, Psychology, Social Work, Sociology, or Other. Teachers were asked to best describe the age group that they work with from: Infant/Toddler (6 weeks-2 ½ years old), Preschool (2 ½-5 years old), School age (6 - 12 years old). Lastly, teachers were asked to identify the appropriate time frame in which they have worked with young children from the following options: Less than 1 year, 1-5 years, 6-10 years, 11-15 years, 16-20 years, 21-30 years, over 30 years.

Procedures

Authors of the Teacher Belief Q-Sort and the Teacher Sense of Efficacy Scale were contacted via email and consent was granted in writing for the both the Teacher Belief Q-Sort and the Teachers Sense of Efficacy Scale (See Appendix A and Appendix D). Additionally, both instruments are available on line with permission granted through their governing lab.

The researcher contacted 297 program administrators and coordinators by an email and asked them to share two written surveys with teachers and early childhood professionals in their programs. Of the 219 professionals who received surveys, 175 surveys and demographic questionnaires were completed online and submitted to Qualtrex through the University of Arkansas for a response rate of 79.9%. Participants were informed that participation was anonymous and voluntary. Data were loaded onto an Excel spreadsheet. No identifying

information was devisable from this file. After data were entered onto to an Excel file, it was subsequently analyzed using the Statistical Package for the Social Sciences (SPSS) version 17.0.

Analytic Strategy

Survey data, collected from Likert scales, is interval in nature and downloaded to an Excel file. To answer research question 1concerning the relationship between teacher efficacy and learner-centeredness Hypothesis One was formed: A significant positive relationship will exist between teacher efficacy and learner-centeredness with regard to beliefs about discipline & classroom management, with regard to beliefs about teaching practices, and also to beliefs about children. The Excel file was opened in the Statistical Package for the Social Sciences (SPSS) software. SPSS was then used to run Pearson's correlations. The group's responses to the Q-Sort and the TSES were aggregated and summed. (see Figure 1)

To answer research question 2, Hypothesis Two was formed: A significant positive correlation will exist between teacher efficacy and level of education specifically between those professionals whose highest degree is early childhood education over those professionals who have not yet obtained a bachelor's degree in this sample of birth to kindergarten teachers. An ANOVA was run to determine whether there was a significant effect between the means of the dichotomous variables. (see Figure 1)

With regard to research question 3, Hypothesis Three was formed: Early childhood professionals in this sample with a Bachelor's degree in child development will have a higher efficacy score as measured by the TSES than those with a B-4 early childhood education degree. An independent samples t-test was run to determine whether there was a significant difference in total teacher efficacy and degree major—specifically those professionals with a degree in child development and those with a P-4 early childhood education degree.

Hypotheses	Analyses
1. A significant positive relationship will exist between teacher efficacy and learner-centeredness with regard to beliefs about discipline and classroom management, with regard to beliefs about teaching practices, and also to beliefs about children.	Pearson correlation coefficient
2. A significant positive correlation will exist between teacher efficacy and level of education specifically between those professionals whose highest degree is early childhood education over those professionals who have not yet obtained a bachelor's degree in this sample of birth to kindergarten teachers.	One way ANOVA
3. Early childhood professionals in this sample with a Bachelor's degree in child development will have a higher efficacy score as measured by the TSES than those with a B-4 early childhood education degree.	Independent Samples t-test

Figure 1 hypotheses and analyses of the current study

Chapter 4

Results

Research Question 1

Teacher beliefs about developmentally appropriate practices or learner-centered approach relate to their approach to implementation of positive interactions with children in the classroom setting. It was hypothesized that a significant positive correlation would exist between teacher efficacy and learner-centeredness with regard to beliefs about discipline and classroom management in this sample of birth to 5 (B-5) professionals. A significant positive relationship to total teacher efficacy (r (169) = .26, $p < 0.01$) was confirmed by the Pearson correlation coefficient with regard to beliefs about discipline and classroom management. This result suggests that B-5 teachers who have a higher competence in their abilities demonstrate a more positive approach to working with student behavior. This also suggests that specific targeted training to teach preservice and in-service teachers appropriate strategies in working with difficult child behavior, the more confident they may be and the more those skills will resonate to classroom practices.

Secondly, it was hypothesized that a significant positive correlation would exist between beliefs about teaching practices and total teacher efficacy. Pearson correlation coefficient showed a positive correlation (r (166)=.20, $p < 0.01$), and therefore this hypotheses was confirmed. This data implies that teachers with a stronger sense of efficacy have a higher belief in their ability to positively influence classroom practices. Teachers who believe in their training and education may be more likely to continue using those strategies that are effective in the classroom.

Finally, it was hypothesized that a significant positive correlation would exist between learner-centeredness with regard to beliefs about children and total teacher efficacy. The Pearson correlation coefficient (r (168) = .35, $p < 0.01$) shows a significant positive relationship and thus confirms the hypotheses. This data suggests that the higher efficacious a B-5 teacher is, the stronger the teacher's belief in the ability to enhance student outcomes. The more training and education the teacher obtains may very well be the force behind how strong their sense of efficacy is demonstrated in the classroom (McMullen et al., 2003). Teachers who believe in their education and training are more likely to implement learner-centered or developmentally appropriate practices in the classroom (McMullen, 1997).

Means and standard deviations for teachers' beliefs about discipline and classroom management practices, beliefs about teaching practices, beliefs about children, and total teachers sense of efficacy are reported in Table 1.

Table 1.
Descriptive Data for Teacher Belief Q-Sort and Teacher Sense of Efficacy Scale

Variable	N	Minimum	Maximum	Mean	Std. Deviation
Beliefs about Discipline Practices and Classroom Management	172	58	100	76.40	7.54
Beliefs about Teaching Practices	168	50	100	78.81	10.68
Beliefs about Children	169	46	100	79.62	7.05
Total Teacher Sense of Efficacy	172	58	108	90.56	10.12

The descriptive statistics for each of the measures were comparable to those previously reported in the literature (e.g., Teacher Belief Q-sort's three scales (Rimm-Kaufman et al., 2006); TSES (Tschannen-Moran & Woolfolk Hoy, 2001)). Similar to the current study, findings by

Tschennen- Moran & Woolfolk Hoy (2001) using the teacher sense of efficacy scale demonstrated results of total teacher efficacy consistent with that of pre-service teachers and in-service teachers. Although, Rimm-Kaufman et al. took a different analytical approach, the data from this study are consistent with this previous work. Rimm-Kaufman et al., also found that Teacher Belief Q-Sort is an effective instrument for measuring teacher beliefs and priorities.

Research Question 2

Teacher education and training are contributing factors relating to how well the teacher teaches in the classroom. It would stand to reason that the more education teachers obtain, the more they believe in their training and education, thus resulting in a higher level of confidence in their teaching abilities. The current study hypothesized that a significant positive relationship would exist between teacher efficacy scores and teacher education specifically relating to those professionals with a P-4 degree in early childhood education over those professionals who had not yet obtained a bachelor's degree. An analysis of variance (ANOVA) was run to determine the correlation. No significant difference was found between professionals with a P-4 early childhood education degree and those with less than a bachelor's degree ($F = .44$, $p > 0.05$). Descriptive data for highest level of education and college majors are presented in Tables 2 and 3. This lack of difference in the findings suggests that a completed P-4 bachelor's degree does not affect total teacher efficacy. This may indicate that teachers with less than a bachelor's degree value the specialized training and experience that is gained while working in B-5 classrooms.

Table 2.
Descriptive Data for Highest Level of Education and Intended College Major

Variable	Frequency	Percent
GED	3	1.70
High School Diploma	19	10.90
Associate Degree	22	12.60
Bachelor Degree	74	42.30
Masters Degree	35	20.00
PhD or EdD	1	0.60
Other	21	12.00
Total	175	100.00
Lifespan Development	2	1.10
Child Development or Equivalent	56	32.00
P-4 Elementary Education or Equivalent	54	30.90
Psychology	11	6.30
Social Work	1	0.60
Sociology	3	1.70
Other	30	17.10
Not Applicable	18	10.30
Total	175	100.00

Table 3.
Descriptive Data for Bachelor's Degree or Higher

Variable	Frequency	Percent
Lifespan Development	2	0.90
Child Development Or Equivalent	36	16.40
P-4 Elementary Education or Equivalent	59	26.90
Psychology	11	5.00
Social Work	0	0.00
Sociology	1	0.50
Other	34	15.50
Not Applicable	4	1.80
Total	147	67.10

Research Question 3

The next construct to consider beyond degree level among teaching professionals is the relationship between teacher efficacy and degree major. One might expect that degree major would support higher efficacy in the field of study the degree is specialized toward. Thus Hypothesis Three stated that early childhood professionals in this sample with a Bachelor's degree in child development will have a higher efficacy score as measured by the TSES than those with a B-4 early childhood education degree. When teacher efficacy scores of those B-5 teachers who hold degrees in child development were compared to those with degrees in early childhood education (P-4), the current study examined whether one major field of study over the other produced teachers with more confidence in their training. An independent samples t-test was conducted to determine if the mean TSES were different between professionals with a child development degree or a P-4 early childhood education degree. Among professionals working in B-5 programs whose highest degree (bachelor's or higher) was in early childhood education or child development, those holding a degree in child development produced scores higher in teacher efficacy than those holding an early childhood education degree as measured by the TSES ($t = 3.33$, $p < 0.01$). Thus, we would expect that teachers with a child development degree demonstrate a higher sense of confidence in positively affecting children in the B-5 classroom. Descriptive statistics are presented in Table 4.

Table 4
Comparison of Teacher Belief Q-Sort and Teacher Sense of Efficacy Between Child Development and Elementary Education Undergraduate Training

Variable	N	Mean	Std. Deviation	Std. Error Mean
Child Development or equivalent	33	96.91	9.05	1.58
P-4 Elementary Education or equivalent	55	90.44	8.70	1.17

All correlations reported in the study were within acceptable range based on Davis' (1971) standards in which a Spearman correlation of 0.70 - 0.99 was considered very high, and a correlation of 0.50 - 0.69 was considered substantial.

Chapter 5

Discussion

Teacher training is vital to the education profession and to the teachers working in the field educating children. Specialized teacher training programs may very well be able to shape the future of our educational system beginning in the birth to five (B-5) early years. The specialized training and education that the teacher receives can mold a teacher's sense of efficacy and beliefs about learner-centeredness or developmentally appropriate practices (DAP). However, these hypothesized predictions have not been examined extensively among teachers of children B-5. The current study aimed to focus on this gap in the literature.

The main effects observed in the current study were consistent with theory and previous research in that a significant relationship between total teacher efficacy and learner-centeredness with regard to beliefs about discipline practices and classroom management, beliefs about teaching practices, and beliefs about children directly related to children's outcomes. This support of Hypothesis One is in line with the long-established relationship between learner-centered practices and teacher efficacy and teacher learner-centeredness (McCombs, 2002). Thus student success is influenced by teacher efficacy and learner-centeredness or beliefs about DAP (McCombs, 2002; Brown, 2003; Dunn, 2007). The current study supports that a similar relationship between learner centered approaches and teacher efficacy exists for teachers of children in birth through kindergarten settings. Furthermore, it will be important to incorporate these constructs into teacher education training programs and professional development for teachers to improve quality of educational opportunities and outcomes for children B-5 years of age.

A teacher's sense of efficacy can be a predictor of individual beliefs concerning DAP or learner-centered beliefs as well as classroom practices or action (Cheung, 2008; Dunn & Rakes, 2010; McCombs, 1997; McMullen, 1997, 1999) and therefore can be trained in targeted professional development or in higher education coursework (Dunn, 2007). Teachers who believe in their training and education have better results in the classroom working with young children (Cheung, 2008; Dunn, 2007; McCombs, 2002; McMullen, 1997). Similarly, in teachers, the stronger their efficacy beliefs, the greater their tendency to move toward learner-centeredness beliefs and practices (Dunn, 2007). Therefore, very young children in B-5 classrooms where a learner-centered or DAP approach is used have potential for stronger outcomes.

As stated above, Hypothesis Two was not supported. Teacher efficacy scores of teachers holding a P-4 license through a degree in early childhood education did not significantly differ from those with less than a bachelor's degree ($F = .44$, $p > 0.05$). Teaching professionals working with children in B-5 programs and holding a bachelor's degree or higher in early childhood education in the state of Arkansas showed no significant difference in their level of efficacy in regard to their teaching beliefs as compared to those teachers who had not obtained at least a bachelor's degree. One possible reason for this finding may be that teachers with a degree in P-4 early childhood education may not be entering the B-5 classroom with enough background knowledge related to early childhood development to support teaching children ages birth through 5 years of age and therefore do not demonstrate as much confidence in their training and their abilities to affect positive student outcomes (Gebbie et al., 2012; McMullen et al., 2003; Van Schagen Johnson et al., 2016). Another possible explanation for this finding may be that those without a degree may have a skills through experience and trainings that support their level

of efficacy—or they may have a false sense of efficacy because they believe that their methods are best even when research does not support their pedagogy.

Teachers with a child development degree demonstrated a higher sense of efficacy related to their beliefs about learner-centeredness or DAP than did those trained in P-4 teacher education programs, supporting the third hypothesis. This suggests that early childhood education programs could benefit from more specialized courses in child development, diversity and the uniqueness of children B-5 as well as practicum opportunities in the birth through age 5 range as a means to increase teacher efficacy in licensed teachers. Van Schagen Johnson et al. (2016), studied the early practicum experiences of students in a birth to kindergarten education program, finding a strong correlation between teacher efficacy and the satisfaction the student felt of their practicum experience. The more the student was able to work with a mentor teacher, receive feedback, and the amount of practice working on their teaching skills in the classroom, the higher their confidence in their own abilities, thus resulting in a higher efficacy (Van Schagen Johnson et al., 2016).

Teacher efficacy and teacher beliefs about learner-centeredness or DAP are foundational in the way a teacher teaches. The current study supports the self system function of Bandura's Social Learning Theory as described earlier (Bandura, 1978, 1986, 1997). The education and training opportunities that a teacher receives supports his or her ability to take those experiences, apply his or her own ideas, and create new knowledge and beliefs about how to effectively teach in the classroom. This notion of creating new knowledge at the teacher education level aligns with both the constructivist approach and Social Learning Theory to explain how learning occurs for children and adults and thus supports the value of a learner-centered or developmentally approach practices being utilized in the classroom.

Classrooms where children are encouraged to explore the social and physical aspects of interaction gain experiences and build upon prior knowledge and ideas. In classrooms where learner-centered approaches are utilized, children are encouraged to lead and given the freedom to develop intrinsic motivation to learn (Chaille`, 2008; Emes & Cleveland-Innes, 2003). Classrooms where rewards and direct instruction are the guiding forces behind teaching do not align with constructivism (Chaille`, 2008). Teacher education and training programs that focuses on learner-centered beliefs and the shift away from direct-instruction support the pivotal changes necessary for children to achieve in B-5 classrooms. The same education and training programs for teachers who plan to teach in B-5 classrooms also impact the beliefs a teacher holds in his or her own abilities to teach children. A higher confidence in one's abilities to affect positive outcomes for children is the essence behind efficacy. Teachers with a higher sense of efficacy believe in their training and education and also their own capacity to teach and influence positive change for children in the classroom. Teacher learner-centered beliefs or developmentally appropriate practices and teacher efficacy work together to improve student outcomes for the children taught in B-5 classrooms.

Limitations

There are some notable limitations to the current study. While a substantial effort was made to contact and include a wide variety of programs, the sample in the study is still a convenience sample; thus, the results are not generalizable and caution must be used in the interpretation of the findings beyond the scope of this study. Programs vary across types (public school, private, faith based, family childcare home, head start & early head start) and the ages of children served (infants, toddlers, preschool, and prekindergarten). Programs that are state funded may have more classrooms teaching specifically preschool and prekindergarten children

between the ages of 3 and 5 years old, while family childcare homes have mixed ages, and early head start serves infants and toddlers. Due to the nature of the initial email list for the dispersal of the study survey, it is assumed that the sample consisted primarily of programs that are participating in Better Beginnings, Arkansas Better Chance, or have been given technical assistance and thus those programs reaching out of support may be over represented. Furthermore, the current study relies exclusively on self-report measures, which may reflect certain biases of the respondents.

Future Research

Future research would benefit from using a random sample of all programs across a wider geographical region. The current study did not collect child outcome data. Previous research supports the assumption that students would benefit from being in classrooms where teachers use a learner-centered approach or developmentally appropriate practices (Tschannen-Moran & Woolfolk Hoy, 2001; Brown, 2003; Dunn & Rakes, 2010); however, this conclusion was not directly tested. Future research should be expanded to examine student outcomes.

Finally, the current study relies exclusively on self-report measures, which may reflect certain biases of the respondents. Teachers' responses to the surveys represented their personal beliefs. Thus the answers may reflect that teachers may believe in and feel confident about the training and experiences they have gained -- even if what they have learned is not best practice or developmentally appropriate for the children that they teach. Specifically, teachers may be mentored by or trained by professionals who may not have the credentials to teach or train other professionals the necessary skills for appropriate and positive interactions with children who are age birth through five. Future research should incorporate both self-report measures of teacher behaviors and beliefs and direct observation of teacher practices and student outcome measures.

Conclusion

Despite the noted limitations, this study provides evidence that learner-centeredness/DAP and a B-5 teacher's sense of efficacy are related to their beliefs about discipline practices and classroom management, teaching practices, and beliefs about children. Furthermore, scores indicated that those B-5 teachers with a bachelor's degree or higher in child development demonstrated more confidence in their training and their ability to affect positive outcomes for children in their classroom. Children are the future, and the future heavily relies on the foundation of education afforded to those children. Teacher training programs and education programs globally are the groundwork for the educational system afforded to the children of tomorrow. It has been clearly established that developmentally appropriate practices for children birth to 5 years are not simply a downward extension of what is appropriate for the early elementary ages. Degree programs at the bachelor's level are being modified to include birth to kindergarten licensure as an option for students wanting to teach very young children. Future research should continue to identify the factors that promote positive outcomes for children in the birth to 5-year age range.

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APPENDICIES

APPENDIX A

Teacher Belief Q-Sort Instrument

Based on the strength of your response to this statement please select one of the following for each item.

1 = Least characteristic of my approach or beliefs about discipline and behavior management.

2 = Hardly characteristic of my approach or beliefs about discipline and behavior management.

3 = Somewhat characteristic of my approach or beliefs about discipline and behavior management.

4 = Characteristic of my approach or beliefs about discipline and behavior management.

5 = Very characteristic of my approach or beliefs about discipline and behavior management.

Item #	Statement	1	2	3	4	5
1	The primary goal in dealing with children's behavior is to establish and maintain control.					
2	A noisy classroom is okay as long as all the children are being productive.					
3	Children must be kept busy doing activities or they soon get into trouble.					
4	When children are engaged in interesting problems and challenging activities, they tend to have very few discipline problems.					
5	Proper control of a class is apparent when the students work productively while I am out of the room and another adult manages the room.					
6	Monitoring children can prevent problematic situations.					
7	Peer interactions are best left to recess and snack time.					
8	The curriculum and class schedule need to be prioritized over children's specific interests.					
9	A classroom runs smoothly when there are clear expectations for behavior.					

10	Classroom rules should be discussed and posted.					
11	Self-monitoring behaviors (or self-regulation) are important skills for children to develop.					
12	It is important to respect children's autonomy and expect them to act in a responsible manner.					
13	Children should try to solve conflicts on their own before going to the teacher.					
14	Rules for the children's classroom behavior need to be reinforced consistently.					
15	Praise from me is an effective way to change children's behavior.					
16	Children learn best in primarily teacher-directed classrooms.					
17	If I treat children with respect, kindness, and concern, there are less behavior problems.					
18	Verbal punishment is an unacceptable means of controlling children's behavior; I believe it is more important to use only positive management techniques.					
19	If I anticipate problems before they happen and discuss them with children, I have fewer discipline problems.					
20	Extrinsic rewards for desirable behaviors (e.g. stickers, candy bars, etc.) undermine children's motivation; it is better not to give such rewards at all.					

Based on the strength of your response to this statement please select one of the following for each item.

1 = Those practices that are least essential and/or characteristic of my teaching.

2 = Those practices that are less essential and/or characteristic of my teaching.

3 = Those practices that are somewhat essential and/or characteristic of my teaching.

4 = Those practices that are essential and/or characteristic of my teaching.

5 = Those practices that are most essential and/or characteristic of my teaching.

Item #	Statement	1	2	3	4	5
1	Having a morning routine.					
2	Talking about our plan or schedule for the day.					
3	Welcoming each child by name to class.					
4	Doing an activity to create a sense of community.					
5	Talking about current events.					
6	Using hand signals.					
7	Having at least a few children share something that has happened to them.					
8	Discussing a written announcement or message created by the teacher.					
9	Conducting the business of the classroom (e.g. collecting lunch or milk money) following a set routine.					
10	Reflecting and talking about something, such as a social interaction, that "worked" or "didn't work" in our class.					
11	Reflecting on the content of an academic lesson and talking about what we learned.					
12	Using drill and recitation for factual information (math facts, etc.).					
13	Modeling behaviors for children.					
14	Introducing new objects or new activities in the room through demonstration.					

15	Using work sheets.					
16	Permitting children to choose from a variety of activities.					
17	Encouraging children and giving feedback that focuses on the processes of children's creations or thinking, not the outcomes or the solution.					
18	Using whole group instruction.					
19	Using a theme-based approach to instruction.					
20	Working on group projects.					

Based on the strength of your response to this statement please select one of the following for each item.

1 = Least characteristic of my belief system.

2 = Hardly characteristic of my belief system.

3 = Somewhat characteristic of my belief system.

4 = Characteristic of my approach or beliefs about discipline and behavior management.

5 = Most characteristic of my belief system.

Item #	Statement	1	2	3	4	5
1	Almost all children in my class try their best.					
2	Many of the children in my class try to get away with doing as little work as possible.					
3	Children should feel as though they are "known" and "recognized" in the classroom.					
4	Children need to be met where they are in terms of ability.					
5	Each one of my children teaches me something.					

6	Almost all children are equally likeable and enjoyable.					
7	Most children respect teachers and authority.					
8	Children seldom take care of their materials if they are not supervised.					
9	Children learn best when they have good role models for their behavior.					
10	Children need some choice of activities within the classroom.					
11	Children need to work on skills at which they are not good, even if it means giving them fewer choices.					
12	Children cannot be understood without knowing something about their families.					
13	Children meet challenges best when they feel that their teachers care about them.					
14	Children need to feel safe and secure in the classroom.					
15	Children need opportunities to think in a quiet classroom environment.					
16	Children need to have their strengths recognized to promote learning.					
17	Children learn best by being actively involved in lessons.					
18	Children need opportunities to be creative in the classroom.					
19	Some children show little desire to learn.					
20	Children are more motivated by grades than they are by the acquisition of competence.					

Appendix B

Permission to use the Teacher Belief Q-Sort

April 27, 2011

Mary,
With this email, I give you consent to use the TBQ and to modify it and adapt it for your study sample. Good luck with your work. Sara RK

--
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Appendix C

Learner-Centered Psychological Principles[1]

METACOGNITIVE AND COGNITIVE PRINCIPLES

Principle 1: Nature of the learning process.
The learning of complex subject matter is most effective when it is an intentional process of constructing meaning from information and experience.

Principle 2: Goals of the learning process.
The successful learner, over time and with support and instructional guidance, can create meaningful, coherent representations of knowledge.

Principle 3: Construction of knowledge.
The successful learner can link new information with existing knowledge in meaningful ways.

Principle 4: Strategic thinking
The successful learner can create and use a repertoire of thinking and reasoning strategies to achieve complex learning goals.

Principle 5: Thinking about thinking
Higher order strategies for selecting and monitoring mental operations facilitate creative and critical thinking.

Principle 6: Context of learning
Learning is influenced by environmental factors, including culture, technology, and instructional practices.

MOTIVATIONAL AND AFFECTIVE PRINCIPLES

Principle 7: Motivational and emotional influences on learning
What and how much is learned is influenced by the learner's motivation. Motivation to learn, in turn, is influenced by the individual's emotional states, beliefs, interests and goals, and habits of thinking.

Principle 8: Intrinsic motivation to learn
The learner's creativity, higher order thinking, and natural curiosity all contribute to motivation to learn. Intrinsic motivation is stimulated by tasks of optimal novelty and difficulty, relevant to personal interests, and providing for personal choice and control.

Principle 9: Effects of motivation on effort
Acquisition of complex knowledge and skills requires extended learner effort and guided practice. Without learners' motivation to learn, the willingness to exert this effort is unlikely without coercion.

Learner-Centered Psychological Principles[1]

DEVELOPMENTAL AND SOCIAL PRINCIPLES

Principle 10: Developmental influence on learning
As individuals develop, they encounter different opportunities and experience different constraints for learning. Learning is most effective when differential development within and across physical, intellectual, emotional, and social domains is taken into account.

Principle 11: Social influences on learning
Learning is influenced by social interactions, interpersonal relations, and communication with others.

INDIVIDUAL DIFFERENCES PRINCIPLES

Principle 12: Individual differences in learning
Learners have different strategies, approaches, and capabilities for learning that are a function of prior experience and heredity.

Principle 13: Learning and diversity
Learning is most effective when differences in learners' linguistic, cultural, and social backgrounds are taken into account.

Principle 14: Standards and assessment
Setting appropriately high and challenging standards and assessing the learner and learning progress—including diagnostic, process, and outcome assessment—are integral parts of the learning process.

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[1] APA Work Group of the Board of Educational Affairs (1997, November). *Learner-centered psychological principles: A framework for school reform and redesign.* Washington, DC: American Psychological Association.

Appendix D

Teachers' Sense of Efficacy Scale Instrument

Teacher Beliefs

This questionnaire is designed to help us gain a better understanding of the kinds of things that create challenges for teachers. Your answers are confidential.

Directions: Please indicate your opinion about each of the questions below by marking any one of the nine responses in the columns on the right side, ranging from (1) "None at all" to (9) "A Great Deal" as each represents a degree on the continuum.

Please respond to each of the questions by considering the combination of your *current* ability, resources, and opportunity to do each of the following in your present position.

		None at all		Very Little		Some Degree		Quite A Bit		A Great Deal
1.	How much can you do to control disruptive behavior in the classroom?	①	②	③	④	⑤	⑥	⑦	⑧	⑨
2.	How much can you do to motivate students who show low interest in school work?	①	②	③	④	⑤	⑥	⑦	⑧	⑨
3.	How much can you do to calm a student who is disruptive or noisy?	①	②	③	④	⑤	⑥	⑦	⑧	⑨
4.	How much can you do to help your students value learning?	①	②	③	④	⑤	⑥	⑦	⑧	⑨
5.	To what extent can you craft good questions for your students?	①	②	③	④	⑤	⑥	⑦	⑧	⑨
6.	How much can you do to get children to follow classroom rules?	①	②	③	④	⑤	⑥	⑦	⑧	⑨
7.	How much can you do to get students to believe they can do well in school work?	①	②	③	④	⑤	⑥	⑦	⑧	⑨
8.	How well can you establish a classroom management system with each group of students?	①	②	③	④	⑤	⑥	⑦	⑧	⑨
9.	To what extent can you use a variety of assessment strategies?	①	②	③	④	⑤	⑥	⑦	⑧	⑨
10.	To what extent can you provide an alternative explanation or example when students are confused?	①	②	③	④	⑤	⑥	⑦	⑧	⑨
11.	How much can you assist families in helping their children do well in school?	①	②	③	④	⑤	⑥	⑦	⑧	⑨
12.	How well can you implement alternative teaching strategies in your classroom?	①	②	③	④	⑤	⑥	⑦	⑧	⑨

13. What is your gender?
- O Male
- O Female

14. What is your racial identity?
- O African American
- O White, Non-Hispanic
- O Other

15. What subject matter do you teach? (as many as apply)
- O All (Elementary/ Self-contained)
- O Math
- O Science
- O Language Arts
- O Social Studies

16. What level do you teach?
- O Elementary
- O Middle
- O High

17. What is the context of your school?
- O Urban
- O Suburban
- O Rural

18. What is the approximate proportion of students who receive free and reduced lunches at your school?
- O 0-20%
- O 21-40%
- O 41-60%
- O 61-80%
- O 81-100%

19. What grade level(s) do you teach? (K) ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

20. How many years have you taught? ⓪ ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

For office use only. ⓪ ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

Appendix E

Permission to use the Teachers' Sense of Efficacy Scale:

The College Of
WILLIAM&MARY

School of Education
Post Office Box 8795
Williamsburg, Virginia 23187-8795
Fax: (757) 221-2988

Megan Tschannen-Moran, Ph.D.
Wakefield Distinguished Associate Professor
mxtsch@wm.edu
(757) 221-2187

March 2011

Mary Line
University of Arkansas at Fayetteville
Fayetteville, Arkansas 72701

Dear Mary Line:

You have permission to use the Teachers Sense of Efficacy Scale that I developed with Dr. Anita Woolfolk Hoy for your dissertation research. Please use the following citation when referencing the scale:

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

Although the name of the measure has been changed since that article was published, the contents of the scale remain the same.

You may download a copy of the instrument and directions for administration from my website at http://mxtsch.people.wm.edu. I would like to receive a brief summary of your results when you are finished.

Sincerely,

Megan Tschannen-Moran

Appendix F

UNIVERSITY OF ARKANSAS

Office of Research Compliance
Institutional Review Board

January 14, 2013

MEMORANDUM

TO:	Mary Line Mardel Crandal
FROM:	Ro Windwalker IRB Coordinator
RE:	PROJECT MODIFICATION
IRB Protocol #:	12-12-315
Protocol Title:	*Creating Caring Qualified Early Childhood Teachers: An exploration of the relationship between teacher efficacy and learner-centeredness among early childhood professionals in Arkansas*
Review Type:	☒ EXEMPT ☐ EXPEDITED ☐ FULL IRB
Approved Project Period:	Start Date: 01/14/2013 Expiration Date: 12/18/2013

Your request to modify the referenced protocol has been approved by the IRB. **This protocol is currently approved for 250 total participants.** If you wish to make any further modifications in the approved protocol, including enrolling more than this number, you must seek approval *prior to* implementing those changes. All modifications should be requested in writing (email is acceptable) and must provide sufficient detail to assess the impact of the change.

Please note that this approval does not extend the Approved Project Period. Should you wish to extend your project beyond the current expiration date, you must submit a request for continuation using the UAF IRB form "Continuing Review for IRB Approved Projects." The request should be sent to the IRB Coordinator, 210 Administration.

For protocols requiring FULL IRB review, please submit your request at least one month prior to the current expiration date. (High-risk protocols may require even more time for approval.) For protocols requiring an EXPEDITED or EXEMPT review, submit your request at least two weeks prior to the current expiration date. Failure to obtain approval for a continuation *on or prior to* the currently approved expiration date will result in termination of the protocol and you will be required to submit a new protocol to the IRB before continuing the project. Data collected past the protocol expiration date may need to be eliminated from the dataset should you wish to publish. Only data collected under a currently approved protocol can be certified by the IRB for any purpose.

If you have questions or need any assistance from the IRB, please contact me at 210 Administration Building, 5-2208, or irb@uark.edu.

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