FACULTY BELIEFS IN EARLY CHILDHOOD TEACHER PREPARATION

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DOCTOR OF PHILOSOPHY

by
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TEACHER BELIEFS IN EARLY CHILDHOOD TEACHER PREPARATION

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ABSTRACT

Teacher preparation programs in the United States face increasing pressure to restore America as the preeminent leader in a knowledge-based global economy by graduating a highly skilled workforce. A growing national focus on the importance of early childhood education as a key factor for improving student performance is drawing attention to preparation programs for teachers of young children. College administrators of these programs are challenged by wide variability in program type and the degrees offered, characteristics of the institutional setting, and limited institutional resources. Furthermore, there is a lack of clarity about what bounds early care and education and differing opinions about best practices. Standards, regulations, and teacher certification criteria in early childhood education are varied and dynamic across states. Little is known about the effectiveness of early childhood teacher preparation.

This dissertation research examined differences in faculty beliefs compared across factors including types of higher education organizations—as defined by Birnbaum's (1988) model of administrative practice, the Carnegie classification of colleges and universities, and whether their early childhood programs lead to teacher certification. A national survey of 151 early childhood teacher educators, from 125 colleges and universities, in 35 states was conducted to assess beliefs about developmentally appropriate practice (DAP)—the industry standard and a key distinguishing feature of high-quality early education. The Teacher

Beliefs Scale (Charlesworth et al., 1990, 1993) was selected to assess the degree to which teacher beliefs align with appropriate practices.

This study revealed that faculty beliefs were predicted by organizational types of colleges and universities (collegial, bureaucratic, political, anarchical, and cybernetic) related to their governance structure and organizational coupling relationships. Findings suggested that faculty teaching in institutions, which they perceived to be of the anarchical type, were more likely to have DAP beliefs. Also, significant differences in faculty beliefs were found between two-year colleges and four-year institutions. Assuming that faculty beliefs are reflected in the curriculum and pedagogy in teacher preparation, evidence about differences across program type and classification will be useful for college and university administrators, public policy makers, and professionals serving the early childhood system.

The faculty listed below, appointed by the Dean of the School of Graduate Studies have examined a dissertation titled "Faculty Beliefs in Early Childhood Teacher Preparation," presented by Michael B. Abel , candidate for the Doctor of Philosophy degree, and certify that in their opinion it is worthy of acceptance.

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teacher educators across America that contributed their perceptions about their organizations, teacher preparation, and developmentally appropriate practice. They are often unrecognized and underappreciated for their contributions to early childhood education and their students.

I have been fortunate to receive encouragement and inspiration from individuals with whom I have had the privilege to work: Dr. Al Dimmitt, Jr., Dr. Carl Calkins, Dr. Kathy Fuger, Dr. Kathy Thornburg, and Dr. Paula Jorde Bloom. Their leadership and contributions to the field are enough to stimulate any student and emerging professional, but each of them has personally invested in my development and career. I am thankful for their interest in me as a person and their commitment to my growth as an educational leader.

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CHAPTER 1

INTRODUCTION

Statement of the Problem

As the United States struggles with its lagging educational system and sluggish

economy, greater political and public pressure is exerted on higher education administrators

for "righting the ship" by graduating more highly skilled individuals for the workforce and

producing research that will restore America as the preeminent leader in a knowledge-based

global economy. College administrators are expected to respond to various and sometimes

competing interests for institutional resources and academic priorities. These challenges are

complicated by the dynamic nature of American culture and the rapidly changing

demographic in a multicultural society. In order to keep pace with these societal changes,

administrators working in colleges and universities must be resilient and responsive to diverse

constituencies and are responding to societal needs from an adaptive leadership paradigm

(Stephenson, 2011). Analysts of higher education administration identify communication and

coupling relationships as one of the greatest challenges facing college and university leaders

(Cipriano & Buller, 2012). Historical structures and practices in college administration are

often insufficient to meet the instructional, research, and service demands placed upon higher

education (Putnam, 2012; Randall & Coakley, 2007).

These challenges are particularly acute among the approximately1,200 higher

education organizations in the United States that offer a degree in early childhood education

(Early & Winton, 2001; Hyson, Tomlinson, & Morris, 2009) as well as those that offer other

types of degrees, such as child development, to prepare teachers for the early childhood

workforce. The pre-service preparation of early childhood teachers is influenced by the

institutional setting, program type, the degrees that are offered, and limited institutional resources (Hyson, Horm, & Winton, 2012). Maxwell, Lim, and Early (2006) report that approximately 44% of early childhood programs offer baccalaureate (BA) and/or graduate degrees, and 56% offer associate degrees. Early childhood higher education programs must comply with an array of regulations and professional expectations that include state teacher certification or licensure requirements, national accreditation standards, and state or federal degree requirements (Hyson, 2012). The complexity of early childhood teacher preparation is further compounded by differences in requirements from state to state.

College administrators are charged with ensuring that their graduates meet the most current standards in early childhood education and teacher preparation and that they are up-to-date on dynamic issues such as practice in special education and work with English-language learners (Heckman & Masterov, 2007). Mounting pressure from the federal government to expand access to high-quality preschool, improve early learning beginning at birth, and ensure school readiness adds urgency and importance to the work of early childhood teacher educators (Harkin, 2013; Obama, 2014). However, national trends also suggest that the level of qualified early childhood teachers declined between 1983 and 2001, which ran counter to the rest of the U.S. workforce (Herzenberg, Price, & Bradley, 2005).

Early childhood advocates insist that teachers of young children exercise a wide range of skills and should be recognized as professionals like those teaching in elementary and secondary school classrooms. In 1994, the National Association for the Education of Young Children (NAEYC) published a conceptual framework for an early childhood career lattice (Johnson & McCracken, eds., 1994). Yet currently, there is still a perceived credibility gap where early childhood teachers lack the credentials or certification to validate their

competency. This inconsistency among personnel qualifications undermines the credibility of the early childhood profession (Goffin & Washington, 2007).

In a critical analysis of 40 research studies on early childhood teacher preparation, Saracho & Spodek (2007) found great variability in the requirements and standards for early childhood education teachers and recent studies of qualifications for the early childhood workforce confirm these disparities (Bassok, Fitzpatrick, Loeb, & Paglayan, 2013; Carolan, 2013). The National Institute for Early Education Research (NIEER) recently reported that the majority of teachers in state-funded pre-K (79%) & Head Start (62%) programs had at least a bachelor's degree (Carolan, 2013). However, a study from the Stanford University Center for Education Policy Analysis found that the overall early childhood workforce is undereducated with low-compensation and high turnover (Bassok, Fitzpatrick, Loeb, & Paglayan, 2013).

Faculty and administrators of early childhood teacher preparation programs in the United States face challenges that are common to all disciplines in higher education settings as well as a few that are unique to early childhood. Financial constraints are particularly salient for higher education units that are charged with producing "highly qualified teachers" in a field where compensation is relatively low (Hyson, Tomlinson, & Morris, 2009). Philosophical differences between the university administration and departmental faculty have created tensions since higher education began. The degree to which these differences affect coupling relationships—how people or elements are connected—within the university and with external constituents in the community is a variable that was examined in this study. Another phenomenon common to higher education organizations is the trend toward a higher use of adjunct faculty. Early childhood teacher preparation programs are typically small units and any shifts in the ratio of full-time faculty members to adjunct instructors may have a

meaningful impact. This research examined the characteristic makeup of the instructional faculty.

Little is known about how well early childhood teacher education programs prepare individuals for the classroom (Saracho & Spodek, 2007). There is some evidence to support that early childhood teachers with a bachelor's degree perform better and are considered to be more qualified than those with an associate's degree, but the magnitude of these effects are inconsistent. For example, Croninger, Rice, Rathbun, & Nishio's study of the Early Childhood Longitudinal dataset found a positive association between teachers' degree types and reading achievement, but not in other curricular domains (2007). Kelley & Camilli (2007) conducted a meta-analysis of four large-scale studies to link teacher education with high-quality learning environments and determined that teachers with a bachelor's degree had the highest outcomes, but the effects size was small and the researchers were not able to differentiate these effects from other confounding factors. Evidence that can contribute to an understanding about the effectiveness of early childhood teacher preparation is needed to address concerns about the credibility of the early childhood teaching workforce.

There are also differences among faculty of early childhood teacher preparation programs regarding how young children learn and the effects of certain practices in the classroom. The National Association for the Education of Young Children (NAEYC) established guidelines for developmentally appropriate practice (DAP), but Copple, & Bredekamp (2009) reported that DAP does not always align with the beliefs of classroom teachers.

Evidence suggests that the beliefs of faculty in early childhood teacher preparation programs are transferred to their students and affect their classroom teaching practices upon

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entering the workforce (La Paro, Siepak, & Scott-Little, 2009; Vartuli & Rohs, 2009). In a study of 28 student teachers, La Paro, Siepak, & Scott-Little (2009) found that by the end of their student teaching experience, preservice teachers' beliefs about children, discipline, and teaching practices were more similar to the beliefs of the faculty members than when entering the teacher preparation program. Understanding the differences in beliefs about early childhood teacher practices among faculty may provide valuable insight for higher education organizations in the development and administration of pre-service programs.

There is also a lack of clarity about what constitutes adequate preparation of early childhood teachers (Buysse, Winton, & Rous, 2009; Herzenberg et al., 2005) and some research suggests that their preparation is inadequate (Cavanagh, 2002). Levine (2006) found significant disparities in institutional quality utilizing case studies, surveys, and interviews of deans of schools of education, chairs of education programs, education school faculty, alumni of schools of education, and school principals. In their national study of two- and four-year colleges and universities preparing early childhood teachers, Early and Winton (2001) found that only 53% of early childhood faculty had a degree in early childhood education or a related field, and only 64% had experience working with 3- or 4-year-olds. In a recent report, *Subprime Learning: Early Education in America since the Great Recession*, Lisa Guernsey and others document how the education and training requirements for early childhood teachers remains low and there is no financial incentive for teachers to seek a birth-to-eight teaching license over other credentials in the teaching profession (Guernsey, Bornfreund, McCann, & Williams, 2014). Federal policy for early childhood teacher preparation has been limited to specific sectors of the early childhood workforce, such as Head Start standards or other funded initiatives like Race to the Top—Early Learning Challenge grants. There is no

consensus across states regarding requirements for early childhood teacher preparation nor a coordinated system of preparation that leads to an organized field of practice (Goffin, 2013). Early childhood professional associations or higher education credentialing body have worked to establish aligned standards, but field-specific accreditation is voluntary and is not sought after by many higher education units that offer degrees in early childhood education or child development. Depending on the organizational structure of the college or university department, the early childhood teacher preparation program may fall under the auspice of another accreditation system.

Therefore, we know that a number of societal and systemic factors present challenges for early childhood teacher preparation. Teacher educators are impacted by the diversity among faculty and students; complexity of various sectors and means of service delivery; competing entities (both internal and external to the Academy); and communication within higher education organizations. These challenges and disparities are reflected in the purpose and organizational structure for administrators of early childhood teacher preparation programs. As pressure increases to ensure that young children's educational experiences prepare them for academic learning, the beliefs about best teaching practice is all the more a salient issue.

Purpose of the Study

The primary purpose of this research is to examine differences in the beliefs of early childhood teacher educators about DAP. These beliefs will be compared across factors including types of higher education organizations (as defined by a model of administrative practice), the Carnegie classification of colleges and universities, and whether their early childhood programs lead to teacher certification. Assuming that faculty beliefs are reflected in

the curriculum and pedagogy in teacher preparation, evidence about differences across program type will be useful for college and university administrators, public policy makers, and professionals serving the early childhood system. Information about faculty beliefs in teacher preparation is highly segmented for specific disciplines or pedagogical methods. An exhaustive search of the literature about faculty beliefs in early childhood teacher preparation from a comprehensive perspective (apart from those segmented for specific disciplines or pedagogical methods) is limited.

Developmentally appropriate practice (DAP) is the industry standard and a key distinguishing feature of high-quality early education. For over 30 years, early childhood leaders have considered and refined statements that define aspects of teacher practice that are deemed appropriate for children at various developmental stages and in various cultural contexts (Bredekamp & Copple, 1997; Dunn & Kontos, 1998; Lee, Baik, & Charlesworth, 2006; McMullen & Alat, 2002; McMullen et al., 2005). DAP has also been recognized in early childhood teacher preparation and incorporated in higher education accreditation standards for both 2-year and baccalaureate early childhood or child development programs (NAEYC, 2002; NCATE, 2001).

One dimension for examining differences in faculty beliefs is by organizational type based on a model of administrative practice. Types of higher education organizations and programs can be identified from various perspectives. Bergquist (1992) named four types of college and universities through a cultural lens. The seminal work of Bolman and Deal (2008) suggests examining higher education organizations through *structural, human resource, political,* and *symbolic* frames of administrative practice. Birnbaum types higher education organizations based on administrative structure and coupling relationships that exist internally

and externally. He distinguishes organizations as *collegial, bureaucratic, political, anarchical* or *cybernetic* (1988).

Birnbaum's model (1988) was selected for this study because the typology fit with understanding organizational characteristics and their relationship to faculty beliefs about teaching and learning. Of particular interest was Birnbaum's discussion about coupling relationships between academic units and internal and external entities. Early childhood education is related to several disciplines beyond education and the potential for coupling relationships with other academic units within the university might be a viable factor for the study. In addition, early childhood education is often tightly coupled with external organizations related to health, psychology, social services, child care, small business and other fields beyond education.

In Birnbaum's model (1988), the first four types were clearly defined with unique characteristics for grouping institutions and discriminating aspects that might influence faculty beliefs. A number of previous studies had selected the Birnbaum model for grouping higher education institutions (Douglas, 2013; Hall, 2002; Higgins, 1997; Jones, 2002; Williamson, 2000). A self-report instrument was developed with strong valid and reliable psychometrics and used in the previous studies with good results (Higgins, 1997).

A second dimension for examining the beliefs of early childhood teacher educators is based on the Carnegie classification of their sponsoring organizations. The Carnegie Commission on Higher Education developed a classification of colleges and universities in the 1970s that has emerged as the industry's leading framework for describing institutional differences (Carnegie Foundation, *n.d.*). Taxonomic categories are based on factors such as the types of degrees offered (e.g., associates, baccalaureate, graduate); size; two-year or four-

year organizations; and residential character; and profiles for undergraduates. Administrative leadership is influenced by the context of the organization or program and differences across classifications is useful for understanding faculty work environments.

Whether the early childhood teacher preparation program leads to state teacher certification is a third dimension by which differences among faculty beliefs will be measured. Forty-four states have early childhood standards as part of their teacher certification standards (U.S. Department of Education, Office of Postsecondary Education, 2009). However, few states require teacher certification for teaching children prior to kindergarten (Ackerman, 2004; Bowman, Donovan, & Burns, 2000). With growing support for publicly funded pre-kindergarten programs (Chapman, 2014; Freemantle, & Fraser, 2014; Harkin, 2013; Obama, 2014), states' requirements for certified teachers lags behind (Guernsey, 2014; NACCRA, 2011). Most teachers (87%) that work in public school settings have at least a bachelor's degree, but many lack specific training and knowledge in DAP (Bowman, Donovan, & Burns, 2001; Saluja, Early, & Clifford, 2002). This study will examine if faculty beliefs about DAP differ for programs that lead candidates to teacher certification.

While various faculty beliefs may affect pre-service instruction, this study will focus on three types of faculty beliefs: behavior management in the early childhood classroom, teaching practices, and the characteristics of children in general. These beliefs suggest a philosophical perspective about the interaction of young children and their teachers and the degree to which freedom and control are shared (La Paro, 2009). They have meaningful implications for early childhood environments and fidelity to evidence-based developmentally appropriate practice (Copple, and Bredekamp, 2009).

Research Hypotheses

Results of this study will seek to determine if significant differences of early childhood teacher educator beliefs about DAP exist by institutional type, governance, and programs designed to lead to teacher certification. These are the null hypotheses for this research:

1. There are no differences in the beliefs of early childhood teacher educators between different types of higher education organizations based on their governance structure and processes as defined by the Birnbaum (1988) model.

2. There are no differences in the beliefs of early childhood teacher educators between different types of higher education organizations based on their Carnegie classification.

3. There are no differences in the beliefs of early childhood teacher educators between early childhood programs that lead to state teacher certification from those that do not lead to state teacher certification.

Theoretical Perspective

Developmentally appropriate practice (DAP) is the theoretical basis of faculty beliefs in early childhood teacher preparation. It has become the most widely recognized distinctive in early childhood education since its introduction in the 1980s (Bredekamp, 1987) and is generally regarded as "best practices" in the field (Bredekamp & Copple, 1997; Copple, & Bredekamp, 2009; Dunn & Kontos, 1998; McMullen & Alat, 2002). DAP is used as a evaluative metric worldwide and transcends culture, program setting, and program type (Lee, Baik, & Charlesworth, 2006; McMullen et al., 2005). It is embedded throughout accreditation standards for early childhood teacher preparation programs and standards for early childhood and child development curricula (NAEYC, 2002; NCATE, 2001). Based upon constructive

learning theory (Hagan, 2011; Kim, 2005), DAP ensures that early childhood educators understand that learning occurs along a developmental continuum and that they are responsive to the individual needs of children. It is assumed that faculty beliefs influence the curriculum and instruction in college classrooms. The degree to which early childhood teacher educators ascribe to developmentally appropriate paradigms is the dependent variable of this research.

Definition of Terms

- Accreditation – voluntary evaluation of early childhood teacher preparation standards to validate quality of academic units (e.g., school, college, or department of education or child development). The National Council for Accreditation of Teacher Education is the accrediting body that accredits a unit offering baccalaureate or graduate degree programs leading to initial or advanced teacher licensure. NAEYC's Early Childhood Associate Degree Accreditation (ECADA) awards accreditation to 2-year early childhood teacher preparation programs (NAEYC, 2002; NCATE, 2001).

- Administrators in higher education – College or university leaders that include presidents, chancellors, provosts, deans, and departmental chairs. With regard to administrators of early childhood teacher preparation programs, administrators refers to deans of schools of education, chairs of education or child development programs, and education school faculty with administrative responsibilities.

- Community college – organizations that are part of the postsecondary education system, offering certificate and undergraduate degree programs with open student access; synonymous with 2-year organizations.

- Early childhood - period of human development from birth and to 8 years old (NAEYC, 2011).

- Early childhood teachers – individuals responsible for the care and education of children birth through age eight in center-based early childhood programs or elementary schools. This definition is not intended to negate that other individuals that work with young children may also fulfill the role of early childhood teacher (i.e., family child care providers, early childhood special educators that are not responsible for groups of children, but it is aligned with the boundaries of this study.

- Epistemological beliefs – convictions about the nature of knowledge and the process of knowing (Hofer, 2000).

- Evidence-base practice – processes occurring in early childhood programs that integrate professional wisdom and values supported by rigorous research evidence (Buysse & Wesley, 2006, p. xiv) (NAEYC, 2011).

- Faculty – full-time, part-time, or adjunct faculty serving in post-secondary education organization (NAEYC, 2011).

- Higher Education Act (HEA) – federal legislation that sets forth requirements for organization of higher education and higher education accrediting agencies. (http://www.ed.gov/admins/finaid/accred/index.html; http://www2.ed.gov/policy/highered/leg/hea98/index.html; NAEYC, 2011).

- Licensure – recognition by a state education authority that an individual has met prescribed criteria to practice as a professional teacher,

- Preschool – programs or classrooms for children from 3 to 5 years-old who are not yet enrolled in kindergarten (Bredekamp & Copple, 1997).

- Subunits – refers to organizational segments of a higher education (e.g., schools, academic departments, faculty senates, student governments, campus councils, administrative offices, etc.)

- Teacher certification – state licenses awarded at the completion of an approved teacher preparation program to individuals that have met the requirements of the state. States have flexibility in how they categorize certificates, but the HEA guidelines establish three levels to reflect the teacher's credentials and experience. Level I (Type A) is the general teaching certificate for completing a full teacher preparation program without specialization. Level II (Type B) is issued to candidates who may have completed an alternative route program with not less than 27 months of professional employment. Level III (Type C) certificates are issued to individuals that complete all of Level II plus advance requirements established by the state (U.S. Department of Education, Office of Postsecondary Education, 2006).

- Teacher preparation – refers to a post-secondary educational course of study that prepares individuals to practice as a professional teacher; may include programs that confer certificate, associates, baccalaureate, or graduate degrees; may lead to initial licensure or advanced degrees in teacher education.

Delimitations of the Study

This study will examine the beliefs of early childhood teacher educators in preparation programs from post-secondary education organizations in the United States. Participants will be recruited from the membership of two national professional associations: the National Association of Early Childhood Teacher Educators (NAECTE) and the Associate Degree Early Childhood Teacher Educators – ACCESS. Informal teacher educators or non-credit

professional development trainers for the early childhood workforce will not be included in this research. Both full- and part-time faculty members will be surveyed without regard to their tenure or non-tenure trajectory.

The higher education institution from which faculty members are employed will be grouped based on their Carnegie Classification. The Carnegie Foundation collects data from all colleges and universities registered with the National Center for Education Statistics (NCES). As the principal agency of the U. S. Federal Statistical System, the NCES database is the most comprehensive and exhaustive source for identifying organizations of higher education. It is unlikely that any early childhood teacher preparation programs would not be included in the Carnegie dataset.

Academic disciplines other than, but related to, early childhood teacher preparation may matriculate students that enter the early childhood workforce. Individuals with formal education in early childhood special education, child psychology, social sciences, and other educational or human development disciplines may become early childhood teachers due to low educational standards and easy entry into the field. But this study will focus on faculty members that self-identify as early childhood teacher educators through their affiliation with professional membership associations.

Limitations of the Study

The recruitment of participants from two professional membership associations was a limitation of this research. Faculty members may choose not to join the associations which could have reduced the sample size and influenced how well it represented the early childhood teacher educator workforce. For example, teacher preparation programs that offer Montessori Accreditation (Montessori Accreditation Council for Teacher Education) were not specifically

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recruited for this study. However, NAECTE and ACCESS are the largest national early childhood teacher educator associations with members from a broad base of higher education institution types. Respondents included both full-time and adjunct faculty members. Including part-time faculty is appropriate because they comprise a large segment of early childhood teacher educators, but there could be differences in their beliefs based on their full- or part-time status.

The length of the questionnaire was lengthy, which reduced the completion rate and limited sample size. Certain higher education classification groups were not represented or underrepresented in the sample. Furthermore, caution is needed in generalizing the results since the results were based on self-report data from faculty members. Self-reporting leaves room for varying interpretations of what was being asked on the questionnaires. Methodology was used to control for social reliability, but additional measures to validate faculty beliefs could strengthen the research.

The study was also limited by low reliability scores for the measure used to group participant's institutions by governance type. Low scores for the instrument were found when Chronbach's alpha values were computed on the data in this study. Poor performance on this measure could have caused participant organizations to be assigned to the wrong group.

Significance of the Study

In recent decades, there is been a national push to develop early learning standards and to establish benchmarks in order to assess the effectiveness of early learning programs and child outcomes. The need for standards came in response to trends in early childhood education that could lead to inappropriate practice, which emphasized "hurrying children" for early academic achievement (Elkind, 1988) and the establishment of a National Education

Goal that "by the year 2000, all children in America will start school ready to learn" by President Bush and 50 state governors (North Central Regional Education Laboratory, 1995).

As early as 1983, with the release of *A Nation at Risk,* national discourse began to focus on readiness leading to the establishment of standards making school curriculum more challenging for young children. In 1991, the Carnegie Foundation issued a report, *Ready to Learn: A Mandate for the Nation,* which revealed more than 1 in 3 children were not prepared for school (Boyer).

During the 2002 State of the Union address, George W. Bush introduced a federal early education initiative, *Good Start, Grow Smart,* and referenced his signing of the *No Child Left Behind Act* (NCLB) on January 8, 2002 (Office of the White House, 2002). NCLB included a primary goal that every child would be able to read by the end of third grade and established the *Early Reading First* program to help prepare young children prior to entering kindergarten in language and cognitive development with an emphasis on early reading skills (U.S. Department of Education, 2002). However, NCLB also required accountability measures that included high-stakes child outcomes to evaluate success. Diane Ravitch (2010), education leader and former supporter of the federal standards movement, suggests that NCLB has emerged over time as a punitive program that has proved to be ineffective in improving schools.

There are unintended consequences of the law that are detrimental to students, families, and communities. When children enter school, they face for the first time a system where their skills, abilities, and characteristics are evaluated (Pianta & Cox, 1999). Ravitch (2010) noted that the most toxic flaw of NCLB was the requirement that 100% of students

must reach reading and math proficiency by the 2013-2014 school year. Student outcomes are the accountability metric that is applied to the schools and in particular the proficiency scores.

School readiness has emerged as a primary focus of early childhood public policy that has resulted in numerous initiatives and accountability measures across early childhood systems. Early childhood curriculum and teaching practice is aligned to academic performance expectations (Boyer, 2000; Brown, 2010). There has been a shift in early childhood curriculum development to emphasize readiness skills such as executive function, early literacy, and to prepare young children for improved student performance in STEM disciplines (Bierman et al., 2008; Clements & Sarama, 2008; Greenes, Ginsburg, & Balfanz, 2004; Justice, Mashburn, Pence, & Wiggins, 2008; Klein, Starkey, Clements, Sarama, & Iyer, 2008).

A more recent development in the movement toward accountability is the adoption of the Common Core State Standards, an initiative of the National Governors Association and the Council of Chief State School Officers, to establish a single set of standards for English-language arts and math (Council of Chief State School Officers, 2010; National Governors Association, 2013). Nearly all of the U. S. States and Territories have adopted the Common Core Standards which has raised concerns among some early childhood educators about resulting teaching practices that may not be developmentally appropriate. Threats to DAP may include a narrowing of the instructional focus, reliance on teacher-directed instruction, and emphasis on assessment in the early grades, and standards that may not be developmentally appropriate due to their content or age validity (NAEYC, 2012; Snow, Burnium, & Hughes, 2013). However, the Common Core does provide standards about the content (what should be taught) so that teachers can be more focused on instructional teaching methods (how to teach).

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The Common Core State Standards, in and of themselves, do not necessarily restrict early childhood teachers from using DAP, because they allow for play-based learning and meaningful scaffolding (NAEYC, 2012; Snow, 2013).

Unfortunately, the standards movement has led to inappropriate practices regarding early childhood assessment especially through the use of high-stakes testing for program accountability (Bagnato, McLean, Macy, & Neisworth, 2011; Hagan, 2011; Pianta, 2007). Evidence suggests that high stakes testing is related to changes in curriculum content, the structure of knowledge, and pedagogy (Au, 2009). For example, neo-Vygotskian theorists (a construct closely aligned with DAP) posit that the curriculum should support higher order thinking that guide children to process information in the internal mental plane (Bodrova & Leong, 2007). They also suggest that self-regulated thoughts are developed in the social context as students moderate their emotions and consider possible outcomes through shared understanding with others (Bronson, 2000; Erikson, 1950; Gillespie & Siebel, 2006). An emphasis on standardized testing may mitigate against a teaching pedagogy that supports the development of higher order thinking and learning.

Sandra Petersen (2012) suggests that developmentally appropriate practice for school readiness begins in infancy when foundations are set for later learning. However, David Elkind (1988) described trends in early childhood education to apply uniform standards with disregard for individual differences as a "factory model" where curriculum content is thrust down from higher grades in order to increase productivity. These inappropriate assessment strategies assert negative pressure on the educational system with detrimental outcomes for children who fail to meet the targets. Political rhetoric regarding education reform has continued to stress workforce preparation and the U.S. ranking of students in the global

economy (Banchero, 2013; Early Care & Education Consortium, 2014; Glickman, 1998; Kelly, Xie, Nord, Jenkins, Chan, & Kastberg, 2013; Mulligan, Hastedt, & McCarroll, 2012; NACCRA, 2011).

The significance of this study is that findings may help to guide academic leaders in higher education to create early childhood teacher preparation programs that support DAP. Understanding when faculty beliefs are influenced by institutional type, governance, and program design may be useful as administrators examine their programs and seek to lead the faculty. Leaders of higher education units have a great opportunity to make decisions that are related to credentials or certification of early childhood teachers to addresses the credibility gap in the field. They can also evaluate the expertise of faculty members and provide leadership to influence curricular content. Understanding characteristics of the sample of faculty members in this study may also be useful for college and university administrators as they consider they diversity of their faculty. The emphasis on embedding DAP is not to homogenize the field or to discourage divergent thinking, but to ensure that early childhood teaching practice is based on proven theory and evidence of how children learn. By examining coupling relationships and their influence on faculty beliefs, administrators may identify avenues to collaborate within the institution or to partner with external organizations to foster best practice in the field.

The intended outcome of this knowledge for higher education administrators is especially important for addressing the workforce needs of the field. As the number of highly qualified early teachers is declining, higher education administrators must develop programs where the graduates are fully prepared to meet the needs of young children by providing pedagogy that DAP. A key factor for closing the credibility gap in early childhood education

is to ensure that teachers entering the field are competent and "ready to teach." Not only will

graduates realize greater success in the classroom, but they will also act as advocates for DAP

to influence school setting in general.

CHAPTER 2

LITERATURE REVIEW

Administrators of early childhood teacher preparation programs face numerous complex issues within the multifaceted dynamic environment of higher educational organization. They apply adaptive leadership skills (Heifetz, Grashow, & Linsky, 2009) in responding to societal pressure for improving student outcomes, the variability in the field of early education, and the differences in the theoretical and philosophical perspectives of students, community stakeholders, and faculty. Despite clear evidence that developmentally appropriate practices benefit the growth and learning of young children (Copple, 2012; Dunn & Kontos, 1998; Galinsky, 2010; Marcon, 1999; Shonkoff & Phillips, 2000), not all faculty members in early childhood teacher preparation espouse its value. College administrators lead their respective programs despite a lack of clarity about what bounds early care and education and differing opinions about best practices. The high level of variability and uncertainty about the definition and essential tenants of early education contribute to a credibility gap for policy makers, funders, business leaders, and other stakeholders that are concerned with child development and school readiness (Goffin & Washington, 2007).

The increased national focus on early childhood program quality has fueled a growing interest in the quality of teacher education and its influence on practice in preschool and primary school settings (Bornfreund, 2012; Chu, Martinez-Griego, & Cronin, 2010; Hyson, Tomlinson, & Morris, 2009). A lack of clarity about what constitutes adequate teacher preparation (Buysse, Winton, & Rous, 2009; Cavanagh, 2002; Levine, 2006) and the characteristics of faculty in effective early childhood programs (Whitebook, Austin, Ryan, Kipnis, Almaraz & Sakai, 2012) is another challenge for higher education leadership.

Accreditation standards for higher education teacher preparation programs provide some insight into the nature of teacher education curriculum and pedagogy, but the research on faculty background and beliefs is scant.

In addition to the challenges presented from the early childhood sector, the administration of higher education offers its own set of issues that presidents, provosts, deans, and department chairs must address. Coupling relationships among internal and external entities vary across different types of organization and higher education leaders must make decisions and exercise influence within the context of their organizational culture and climate. Pressure exists from within the institution to support organizational mission, strategic objectives, and goals, as well as influence from the community to fulfill its research and service needs.

Robert Birnbaum (1988) developed a model for categorizing colleges and universities based on organizational characteristics and coupling relationships. These interdependent relationships exist among subunits within the university or external partners to the higher education institutions. It is widely recognized among higher education administrative scholars and has been widely utilized in research for studying administration of colleges and universities (Burnett & Collins, 2010; Douglas, 2013; Heckler, 2011; Higgins, 1997; Hilbun, 2013; Krakowsky, 2008; Williamson, 2000).

One factor by which Birnbaum examines administrative practice is the degree to which coupling relationships exist among faculty, departments, administrators, and external actors that interact with the university. He describes how organizational structure affects these coupling relationships and administrative practice. His work is useful in understanding differences in higher education leadership and management, particularly in large organizations

or statewide systems (Cohen, 2010) where interpersonal and interdepartmental relationships are complex and administrative decisions can be irrational (Bergquist, 1992; Birnbaum, 1988). Administrative practices across various types of higher education organization affect faculty constituency by attracting and retaining individuals that fit with the organization's culture and operational practices. The focus of this study is to determine if there are differences in the beliefs of early childhood teacher educators about best practice across various types of colleges and universities and their respective early childhood or child development programs.

The Birnbaum Model

Birnbaum described a model for examining types of higher education organization in his seminal work, *How Colleges Work: The Cybernetics of Academic Organization and Leadership* (1988), which serves as a conceptual lens for this study. The focus of his model is not only based upon the structure of colleges and universities, but specifically examines the interactions and coupling relationships among faculty, administrators, and the component parts they represent. The model defines these coupling relationships in terms of their relationship to organizational governance, providing frames for which higher education organization can be differentiated as types. The four types of organizations he identifies are *collegial, bureaucratic, political*, and *anarchical*. In addition, he also suggests some organizations are *cybernetic* organizations – a fifth type that represents an integration or amalgamation of the other four categories.

Birnbaum (1988) first identifies collegial organizations where actors share power and operate from a unified perspective of common values. He notes that *collegiality* refers to equality among scholars with three major components: (1) the right to participate in

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institutional affairs, (2) membership in a company of scholars, and (3) equal worth of knowledge in various fields (Bowan & Schuster, 1986). Collegial systems are characterized by consensus and shared responsibilities for governance of the institution. As faculty members within a department interact with one another, their professional work is enhanced through collaborating to achieve shared purposes, consensus-based decision making, and assuming equitable responsibilities (Cipriano & Buller, 2012). This egalitarian environment is dependent upon mutual respect and engaged participation. Content experts that helped to develop the Collegiality Assessment Matrix (CAM), an assessment tool for evaluating collegiality in higher education environments, noted that in addition to collaboration, collegiality involves stepping up when needed, following through with professional tasks, exercising respect in the decision-making process, and being supportive in professional relationships (Cipriano, 2012).

According to Birnbaum (1988), administrators in collegial organizations are often faculty members serving in a leadership capacity and may do so in rotating terms. Their role is to provide support services that embody the collective vision of the collegium and represent the interests of the organization. They are often responsible for fostering collaborative workplace climate and expected to demonstrate positive outcomes related to faculty relationships and collegiality among peers (Cipriano & Buller, 2012). Evidence shows a precedence of judicial decisions that support the use of collegiality as a factor in faculty evaluation and granting tenure because of its importance to the institution's ability to fulfill its mission (Connell & Savage, 2001).

Collegial organizations are tightly coupled internally, but tend to be loosely coupled with external organizations, other colleges and universities, political influencers, or the local

community. Birnbaum (1988) notes that this loose coupling may cause the institution to appear inefficient or unresponsive to change in the external environment, but he suggests that the thorough deliberation necessary for consensus-based decision making may have distinct advantages. Within the collegial model, compromise is achieved through the full participation of the faculty and administrators.

The collegial system works best on small campuses because the logistics of a tightly coupled faculty coming to consensus is difficult in larger organizations (Birnbaum, 1988). Collegiality certainly exists in higher education organizations of all sizes, but Birnbaum emphasizes how the collegial organization relies on unilateral consensus for its governance. He notes that subunits on larger campuses are sometimes able to function in collegial systems, but as tightly coupled groups in their own right, they tend to function politically by competing for their own interests.

The central paradigm in bureaucratic organizations is the systematic administration for rational decision making (Birnbaum, 1988). In mechanistic fashion, these organizations are governed through hierarchical structural components, rules and regulations, and clearly codified policies. They tend to be data-driven. Collegial relationships among faculty operate most fluidly within subunits because the organizations are too large to accommodate the full participation of all the scholars for consensus decision making. Bureaucracies may be more efficient and tend to place greater emphasis on fiscal issues than the other types in Birnbaum's conceptualization (1988). Organizational charts are utilized to delineate "lines of authority" and/or "lines of communication." Bureaucratic activity includes planning, directing, organizing, staffing, controlling, and evaluating. Governance is often accomplished through committees or representative ad hoc groups that create or influence policies and regulations.

The division of labor, rights, and responsibilities define the limits that govern the behavior of staff, which are strengthened by a merit pay system that reinforces the willingness of institutional staff to accept direction from the administration or faculty.

Birnbaum (1988) explains how some parts within a bureaucratic organization are tightly coupled while other units or functions may be loosely coupled as determined through policies and procedures. Key leaders are often tightly coupled with the local community in order to provide educational services that are responsive to community needs. However, the faculty may be more tightly coupled within their departments or with other units to which they are associated on the organizational chart. For example, units that fall under student services may be tightly coupled with one another, while academic units providing instructional services may have cause to interact more frequently. In bureaucratic organizations, authority relationships work from the bottom up and not the top down. Individuals working on the ground make requests, initiate ideas, or seek to affect change, which filter up through the organizational lines of authority.

In contrast to collegial organizations, bureaucratic leaders located in positions higher on the organizational chart are more likely to conform to the expectations of the group. Persons in a leadership positions in a collegial system are expected to influence without coercion, to direct without sanctions, and to control without inducing alienation. This is not a primary concern in a bureaucracy. For example in the bureaucratic organization, the president may provide rewards of status, service, and support for individuals or groups that advance institutional goals that are aligned to community needs.

The third type in Birnbaum's models of higher educational organizations is the political organization that is primarily characterized as subunits competing for power and

resources. These organizations are larger in scale than those in collegial or bureaucratic models. As a result, subgroups within these complex organizations are more specialized and heterogeneous than the university as a whole. Decision making is diffused and decentralized, but may functionally operate with bureaucratic systems of control. The focus and goals of the political institution are continually shifting under the influence of pressure from interest groups and coalitions. Conflict may arise as subgroups compete for the allocation of institutional resources. Unlike the collegial model, political organizations make no attempt to ensure unilateral equality but rather allow the competitive process to determine how subunits acquire money, prestige, or influence. Political processes are the means by which issues are resolved within these pluralistic organizations.

Birnbaum (1988) suggests that coupling relationships within political organizations are inconsistent because of the shifting nature of political alliances. The degree to which individuals or groups collaborate may be more related to specific initiatives or issues rather than long-term ongoing relationships. When resources are scarce, competition between groups trumps relationship unless there's a particular political reason that would make an alliance mutually advantageous. Leaders evaluate coupling relationships not only because there are rational reasons to collaborate, but also for the political ramifications on the acquisition of finance, power, and influence within the organization. One cannot assume that decisions are made because they are in the best interest of either the institution or the participating subgroups, but rather may be politically advantageous through a process of negotiation to increase power and influence of all involved.

The fourth type in Birnbaum's model (1988) is the anarchical institution which is a complex organization comprised of autonomous colleges, research centers and institutes,

professional schools, and other entities that may operate on multiple campuses. Unlike the rational decision making of bureaucratic organizations, anarchical systems appear to react to problems or issues from irrational precedent and intuition. However, the appearance of chaos can be deceiving because these organizations operate with open systems and the entities within are loosely coupled. Functionally, the institution is organized with a specific structure, rules and regulations, and roles of the autonomous entities by which it is comprised. Status within the organization is directly related to the influence it exerts both within the institution as well as the external culture. The anarchical institution is characterized by problematic goals, unclear technology, and fluid participation.

Birnbaum (1988) discusses independent streams that flow within the anarchical system that affect coupling relationships including problems, solutions, and participants. Problems within the anarchical institution are constantly changing and drive individuals or groups to find processes or forums for resolving them. Solutions are someone's or some entity's product that may or may not be in response to a particular problem, and flow through the organization, giving rise to initiatives. In the open system of the anarchical institution, individuals and groups may choose to adopt and advocate for a particular solution. Free participation is characteristic in anarchical systems and individuals tend not to be assigned to participate in decision making nor are they barred from the process. They tend to come and go in the decision-making process based on their interests and availability. Birnbaum (1988) offers the analogy of a loosely braided rope to describe the coupling relationship of these three streams. The degree to which coupling occurs is dependent upon the intermittent contact that may occur between individuals or groups as they progress down the length of the rope. At times,

coupling may be very tight when problems, solutions, and participants converge, but in general coupling relationships in an anarchical system are rather loose.

The cybernetic institution is characterized by self-correcting mechanisms that monitor organizational functions and provide cues or negative feedback to actors within the system things are not going well (Birnbaum, 1988). As with political and anarchical organizations, groups within the cybernetic organization make operational decisions based on their own self interests. Administrators utilize adaptive or transactional leadership methods by responding to rather than initiating action. In fact, their leadership is seldom exercised. Academic units and other constituencies are loosely coupled within the cybernetic organization unless they form alliances for their mutual benefit. Instead of highly specific strategic planning, broad goals for my framework that allows much freedom in an environment with limited measurement. Inputs service the catalyst for change in the cybernetic institution instead of specific outputs or intended outcomes. Birnbaum (1988) compares the cybernetic organization to a thermostat that acts as a structural and social control system that responds to feedback from the environment. Management is primarily accomplished through subsystems that act independent of the overall institution.

Other Models for Understanding Higher Education Administration

The literature also reflects other frameworks for examining the administrative practices and organizational characteristics of higher education organizations. For example, the cultural context within a college or university affects teaching practice as faculty members adapt to the organizational norms of their institution and academic unit (Svinkcki & McKeachie, 2011). William H. Bergquist offers another perspective of higher education administration by examining the organizational culture of colleges and universities in his

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work *The Four Cultures of the Academy* (1992). He describes the four cultures—collegial, managerial, developmental, and negotiating—as a framework of institutional dynamics. Like Birnbaum (1988), Burquist's perspective is concerned with coupling relationships among faculty, administrators, and departments.

The collegial culture can be closely aligned with the institution in Birnbaum's (1988) model. A primary characteristic of the collegial culture is a quasi-political governance structure that elevates the role of the collective faculty for generating, interpreting, and disseminating knowledge. Berquist notes that the collegial culture originates both from the British or colonial system of higher education and the German-style university models (Cohen, 1992; Rudolph, 1990). The collegial culture is characterized by an autonomous faculty, academic freedom, shared institutional values, and an emphasis on tenure. Faculty leaders within the collegial culture enjoy a prestigious status by virtue of their scholarly activities, research, peer-reviewed publications, and institutional tenure (Bergquist, 1992).

The managerial culture had its origins in the community college movement as well as the growth of Catholic colleges. It is closely aligned to Birnbaum's (1988) bureaucratic type of institution. Organizations that operate with a managerial culture are outcomes driven with an emphasis on teaching and learning. They tend to be more fiscally efficient by reducing labor costs, approaching capital expenditures from a low-cost perspective, and reducing non-instructional services. The academic administration is actively involved in directing the teaching and learning process, establishing and supporting curriculum, and engaging with service in the local community. The focus within the managerial culture is on student development and instruction instead of the creation and dissemination of societal knowledge. Power and lines of authority within the managerial culture lie within a hierarchical system of

administrators (Bergquist, 1992). Faculty members are primarily focused on instruction and participate in leadership through established lines of authority.

Economic pressure has given rise to an emphasis on managerialism in higher educational organizations (Dearlove, 2002). Administrators are expected to manage their academic departments in a more efficient manner, applying the business model and utilizing cost-benefit analysis and process controls in their decision making (Bell, Warwick, & Kennedy, 2009). This focus on institutional efficiency includes adjusting the ratio between tenured faculty and adjunct instructors for cost-effectiveness; intensified the utilization of capital resources, such as buildings and technology, for efficiencies; and increasing the economies of scale to spread out overhead costs (Bergquist 1992). Critics challenge the appropriateness of applying business or industrial methods to the work of universities in disseminating knowledge through teaching and suggest that blending collegiality and managerialism is a desirable and achievable goal (Dearlove, 2002). Patricia Gumport (2007) noted historically as schools increased in size and their organizational structures grew more complex, external societal conditions reshaped the academic purposes and practices in American higher education. This trend leads to organizations that are "built to serve" with an organizational design purpose to prepare future leaders to meet society's needs (Gumport, 2001). In the managerial culture success is measured by students acquiring particular competencies for future career advancement (Bergquist, 1992).

Colleges and universities that adopt a developmental culture emphasize faculty development, curriculum development, and long-term institutional planning (Bergquist, 1992; Rice, Sorcinelli, & Austin, 2000). These institutions create an organizational climate where introspective and rational examination of the effectiveness of teaching and learning is

encouraged. Support for faculty members to live a balanced and integrated life is encouraged (Austin, 2003). Colleges and universities with a developmental culture increase efforts to conduct internal institutional research by examining organizational climate, management practices, and change processes. Teaching and learning are often elevated over research or other kinds of scholarly endeavors. Inclusiveness and conflict resolution are highly valued in the developmental culture. Faculty often identify themselves as instructors as opposed to experts in their particular field of study. Organizational development principles, borrowed from the corporate world, are often superimposed in these organizations. Additionally, a climate that fosters personal growth both of personnel, as well as students, is pervasive throughout the college.

The negotiating culture (Bergquist, 1992) can be found in bureaucratic or anarchical organizations (Birnbaum, 1988) where confrontation is necessary to acquire resources. The institution is segmented according to groups competing for power and it is understood in the negotiating culture that tension is inherent to the functioning of the organization. (Bergquist, 1992). Collective bargaining to advocate for salaries, benefits, job security, or working conditions may be involved in organizations that adopt a negotiating culture. The overriding value in these organizations is equity and egalitarianism. Academic freedom within a negotiating culture is controversial because it may be considered a condition of employment by collective bargaining agents, however faculty may perceive it as a right within an egalitarian system.

Bolman & Deal (2008) offer four frames for examining administration in higher education organizations: structural, human resource, political, and symbolic. They offer an analogy for each of the four frames in order to conceptualize their characteristics. The

structural frame can be thought of as a factory where managers act upon the organizational structure to accomplish goals. The human resource frame is analogous to a family where the administrative focus is directed to the relationship between the university and human nature, with an emphasis on building a committed and participatory workforce. Organizations that operate from a political frame are like jungles where individuals or groups compete for power, scarce resources, and to assert their point-of-view. Lastly, colleges and universities classified as symbolic are like temples where a shared mission is wrought out through symbolic elements such as myths, heroes, metaphors, stories, humor, play, rituals, and ceremonies (Bolman & Deal, 2008).

Colleges and universities that operate from a structural frame address two major organizational issues in the higher education landscape: (1) the division of labor into units with specialized roles and functions and (2) the creation of units to coordinate and integrate the specialized units both vertically and horizontally throughout the organization (Bolman & Deal, 2008). From these structural perspectives, institutional leaders assumed that the organization exists to accomplish goals, a structural form can be designed to address situations, rational solutions are the most effective way to address issues, specialization leads to higher performance, effectiveness is dependent upon coordination and control, and organizational problems typically originate from inappropriate structures or systems. The structural frame is closely aligned with Birnbaum's (1988) bureaucratic model and Bergquist's (1992) managerial culture.

The human resource frame (Bolman & Deal, 2008), as well as Bergquist's developmental culture, emerged from the recognition of a need to address the personal needs among members of higher education organizations. Administrative practice from the human

resource perspective is guided by these core assumptions: (1) organizations exist to serve human needs, (2) organizations and people need each other, (3) people suffer when the fit between the organization and the individual is poor, and (4) both the individual and the organization benefit when the fit is good. Strategies for building an effective workforce within the university involve selective hiring practices, rewarding and empowering employees for retention, and promoting diversity. Academic leaders that operate from the human resource frame must manage groups within the organization giving attention to norms, informal networks, and conflict.

The political frame offers another way to examine administrative practice in colleges and universities (Bolman & Deal, 2008). Administrators operating from the political frame understand that organizations are coalitions composed of varied individuals and interest groups. The diversity among these people and groups bring to the college environment enduring in their values, preferences, beliefs, information, and perceptions of reality. These differences slow the change process and must be considered by administrators when making organizational decisions. As groups compete for scarce resources, these enduring differences give rise to conflict which is central to the organizational dynamics. Therefore, power becomes the most important resource from the political perspective. Organizational goals and decisions originate from processes that involve bargaining, negotiating, and compromising among various actors with power in the organization. Bolman & Deal (1991) identify a number of sources of power in colleges and universities that include position power or formal authority, control over rewards, coercion, information and expertise, the reputation of individuals or groups, referent power emanating from personal characteristics like charisma, alliances and networks, authority to set agendas, and the control of institutional meaning and

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symbols. Power in the political environment can be highly concentrated and tightly regulated in an *over bounded system* or decentralized and loosely controlled in and *under bounded system*. Conflict is embraced as a dynamic force for new ideas and innovation. Administrators operating from a political perspective understand that paying attention to interpersonal relationships is essential for accomplishing organizational goals. Some administrators may affect political action utilizing a bottom-up approach while others hold fast to a top-down leadership style. Administrators and faculty members—particularly those from collegial, developmental, and negotiating cultures—may express concerns about the irrationality of the political process. They perceive the college or university operating from the political frame to be indifferent to the educational values, aspirations, or ideals of the institution. Members of the negotiating culture seem to be indifferent to teaching and learning and spend more time in political meetings than in preparation for class.

When applying a symbolic frame, academic leaders assume that what happens at the college or university is not as important as what it means. Activity is subject to multiple interpretations from diverse actors within the system and is loosely coupled with meaning. People create symbols in order to bring clarity and help all those involved at the institution find direction with a sense of optimism. Symbols can be a very powerful motivator to unite individuals for action within the organization. Some of the symbols in higher education organizations include myths, vision, and values that cut to the core ideology and internal culture. Administrators who examine colleges and universities from the symbolic frame look for heroes and heroines to provide iconic meaning to sometimes fragmented or anarchical systems. Rituals and ceremonies must be considered in understanding higher education through this symbolic lens. Because human beings create symbols to resolve confusion,

increase predictability, and provide direction in an ambiguous and uncertain environment, this symbolic frame is is appropriately applied to anarchical organizations as defined by Birnbaum (1988).

Classification of Higher Education Organizations

The Carnegie Commission on Higher Education is the principle institution for classifying higher education organizations in the United States for the purpose of research. Alternative classification schemes are used for other purposes such as rating the quality of organizations (Sukwadi, Yang, & Liu, 2011) but the Carnegie Classification has endured as the most notable standard in research. The Commission developed the traditional framework in 1970 and subsequently revised the taxonomy in 1976, 1987, 1994, 2000, and 2005 (Carnegie Foundation for the Advancement of Teaching). It is important to realize that the Carnegie designation is a time-specific snapshot of institutional attributes and the 2010 revision will be used for this study, which represents the status of organizations during the period of 2008 to 2010. Changes in the taxonomy may impact research using the classification system over time (Adams, Guarino, Witte, & Spataro, 2003)

The Associate's Colleges classification was developed by Katsinas, Lacey, and Hardy (Carnegie). Organizations are classified as Associate's Colleges if their highest degree offered is an associate's degree or if the number of bachelor's degrees is less than 10% of the undergraduate degrees offered. These statistics are reported by the Integrated Postsecondary Education Data System (National Center for Education Statistics). The classification is divided by geographic statistical areas (rural, suburban, or urban); institutional size (small – less than 2,500, medium – 2,500 through 7,500, and large – greater than 7,500); single campus

or multi-campus organizations; special use colleges; and other considerations regarding governance.

Baccalaureate Colleges are organizations where at least 10% of the degrees they award are undergraduate and they award fewer than 50 master's degrees (Carnegie). Differentiation within the category of Baccalaureate Colleges is similar to that of Associate's Colleges also identifies organizations with full time equivalent (FTE) enrollment of fewer than 4,000 students; and enrollment profiles, such as highly residential (a size and setting classification) or enrollment profiles that describe student demography (e.g., very high undergraduate, no graduate coexistence).

Master's Colleges and Universities and Doctorate-granting Universities are other major divisions in the taxonomy. Master's Colleges award at least 50 master's degrees in a target year, but fewer than 20 research doctorates (Carnegie). Research doctorates do not include professional doctorate degrees (J.D., M.D., Pharm.D., etc.). Program size in Master's Colleges is based on the number of master's degrees awarded (small – fewer than 50, medium – 100-199, large – 200 or more degrees). A classification was identified for programs that are Exclusively Graduate/Professional or Majority Graduate/Professional. The level of research activity is another factor that is considered in the classification of Doctorate-granting Universities. Data from the *National Science Foundation (NSF) Survey of Research and Development Expenditures* and the *NSF Survey of Graduate Students and Post Doctorates in Science and Engineering* was used in developing taxonomic categories.

The Carnegie Classification also includes major categories for organizations with a Special Focus and Tribal Colleges. Special Focus Colleges are those where there is a concentration of at least 75 percent of undergraduate and graduate degrees in a single field or

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set of related fields (Carnegie). The Commission designated Tribal Colleges as those recognized as members of the American Indian Higher Education Consortium (Carnegie).

The Commission also created the Undergraduate Instructional Program Classification and the Graduate Instructional Program Classification. The Undergraduate Instructional Program Classification examines organizations regardless of the presence or extent of graduate education. The Undergraduate profile classification uses a focus on characteristics of undergraduate students including the number of associate's or bachelor's degrees awarded, the proportion of students earning bachelor's degrees with majors in the arts and sciences or in professional fields, and the extent to which graduate and undergraduate degrees awarded were in the same fields. The Graduate Instructional Program Classification looks at the nature of graduate education including the mix of graduate degree programs in a particular discipline, the level of graduate degrees (master's to doctoral), and the number of fields represented. Medical and veterinary degrees are considered separately from other graduate degree programs.

Beliefs about DAP in Early Childhood Teacher Preparation Programs

Since the primary purpose of this study is to examine differences in faculty beliefs about developmentally appropriate practice, an understanding about the basis for DAP is discussed. Developmentally appropriate practice is an intentional approach by teachers to make pedagogical decisions based on knowledge about child development and learning, the individual children's needs, and social and cultural context in which children live (Copple & Bredekamp, 2009). Flowing from the work of theorists such as Piaget, Vygotsky, and Erikson, some basic principles that characterize DAP include: meeting the physical and psychological needs of children is necessary for learning; children construct knowledge; social interaction

with other children and adults is necessary for learning; children learn through play; children's interests and curiosity fuel their motivation to learn; and individual differences are part of development and learning (Bredekamp, Knuth, Kunesh, & Shulman, 1992).

DAP is rooted in social constructivist theory, that is characterized by collaborative activities that lead to shared meaning which is socially constructed, communicated, and mediated through symbolic tools (Berk & Winsler, 1995; Erikson, 1950; Vygotsky, 1978). Constructivist theorists believe that knowledge of the world is constructed from information through experiences in a sociocultural context (Dewey, 1997; Vygotsky, 1978). The sociocultural approach to teaching and learning is based on social constructivist theory that knowledge is constructed through society and interactions with others (Berk & Winsler, 1995; Erikson, 1950).

The Curriculum in Early Childhood Teacher Preparation

College programs also differ in how they value the relationships among their students and the implementation of a culture that emphasizes interaction in the academic setting (Lanigan, 2010; Moran, 2007). Collaborative study and engaging in meaningful learning communities is especially effective for education students. Moran (2007) emphasizes the importance of social constructivism in the educational experience of pre-service teacher programs and suggests that schools of education should implement collaborative action research as an essential component to their program.

Another aspect of the philosophical approach to early childhood teacher preparation is an inquiry-oriented teaching stance. Reflective inquiry accompanied with action is important to the intentionality of teachers and the basis for their decision making. The level of reflectivity is shown to be an essential element to teacher preparation and an important aspect

of quality in teacher education (Moran, 2007). Effective early childhood teachers use documentation to make visible and public the relationship between teacher thinking, practice, and children's learning. Teacher research can be included in assignments such as researcher projects, partnership research, and its extension into classroom research with children. Reflective practice is also an essential element for professionalizing the field (Hyson, et al, 2009; Moran, 2007).

Program Structure in Early Childhood Teacher Preparation

Structural aspects of the program itself must be considered for their contribution to preparing early childhood teachers for the classroom. Factors by which early childhood teacher preparation programs differ include the characteristics of organizations (Croninger, 2007; Early, 2006; Levine, 2005; Lobman, 2005; U.S. Department of Education, 2009), the college program philosophy (Bowman, Donovan, & Burns, 2000; Hyson, et al, 2009; Lanigan, 2010; Moran, 2007), and the structure of the college program (Croninger, 2007; Early, 2006; Lobman, 2005; Macy, Squires, & Barton, 2009). Characteristics specific to early childhood teacher preparation such as the type of degrees offered (Early, 2006), whether it is designed to lead to state certification (Croninger, 2007; Lobman, 2005; U.S. Department of Education, 2009), and the credit-hour requirements for both general education and core content can reveal much about the nature of college programs.

The focus and purposes of the program may also be related to the types of degrees that are being offered, whether they are leading to state certification and the amount of teaching with a focus on early childhood special education. These differences radically impact how the teacher perceives young children and their role as an instructional leader or facilitator of developmental progress. Some organizations offer more than one degree program to meet the

diverse needs of its students and the community. Employers may require an associate's or bachelor's degree as a pre-service requirement, or they establish professional development plans for their staff with expectations that degrees will be earned over an established period of time. Congressional re-authorizations of the Head Start program set benchmarks for specific degree attainment requirements by 2013 (Hull, 2009).

The nomenclature for the degree programs vary between organizations, contributing to the lack of clarity about the educational preparation of early childhood personnel and the number of credit hours related to early childhood education and child development may be different form one college to another (Abel & Fuger, 2009). Awarded through the Council for Professional Recognition, the Child Development Associate (CDA) is a nationally recognized credential that recognizes performance on competency goals in early childhood programs. More than 300,000 individuals nationwide who hold CDAs work in a variety of settings (Council for Professional Recognition, 2009). Some community colleges offer a non-degree course of study leading to a certificate of proficiency which is not considered a degree, but it is recognized as an incremental step between the CDA and an associate's degree (Hull, 2009). A number of degrees are offered at the associate's level, including the Associate in Applied Science (AAS), the Associate of Arts (AA), and the Associate of Arts in Teaching (AAT).

Baccalaureate degrees and advanced degrees related to early childhood are offered through different programs such as Education – Early Childhood, Child Development, Family and Consumer Science with an emphasis in Child Development, and Early Childhood Special Education. For example in Missouri, certification is issued through Missouri's State Board of Education and is administered by the Department of Elementary and Secondary Education (DESE). Missouri teachers can be certified in Early Childhood (birth to grade 3); Early

Childhood Special Education; Elementary Education – Early Childhood; or Family Resource Specialists requiring a Bachelor's degree from a state-approved teacher education program with coursework in content and pedagogy, supervised student-teaching experience, a passing score on a praxis test, and a child abuse and neglect background screening (Missouri Department of Elementary and Secondary Education, 2010, October).

Standards for teacher knowledge and the understanding of child development, competency-based standards for early childhood programs, and standards for teacher preparation programs is a second aspect of program structure. Teachers' knowledge should be based on current research and should include evidence-based practices (Hyson, et al, 2009). Standards regarding knowledge for children such as the Missouri Early Learning Standards identify specific content in early literacy, math, physical development/health and safety, science, and social and emotional development (MO DESE, 2009). They include content components, process standards, indictors, and examples of specific behaviors children can exhibit.

Developmentally Appropriate Practice (Copple & Bredekamp, 2009) is a framework of principles and guidelines for best practice in the care and education of young children which is based on research of children's optimal development. Early childhood teachers should have a thorough knowledge of standards that exist for early childhood programs such as: *Head Start Performance Standards* (MOA, 2010; U.S. Department of Health and Human Services, 2008), early childhood program accreditation standards (NAEYC, 2005;), and state licensing regulations (DHSS, 2010) are examples of many types of standards that are established for programs.

A third aspect that applies to structure involves standards for teacher preparation programs. While the literature of teacher preparation specifically for early childhood teachers is limited, there is considerable evidence of teacher preparation in general. In 2009, NAEYC issued revised standards for early childhood professional preparation programs for use in higher education accreditation systems, professional development systems, state policy development, and in program improvement planning. Independent standards exist across degree levels from associate to baccalaureate to graduate programs (Hyson, 2003; NAEYC, 2009; NCATE, 2001). The literature suggests that strengthening relationships between associates' and advanced degree teacher education programs leads to quality teaching (Hyson, et al, 2009). Standards for teacher preparation in Missouri impact quality of college and university programs in the state (Council of Chief State School Officers, 2010; MO DESE, 2010). These standards address the learner and learning theory, content of teacher preparation programs, instructional practices, and professional responsibility.

Academic Leadership and the Faculty

The models for institutional type, culture, and framework offer a perspective of higher education administration with regard to operational factors and influences on organizations. However, leadership must also be considered when examining how colleges and universities operate. Leaders in higher education, including faculty members in early childhood programs, have a responsibility to meet societal demands for a competent citizenry and meaningful contributions to fields of study (Kallison & Cohen, 2010; Metz, 2010). The literature is flush with references advocating for more academic freedom in a culture of accountability (Bawa, 2009; McAreavey & Muir, 2011; Palfreyman, 2007; Ren & Li, 2013; Schrecker, 2012), but Kennedy (1997) notes that *academic duty* must accompany the freedom to teach. Academic

leaders are able to guide the Academy in instruction and scholarship that is responsive to the dynamics of a post-modern culture.

Adaptive leadership is an emerging conceptual framework, introduced by Ronald Heifetz (1994), who approaches leadership more as a process rather than that of individual style or attributes of the leader. It has its roots in contingency theory that suggest that diverse situations require varying types of leadership to be effective (Bolman & Deal, 2008). Adaptive leadership is defined as "the practice of mobilizing people to tackle tough challenges and thrive" (Heifetz, et al., 2009, p. 14). Instead of framing leadership in terms of authority, power, and influence, this model views leadership as a practice (Heifetz, 2009). Adaptive leaders are shaped by the constituencies they serve and decisions are made collaboratively. Heifetz suggests that adaptive leadership is especially useful in systems, such as political and anarchical organizations, where the challenges are too complex to be addressed by types of conventional leadership. The capability of individuals to effect meaningful change in an "organized anarchy" (Birnbaum, 1988) is impotent without collective participation of multiple stakeholders. So we see that adaptive leaders are engaged in a "dance" with individuals, constituent groups, coalitions, and external entities and do not act independently from a position of authority when making decisions.

Thriving through change is characterized by building upon the past instead of discarding lessons learned; relying on diversity; and significantly displacing, reregulating, or rearranging old models. The adaptive leader is one who calls for collaborative action from the diverse stakeholders related to the organization and the adaptive challenge. Austin (2002) found that graduate students preparing for professorships experienced a lack of systematic professional development opportunities, minimal feedback and mentoring from faculty, and

few opportunities for guided reflections. These finding raise questions about the perpetuation of highly skilled adaptive leaders in higher education for the future. The process takes time to unfold and adaptive leaders must be committed to persist through the arduous change process even if progress is intermittent and incremental.

Adaptive challenges, those that can only be addressed through changes to people's priorities, beliefs, habits, and loyalties, are differentiated from technical problems (Heifetz, 1994). Technical problems can be very challenging, but the technical issues can be clearly defined, known solutions may exit to correct the problem, and they are often addressed through the existing authority structures of the organization (Heifetz et al., 2009). Technical challenges can be dealt with through institutional systems by applying transactional or transformational leadership as previously discussed. With adaptive challenges however, the problem itself may be undefined or ambiguous and discovering solutions required additional learning from diverse stakeholders. Since adaptive challenges involve the priorities and beliefs of individuals, understanding adaptive leadership in higher education setting is important to this study.

Responding to adaptive challenges is especially salient for political and anarchical organizations of higher education. Colleges and universities with political systems may have many diverse power centers and each of these groups represents positions based on their group's needs and interests (Birnbaum, 1988). Traditionally, leaders of political organizations assumed a role of mediator, clarifying group values, helping organizations select alternative policies and programs, and providing incentives to encourage participation in the process. These methods may be effective to address technical problems where problems are apparent and solutions are known. But adaptive leadership can be a useful approach when the

competing interests of diverse groups present paradoxical issues and collective learning is necessary to discover potential solutions.

Similarly, adaptive leadership is useful in the complexity of anarchical university environments. University presidents are relatively powerless as individuals in a system where there are "too many variables and potential interactions to permit complete understanding, and the bounds of rationality interfere both with observation and with interpretation (Birnbaum, 1988, p. 157). Cohen and March (1974) refer to the presidency as an illusion with only symbolic significance in university affairs. University presidents can be powerful leaders in adaptive leadership structures because the dynamic is not dependent on the assertion of positional power. Rather, the adaptive leader is one that is able to focus attention, frame the issues, mediate conflict among stakeholders, and maintain a level of productive distress (Heifetz, Kania, & Kramer, 2004).

Unlike the role of a mediator, the adaptive leader seeks to maintain a level of individual and collective distress that Heifetz refers to as the productive zone of disequilibrium (Heifetz et al., 2009; Heifetz & Laurie, 1998). If the collective consciousness about the adaptive challenge falls below the PZD, stakeholders become comfortable and satisfied, stymieing the progress of the adaptive work. Since adaptive work is not linear, there can be considerable fluctuation in the focused attention to the challenge and the adaptive leader may need to engage in circular processes to re-engage diverse constituents and keep the collective dialog going. It may also be necessary to mediate conflict that occurs in political or anarchical environments and to provide safe havens to discuss disparate perspectives when the influence of power groups becomes counterproductive (Heifetz, 2004).

While empirical evidence of the effectiveness of adaptive leadership in higher education is lacking, some examples of its use can be found in the literature. A case study at Virginia Polytechnic Institute and State University (Virginia Tech) revealed efforts to partner with local community agencies to address complex issues related to a need for change in social and economic problems of that part of the state. Poly Tech was perceived as an adaptive leader in the community change process (Stephenson, 2011). It should be noted that the University, itself, was perceived as the leader and not an individual person as the catalytic change agent. This supports the theory that adaptive leadership shifts the focus from the individual and embraces the process of change through collective impact. The nature of the institutional setting may also dictate the degree to which faculty members and administrators feel at liberty to implement an adaptive leadership approach. Bodla & Nawaz (2010) found that transactional leadership is more prevalent in the private sector over public sector organizations.

Another example of adaptive leadership's application in education is system building work occurring in the field of early childhood care and education. In 1991, the Carnegie Corporation of New York initiated an adaptive change process to design a career development framework in partnership with NAEYC (Goffin & Washington, 2007). Over the next decade this adaptive work expanded to several different initiatives funded by a number of foundations to address systemic problems in the field regarding program quality, collective advocacy, and financing in early care and education. This work had evolved into sectors that reach beyond the field early care and education to engage business leaders to address issues regarding school readiness as a public investment strategy for America's economic success (Zeidman & Scherer, 2009). NAEYC is currently engaged in a multi-year adaptive process, called the

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National Dialog, to continue the adaptive process of defining the field and addressing critical challenges for the organization and early childhood professionals. Each of NAEYC's component parts (the national organization, state affiliates, and local chapters) participate in a process to examine the organizational mission, structural configuration, and the role of member voice in shared governance (Carlin, 2012). Other challenges requiring adaptive leadership face the field of early care and education. Goffin and Washington (2007) identified two of these adaptive challenges: "(1) *The Performance Gap*: The gap between the fields expressed commitment to children's high-quality early care and education and its uneven collective competence, and (2) *The Credibility Gap*: the gap between the desire to be recognized as educational leaders on behalf of early care and education and "self-protective behaviors" that accommodates individuals with sub-standard qualifications or practices to be more inclusive of all current practitioners (p. 57).

The focus of this study hypothesizes that differences among colleges and universities and their respective early childhood teacher preparation programs affect the beliefs of early childhood teacher educators regarding DAP. It will seek to determine if the uneven collective competence or *Performance Gap,* identified by Goffin and Washington (2007), extend to faculty teaching in university schools of education or college child development programs. Results of this study may be useful for higher education administrators as they address the adaptive challenges in early childhood care and education.

Diversity Among Teacher Educators

Diversity of the higher education workforce is an important aspect in understanding perspectives of faculty beliefs. While leaders among early childhood educators have espoused the value of diversity, inclusion, multiculturalism, and social justice (Kagan & Bowman,

1997)—underrepresentation of minority groups has existed for decades and persists among college faculty teaching in early childhood programs (Altbach & Lomotey, 1991; American Federation of Teachers, 2010; Early & Winton, 2001; Mueth, 2009). Institutions of higher education have struggled to address this disparity but little progress has been made to address differences between the racial distribution of higher education personnel and the general population in the United States. Phillip Altbach and Kofi Lomotey raised attention to this problem in their seminal work, The Racial Crisis in American Higher Education (1991). The 2010 Census reports that 72.4% of the population was White; 12.8% was Black or African-American; 5.0% was Asian, Native Hawaiian, or Pacific Islander; 0.9% was American Indian and Alaska Native; 6.2% was some other race; and 2.9% were 2 or more races. Individuals self-identified as Hispanic or Latino made up 16.3% of the population (U.S. Census Bureau, 2010). When these data are compared with the racial and ethnic distribution of higher education faculty, we see that minority groups are substantially underrepresented. The U.S. Department of Education, National Center for Education Statistics (2010) reported that the of college and university faculty, 7% were Black, 6% were Asian/Pacific Islander, 4% were Hispanic, 1% were American Indian/Alaska Native, and 79% were White (2011). Of White faculty members, 37% were female and 42% were male.

In contrast, we see a very different picture of the students that are enrolling in colleges and universities. The U.S. Department of Education, National Center for Education Statistics (Spring, 2011) reported that 60% of college students are White, while 15% are Black, 14% are Hispanic, 6% are Asian or Pacific Islander, and 0.5% are American Indian or Alaska native. The percentage of Black students as compared to African-American faculty members is about

two times greater. The percentage of Hispanic students is more than three times greater than the percentage of faculty members.

These disparities among teacher educators and their students mirrors that of higher education in general (Early & Winton, 2001; Gay & Howard, 2000; Wilson, Floden, & Ferrini-Mundy, 2001). Diversity issues in early childhood higher education programs were addressed by establishing accreditation standards for 2-year and 4-year programs (Hyson, 2003). "Guidelines" for formal early childhood teacher education programs were first developed in 1996 (Hyson, 2003). In 2003, the Council for Exceptional Children (ECE) and the Division for Early Childhood (DEC), and the National Board for Professional Teaching Standards (NBPTS) partnered with NAEYC to revise and update the guidelines to create Standards for Initial Licensure, Advanced, and Associate Degree Programs (Hyson, 2003). NAEYC also collaborated with the National Council for Accreditation of Teacher Education (NCATE) to adopt and align these standards for the accreditation of four-year teacher preparation programs. Principles of multiculturalism are embedded throughout the standards that include promoting child development and learning; building family and community relationships; observing, documenting, and assessing to support young children and families; connecting with children and families for teaching and learning; and using developmentally effective approaches. A multicultural lens is applied to each of these standards and embedded throughout the key elements, assessments, and supportive skills (Hyson, 2003).

An NAEYC study suggested support for higher education faculty is needed to increase the quality of multicultural education and early childhood classrooms (Daniel & Freidman, 2005). Increased faculty knowledge regarding culture, language, race, social class, special needs, and other dimensions of diversity is needed to support student understanding leading to

culturally appropriate curriculum and practice. Additional support is necessary to move the

field forward by changing faculty dispositions through collegial discussion and racial identity

development. Daniel and Freidman (2005) recommended that college and university faculty

engage in authentic field experiences as an ongoing part of faculty practice. In 2009, Ramey

and Ramey presented their findings that early childhood education holds promise for closing

achievement gap, but not all programs were able to do so. They identified reasons for failure

to improve outcomes for minority children were that teachers were not well prepared or

supported in their classrooms; the dosage of pre-K was too low; instruction was inadequate to

promote cognitive, language, early literacy, and early math skills; communication and

engagement with parents was ineffective; or instruction was harsh and rigid (Ramey &

Ramey, 2009).

As the American population continues to trend toward greater diversity, the need for

teachers to be prepared in multicultural education pedagogy is increasingly critical. The

literature suggests that if the Academy of early childhood teacher educators is not

proportionately diverse, greater attention is needed to ensure educators are implementing a

curriculum that prepares an early childhood teaching workforce to address the diverse needs

of the children they will serve.

Developmentally Appropriate Practice

Since the 1980s, developmentally appropriate practice (DAP) has been the hallmark

for early childhood education and widely considered to constitute "best practices" in the field

(Bredekamp & Copple, 1997; Dunn & Kontos, 1998; McMullen & Alat, 2002). The National

Association for the Education of Young Children (NAEYC), the largest organization for early

childhood practitioners and researchers, issued a position statement and published a book on

DAP (Bredekamp, 1987) that became the standard by which practitioners evaluate care and education methodology for children birth through third grade. These standards were revised twice to ensure that they were relevant for the field and responsive to the changing issues faced by teachers and care providers when working with infants, toddlers, preschoolers, and children enrolled in kindergarten and the primary grades (Bredekamp & Copple, 1997; Copple & Bredekamp, 2009). DAP teacher beliefs were also found to be cross-cultural, universally held by teachers in other countries and flexible enough to be adapted to other cultural situations (Lee, Baik, & Charlesworth, 2006; McMullen et al., 2005).

DAP is also embedded in the higher education standards for early childhood professional preparation (NAEYC, 2002; NCATE, 2001). NAEYC collaborated with the National Council for Accreditation of Teacher Education (NCATE), in 2001, to revise the NAEYC guidelines for higher education programs preparing early childhood professionals, creating standards for the field that were more fully performance-based. NCATE is the primary accrediting body of teacher preparation units (e.g., school, college or department of education) that offer baccalaureate or graduate degrees leading to initial or advanced teacher licensure. Four of the five NAEYC/NCATE Core Standards directly relate to DAP including: Standard1. Promoting Child Development and Learning; *Standard 2. Building Family and Community Relationships*; *Standard 3. Observing, Documenting, and Assessing to Support Young Children and Families*; and *Standard 4. Teaching and Learning* (NAEYC, 2002).

Developmentally appropriate practice is largely based on constructivist learning theories as put forth by such theorists as Piaget, Dewey, Vygotsky, and Kohlberg (Hagan, 2011; Kim, 2005). DAP embodies a perspective where the developmental domains of the whole child are interconnected. From this paradigm, early childhood educators incorporate

cultural and developmentally responsive methods that differentiate instruction and assessment

to meet the needs of the individual child (Barnett et al., 2008; Hagan, 2011; NAEYC, 2002;

Sanders, Deihl, & Kyler, 2007). Teachers that implement DAP intentionally seek to

understand the interest and needs of their students and responsively moderate the curriculum

so that activities are both challenging and achievable (Baumgartner, Buchanan, & Casbergue,

2011; Helm & Katz, 2011; Tomlinson & Hyson, 2012). Copple and Bredekamp offer the

following description of DAP:

"All teaching practices should be appropriate to children's age and developmental

status, attuned to them as unique individuals, and responsive to the social and cultural

contexts in which they live. DAP does not mean making things easier for children.

Rather, it means ensuring that goals and experiences are suited to their learning and

development and challenging enough to promote their progress and interest. Best

practice is based on knowledge – not on assumptions – of how children learn and

develop. The research base yields major principles in human development and

learning. Those principles, along with evidence about curriculum and teaching

effectiveness, form a solid basis for decision making in early care and education

(2009, p. xii)."

A variety of curriculum approaches used in early learning programs promote positive

approaches to learning that are developmentally appropriate. Indicators of a curriculum that

lead to positive child outcomes offer children opportunities to be active and engaged, have

shared goals, is evidence-based, employs focused investigation and intentional teaching, and

builds on prior learning and experiences (Hyson, 2012). In most cases, curricular materials

and approaches can be adapted so the activities and human interactions are developmentally

appropriate and differentiated to meet the cultural and personal needs of the individual child.

DAP is also influenced by social-learning theory, which emphasizes that learning and

development are interrelated in a complex relationship beginning from infancy (Berk &

Winsler, 1995; Vygotsky, 1978). Through interaction with people in the child's school

environment and cooperation with peers, internal developmental processes are stimulated that

lead to the child's independent accomplishment. The child's process of learning that involves

specialized abilities for thinking about a diverse set of subjects is key to his development.

Children are able to focus their attention on a variety of things and develop various cognitive

schema associated with them (Vygotsky, 1978). The social context must be considered when

planning and implementing a developmentally appropriate curriculum.

Anti-bias education has emerged as a hallmark of stated practice in the early childhood

community and is embedded as one of the "sacred stories" (Clandinin, 2006) in the rhetoric

and narratives of the field. It is prominent in many of the more progressive approaches along

the educational continuum (Derman-Sparks & Edwards, 2010) and emphasizes creating a

learning community that supports multiculturalism, fairness, and social justice. NAEYC's

official position statement on developmentally appropriate practice (DAP) in early childhood

programs was revised in 2009 largely in order to address equity issues in the conceptual

framework and to acknowledge the importance of early childhood educators' role in reducing

the achievement gap (Copple & Bredekamp, 2009; Chapin, 2006). This objective was directly

addressed in a 2009 position statement with this key message:

"Because in the United States children's learning opportunities often differ sharply

with family income and education, ethnicity, and language background, sizable

achievement gaps exist between demographic groups. Emerging early in life and persisting throughout the school years, these disparities have serious consequences for children and for society as a whole. Narrowing the gaps must be a priority for early childhood educators as well as policymakers (Copple & Bredekamp, 2009, p. xii)." Embedded within the 2009 revision are pedagogical strategies consistent with culturally competent best practices such as establishing reciprocal relationships with families, ensuring that assessment of children's learning is culturally appropriate, and intentionally seeking curricular content that supports learning for all children.

Differentiated instruction involves observing the child to ensure that learning is occurring within his or her zone of proximal development. The zone of proximal development is the difference between actual development (the level of cognitive development established from previous development cycles) and proximal development which is the level for which the child is on the cusp of mastering (Berk, 1995; Bodrova & Leong, 2007; Vygotsky, 1978). It is proximal because it refers to the child's immediate future development and represents the potential for change in the child's developmental state.

The importance of play in the learning process is a key characteristic of DAP. It is much more that simply an activity that gives children pleasure, but is an essential activity for physical and intellectual growth (Barnette, Jung, Yarosz, Thomas, Hornbeck, Stechuk, & Burns, 2008; Berk, 1995; Jones & Reynolds, 1992; Lifter, Mason, & Barton, 2011; Lynch, 2012; Saracho & Spodek, 2006; Vygotsky, 1978). Play fulfills children's needs and is a factor for helping them to explore higher level thought processes through changes in their motives, inclinations, and incentives. Imagination is a psychological process for the preschool child to relieve tension that develops because there are unrealizable tendencies and desires to be

satisfied. It is generated in the child's actions and unfolds through symbolic representation that incorporates a set of rules that govern the behavior of the child and others that may participate in the imaginary frame.

Developmentally inappropriate practices (DIP) are those instructional methods and teacher dispositions or behaviors that limit self-initiated, spontaneous play. DIP may also include the use of physical punishment or ignore cultural differences among children (Bredekamp & Copple, 1997). Instead of the teacher creating a learning environment that fosters independence and includes differentiated instruction, DIP emphasizes direct instruction that is often compartmentalized into traditional content areas (Hart, Burts, & Charlesworth, 1997; Sakellariou & Rentzou, 2012)

There is strong evidence to support that DAP positively affects child development and learning (Armstrong, 2007; Barnett, 2008; Bowman, Donovan, & Burns., 2000; Comer, 2004; Copple, 2012; Galinsky, 2010; Goffin & Washington, 2007; Lay, 2005; Lee & Lin, 2013; Kappner & Lieberman, 2004; Marcon, 1999; McKeough et al., 2008; Mogharreban and Bruns, 2009; Ray, Bowman, & Robbins, 2006; Ryan & Ackerman, 2004; Shonkoff & Phillips, 2000; Takanishi, 2006). However, there is some research that demonstrates child outcomes were not affected by DAP. Lee Van Horn and Ramey (2003) did not find a relationship between DAP in Head Start classrooms and subsequent academic outcomes for primary grade students. A multi-level analysis of children's reading achievement did not find consistent differences for children that were in developmentally appropriate classrooms from kindergarten through third grade (Kumtepe, 2005). DAP was not found to predict children's multidimensional self-concept (Smith & Croom, 2000). Despite any inconclusive evidence

about the effects of DAP on child outcomes, it is generally considered to be beneficial and best practice for early care and education.

Effects of Early Childhood Teacher Preparation

Evidence in the literature suggests that pre-service teacher preparation influences subsequent classroom practice, including critical components of child development, academics, and methods associated with student success (Kappner & Lieberman, 2004; Mayo, Kajs, & Tanguma, 2005; Ray, Bowman, & Robbins, 2006; Ryan & Ackerman, 2004; Takanishi, 2006). A relationship was found between field experience in pre-service teacher education and classroom practice (Boe, Shin, S., & Cook, 2007). Light and Georgakis (2005) found that integrating theory and practice with an emphasis on experience and reflection affected teaching outcomes.

There is some evidence to support that early childhood teachers with a bachelor's degree perform better and are considered to be more qualified than those with an associate's degree, but the magnitude of these effects are inconsistent (Boe, 2007; Bogard, Traylor, & Takanishi, 2008; Croninger, 2007; Early, Bryant, Pianta, Clifford, Burchinal et al., 2006; Early, Maxwell, Burchinal, Bender, Ebanks, Henry et al., 2007; Kelley & Camilli, 2007; McMullen, Alat, Buldu, & Lash, 2004; Saracho & Spodek, 2007). Early childhood teachers with a bachelor's degree or higher were found to be more likely to adopt DAP as a philosophy over teachers with less education (McMullen & Alat, 2002). However, a bachelor's degree alone was not found to predict classroom quality or children's academic outcomes (Early et al., 2007). These inconsistencies in the literature continue to fuel debate among early childhood leaders about minimum educational standards for teachers and necessary educational components in professional development systems.

The qualification of early childhood teachers were found to have a direct relationship to their beliefs about DAP and their tendencies to utilize developmentally and culturally inappropriate methods in the classroom (Vartuli, 1999; Vartuli & Rohs, 2009, Zeng & Zeng, 2006). Early childhood teacher training is the context in which teachers develop beliefs that support social and educational contexts in the classroom that is developmentally responsive (Hagan, 2011). Zambo (2008) found that child care workers knew about the importance of child/staff interactions, but lacked specific knowledge about brain development, sensitive periods, and other factors critical to classroom function, environments, and learning. Similarly, teacher librarians of young children lacked a complete understanding of the relationship between early vocabulary development and later reading ability (Cahill, 2012).

In addition, there is a pedagogical "split" between traditions in teacher preparation for elementary and secondary education and early childhood education (Hagan, 2011). Charlton (2010) found significant differences among certified kindergarten teachers whose certification was in early childhood education, elementary education, or dual certification in elementary and early childhood. A constructivist approach that is child-centered and focuses on development is a central tenant of non-licensure programs. Faculty members sometimes find themselves in a conundrum of how to work in a curricular system with a focus on subject matter and methodology, while supporting their epistemological beliefs about DAP (Hagan, 2011).

Hyson, Tomlinson, and Morris (2009) found that teacher educators heavily relied on NAEYC Standards for Professional Preparation (NAEYC, 2001) and NAEYC's standards for programs for young children (NAEYC, 2005) for guidance regarding program quality. In addition they found that faculty in baccalaureate programs tended to rely more on state teacher

preparation standards, standards from the National Council for Teachers of Mathematics (NCTM), and standards from the Interstate New Teacher Assessment and Support Consortium (INTASC) than instructors of associate degree programs (Hyson, 2009).

Faculty Beliefs

It is simplistic to try to understand the relationship between faculty beliefs and colleges without considering the greater landscape of higher education and the considerable variability in early childhood teacher preparation (Hyson, Tomlinson, & Morris, 2009). The models we have considered thus far: institutional type, organizational culture, and frameworks highlight the complexity of the field. But faculty beliefs are constructed from personal experience shaped and influenced by social context of the higher education landscape. Clandinin & Connelly (1998) described the "professional knowledge landscape" as a dynamic place with a history where people interact through community relationships (p. 150). It is difficult to separate the individual teachers beliefs from their conceptions about their environment. Phillion (2002) recognized that higher education faculty today work in multicultural environments and complex organizational systems that impact their understanding about teaching and learning. She describes "place" as "a multidimensional, living landscape, filled with diverse people, events, and interactions" (p. 42). Therefore it is not unreasonable to expect that organizational structure, coupling relationships within the institution, and the culture of colleges and universities have a profound effect on shaping faculty beliefs.

Parjares (1992) distinguished beliefs from content knowledge. He emphasizes the existential nature of beliefs and how they are formed through personal episodic experiences. Beliefs are based on existential presumptions and are perceived by the individual to exist

beyond their own control or even their current knowledge. In contrast, knowledge is constructed from human perception as the individual seeks to create schemata to bring meaning and structure to their thoughts. Beliefs emanate from the individual's episodic memory and tend to be unchanging. A seven-year longitudinal study revealed that faculty beliefs tend to hold stable over time (Hyman & Jing, 2005). Educators make decisions that guide their pedagogy based both on their knowledge and their beliefs. Knowledge may be useful for technical aspects of teaching, but educators access their beliefs in curricular functions such as establishing goals, intentional teaching, forming conceptions about children, and activity planning.

Research suggests that beliefs directly influence faculty conceptions of teaching and learning which in turn affects teaching methodology (Austin, 2003; Bai & Ertmer, 2008; Buldu, 2003; Glaeser, Leuer, & Grant, 2012; Pajares, 1992; Sellheim, 2006). There is evidence that some early childhood pre-service teachers link their self-reflective epistemological beliefs with a constructivist view of their own learning and that of young children (Brownlee et al., 2008). However, most pre-service teachers do not make the connection between their own beliefs about children's learning and early childhood teaching practice to their perception of their own personal learning style and competencies. Vartuli and Rohs (2009) empathized the need for teacher educators to help their students reexamine and reconstruct their beliefs about teaching by motivating them to take ownership of their own learning. The research is not clear however about how faculty epistemological beliefs are translated into their instructional practice with college and university students. There is some evidence to suggest that the beliefs about teaching and learning of faculty members differ across various types of college and university settings (Addy, 2011; Austin, 2003). Medical

school faculty differed in their core beliefs about motivation, knowledge, and skill acquisition, retention, feedback, transfer characteristics, and teaching strategies (Williams & Klamen, 2006).

Buldu (2003) found that the epistemological beliefs of 557 early childhood teacher educators across the United States was congruent with a constructivist approach, but incompatible with activities they used in the college classroom with pre-service teachers. In this study, differences in the beliefs of teacher educators were found across various types of organizations, the type of college degree to which their students were seeking, the major field of study, and the longevity of their teaching experience at the college level. Faculty members seek to help pre-service teachers construct their own knowledge and dispositions about DAP and provide experiences through fieldwork to solve real problems in early childhood settings (Buldu, 2003). Teacher educators seek to provide foundational understanding about constructivist theory that is translated into teaching practices such as active engagement, inquiry, problem solving, and collaborative learning experiences.

One conception of the professoriate is the "complete scholar" who understands and is able to transfer knowledge about the whole and the parts of an academic discipline (Austin, 2003). The complete scholar, as an adaptive leader (Heifetz, 2009), engages in different scholarly pursuits throughout his or her career, constructing knowledge about the discipline, its relationship to other fields, the application of knowledge to societal issues, and facilitating engagement of others in pertinent ideas and practices (Austin, 2003).

Early childhood educators that adopt a constructivist philosophy perceive young children as competent, capable individuals that actively engage and participate in their own learning within a social context (Edwards, 1998). Loris Malaguzzi described this "image of

the child" as both a *protagonist* and a *co-constructor* of knowledge in context (Edwards, 1998). Similarly, the image of the "complete scholar" is one where the informed and competent individual interacts with students, colleagues both within and outside of their own discipline, and the greater community in the pursuit of knowledge that informs practice (Austin, 2003).

Raymond Wlodkowski (2008) notes the importance of faculty knowledge in motivating students to learn, "The dominant question adult learners have for any instructor is, 'Can you really help me?'" (p. 51). Early childhood teacher educators must have a thorough understanding of DAP and the ability to communicate this expertise to students so as to incorporate it into the curriculum and teaching methodology. This is especially essential for instructors in their role as curriculum designers. Teacher educators must apply their knowledge when developing assignments, guiding class discussion, structuring peer-learning activities, and supervising field experiences if the knowledge transfer is going to result in shifts in the students' beliefs that will be sustained over time (Vartuli & Rohs, 2009).

The effectiveness of the college faculty member may also be moderated by their sense of self-efficacy. Human agency is acts that are done with intentionality, based on the individual's belief that they will produce certain effects—the consequences of the intended actions (Bandura, 1997). Self-efficacy is based on the individual's belief that they can exercise influence over what they do and can contribute to what happens to them. People do not simply react to their environment and to the situations they face in life, but rather their intentions are intricately embedded in the cause of events and they seek certain results from their actions. Depending on the institutional type or the organizational culture, early childhood teacher educators may or may not have a strong sense of control regarding the

intentionality of their curriculum. They may feel constrained by the institution itself or other standards established in the field that influence the curriculum.

There is also evidence to suggest that faculty beliefs influence the beliefs of their students (Bai & Ertmer, 2008; Glaeser, Leuer, & Grant, 2012; Vartuli & Rohs, 2009). Though Parjares (1992) notes that beliefs are immutable, the teacher's role in the transfer of knowledge suggests that she would also have some influence over the students beliefs. Hill (2011) found moderate change in students' religious beliefs based on their experiences in higher education, with some differences due to college type, particularly in regard to elite universities. Castiglia (2006) found that a change in administrative practice from a collegial model to a bureaucratic model (Birnbaum, 1988) had a negative impact on the commitment of faculty members to the institution, but did not reduce their satisfaction in working as teachers and researchers.

Teacher Beliefs' Influence on Early Childhood Practice

It is widely accepted that teacher beliefs about child development and learning affect practice in the early childhood classroom (Abu-Jaber, Aseel, & Eman, 2010; Hollingsworth & Winter, 2013; Isenberg, 1990; Kagan, 1992; Lee, 2003; Sakellariou & Rentzou, 2012; Vartuli, 2005; Vartuli & Rohs, 2009). There is some evidence that teacher beliefs can predict DAP practices (McMullen & Alat, 2002). Several studies found that teachers who had strong beliefs about DAP were more likely to implement developmentally appropriate practices than teachers with less strong beliefs about DAP (Bryant, 1991; Charlesworth, Hart, Burts, Thomasson, Mosley, & Fleege, 1993; Buchanan, Burts, Bidner, White, & Charlesworth, 1998; Lee, Baik, & Charlesworth, 2006; McMullen et al., 2005; Smith & Shepard, 1987; Spidell, 1988; Stipek & Byler, 1997; Wing, 1989). Lee (2006) found that preschool teachers tended to

share developmentally appropriate beliefs such as early learning activity should be fun, play-based, and provide choice. Student teachers beliefs about partnering with parents were found to be strengthened following a case-based instructional activity about children with special needs (Patterson, Webb, & Krudwig, 2009).

However, there is also a substantial body of evidence that teachers' DAP beliefs do not translate into appropriate practice in the classroom. The degree to which classroom practice can be correlated with teachers' philosophical and epistemological beliefs is inconsistent and may vary depending on the context of the teaching-learning experience (Cahill, 2012; Gao & Gravil, 2013; Lee, Baik, & Charlesworth, 2006; Mansour, 2013; Smolen, Colville-Hall, Xin, & Mac Donald, 2006). Some studies Abbott-Shim, Lambert, and McCarty (2000) determined there were no differences in early childhood teachers' beliefs about DAP based on their level of education. Neither was a relationship established between beliefs about facilitating creativity in the classroom and a change in teacher practice in a study of early childhood teachers in Hong Kong (Cheung, 2012). Some teachers believe that early literacy must be taught using formal methods such as letter name knowledge, anemic awareness, and letter-sound associations, which may not be developmentally appropriate (Schickedanz, 2003). There is also evidence to suggest that teachers' beliefs are more developmentally appropriate than their demonstrated practice (Charlesworth, Hart, Burts, Thomasson, Mosely, & Fleege, 1993; Darnell, 2008).

Lee (2003) found that the strength of pre-service teacher beliefs and correlated practices were affected by the school setting where they were teaching (public vs. private schools; kindergarten classrooms vs. child care centers). Teacher beliefs were found to positively influence pedagogical effectiveness regarding the use of technology, (Mama &

Hennessy, 2013; Pak, 2012; Wang, Ertmer, & Newby; 2004). CDA training was found to increase the appropriateness of DAP teacher beliefs which and were strongly correlated to self-reported practice (Heisner & Lederberg, 2011). The reasons for and the degree to which teaching methods fall short of professed teacher beliefs is beyond the scope of this study and will undoubtedly continue as a research priority for the field. The focus of this work is directed to differences among teacher educators' beliefs about DAP with the assumption that the faculty have some influence on practice in the field.

Even though there is substantial research about the beliefs of early childhood classroom teachers, there is a general lack of evidence on early childhood teacher preparation and in particular the beliefs of early childhood teacher educators (Hyson, Horm, & Winton, 2012). In one study, Brownlee & Berthelsen (2005) suggest early childhood teacher education programs should focus heavily on personal epistemological beliefs that lead to a constructivist teaching approach. Rohs (2007) found there is no significant relationship between Head Start teacher self-efficacy beliefs and child outcomes. Vartuli and Rohs (2009) found that pre-service teachers' beliefs can change during enrollment in a teacher preparation program and subsequently upon employment as reflected in developmentally appropriate practices. This study is designed to add to the evidence, in determining the degree to which early childhood teacher educator beliefs align to developmentally appropriate practice.

CHAPTER 3

RESEARCH METHODS

Introduction

The intent of this research was to determine the relationship between the epistemological beliefs of college and university faculty in early childhood teacher preparation programs and various higher education organizations. The dependent variable—the beliefs about teaching and learning of college faculty—was measured by a self-report survey on developmentally appropriate practice (DAP). Three independent variables about faculty members' higher education organizations were used to examine their relationship to the dependent variable: 1) whether or not early childhood programs are designed to lead to state teacher certification, 2) institutional characteristics as categorized by the Carnegie Classification[TM] system, and 3) characteristics of organizational governance defined by Birbaum's model of academic organization and leadership (1988). Figure 1 shows the influence of organizational factors on the beliefs about teaching and learning of early childhood teacher educators.
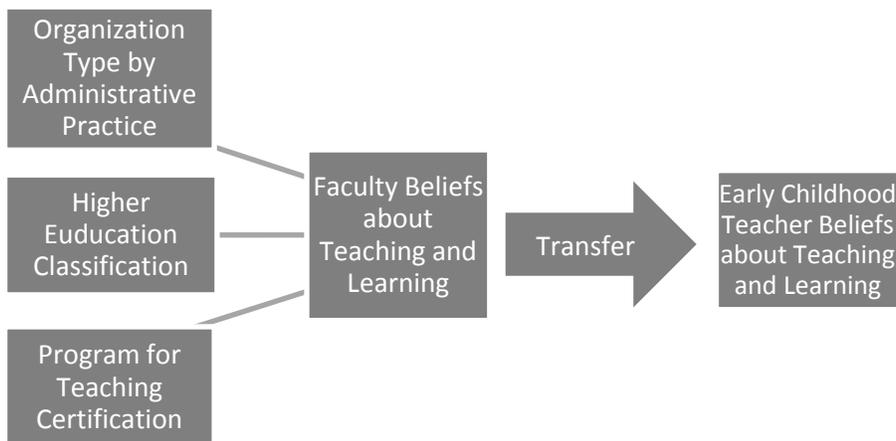
Figure 1. Influence of organizational factors on faculty beliefs

Employing a stratified sampling strategy, participants in this study were recruited from two national professional associations of early childhood teacher educators. They included full-time and adjunct faculty members from organizations of higher education that offer associates' or baccalaureate degrees in early childhood education, child development, or a related discipline that prepare teachers working with children birth through age eight. The sample was stratified to identify and ensure adequate representation from the independent variables groups.

An on-line survey was created to collect demographic data about potential participants, descriptive information about the organizations where they teach, and for administering a questionnaire composed of three instruments. Beliefs about teaching and learning were assessed using the Teacher Beliefs Scale (TBS) (Charlesworth et al., 1990, 1993). It is a self-report instrument that measures the degree to which educators hold DAP beliefs such as behavior management in the early childhood classroom, teaching practices, and the characteristics of children in general. The second instrument, Higher Education Organizational Model Scale (HEOMS) (Higgins, 1997) was used to determine the organizations' governance structure and processes based on Birnbaum's model (1988) and categorize them into groups as part of the data analysis. The Marlow-Crowne Social Desirability Scale short form (MCSDS) (Reynolds, 1982) was incorporated into the survey to help control for response bias. Since 1960, this instrument has been widely used to assess respondents that choose answers they believe to be most socially desirable over the most accurate assessment on self-reported instruments.

Data were collected about the respondents and their respective higher education organizations. Information collected about institutions included size, type (private vs. public),

degrees granted, or other distinguishing institutional attributes. Respondents reported about whether their early childhood program leads to teacher certification and whether the program offers advanced degrees in teaching or program administration. Information gathered about the respondent included the faculty member's age, the number of years of experience as a college or university teacher educator, their full- or part-time status, and the number of years of experience teaching children. Surveys were sent via email through professional associations' distribution lists and other identified teacher educators. A web-based survey site—*SurveyMonkey*®—was used to contact participants and manage the on-line survey.

Multiple linear regression was employed to analyze the relationship between scores on the Teacher Beliefs Scale and the three independent variables (programs leading to teacher certification, Carnegie Classification, and the Birbaum types) to predict differences in faculty beliefs. Dummy coding was applied to the predicator variables that were nominal or categorical so that multiple regression could be used. Control factors of race, ethnicity, and age of the respondent, their years of experience as a college or university teacher educator, the number of years of experience teaching children, and social desirability response tendencies were included in the regression model to examine their influence on variability. Cronbach's alpha was calculated for the subcategories of HEOMS as well as the TBS and MCSDS to analyze the self-reported created scales for reliability.

The study was designed to determine the relationships among beliefs held by early childhood teacher educators and the types and governance of their organizations. These are the null hypotheses for this research:

1. There are no differences in the beliefs of early childhood teacher educators between early childhood programs that lead to state teacher certification from those that do not lead to state teacher certification.

2. There are no differences in the beliefs of early childhood teacher educators between different types of higher education organizations based on their Carnegie classification.

3. There are no differences in the beliefs of early childhood teacher educators between different types of higher education organizations based on their governance structure and administrative processes.

Therefore, the primary goal of this research is to provide discriminatory information about faculty beliefs regarding child guidance, teaching practices, and children's learning in early childhood teacher preparation by program type and institutional governance as defined by Birnbaum (1988). It is anticipated that this information will be useful for college and university administrators, public policy makers, and professionals serving the early childhood field as it is important to understand the organizational structures for effectively implementing new practices and policies.

Population and Sampling

Participants in this quantitative study were recruited from full-time and adjunct faculty from early childhood education and child development professional preparation programs across the United States. Access to faculty was accomplished from two primary sources; 1) The National Association of Early Childhood Teacher Educators (NAECTE) and 2) the Associate Degree Early Childhood Teacher Educators–ACCESS to Shared Knowledge and Practice (ACCESS). NAECTE is the leading professional association for faculty of early

childhood teacher preparation programs at 4-year organizations. NAECTE has approximately 400 members nationwide.

The second source for recruiting participants was through ACCESS, the national membership association for early childhood teacher educators in 2-year degree granting organizations (ACCESS). ACCESS leaders agreed to collaborate on this research project, which allowed for the inclusion of the perspective of teacher educators from 2-year degree colleges. Including members from ACCESS in the participant pool helped to increase the power for this study. ACCESS has approximately 250 members in its membership database.

The estimated sample size for this study was projected to be 160 participants from the membership of the professional associations, based on a 25% response rate from a recent similar on-line survey conducted with the members from NAECTE (Castle, 2013). An exhaustive search of the literature found only one study in the most recent seven years that used the NAECTE or ACCESS membership as the target population for recruitment. It was anticipated that this sample size would be sufficient to be representative of the overall population of early childhood teacher educators. Using the intake data from the survey, the Carnegie Classification system, and the grouping of organizations from the responses to survey questions about institutional governance (Higgins, 1997), codes were assigned to each respondent's organization and linked to de-identified data from the survey responses. This allowed matching the data to the grouping factors for the analysis.

A priori statistical power analysis was performed to determine the projected sample size for this study using *GPower 3.1* software. A thorough review of existing literature of beliefs about early childhood teaching practice (Bryant, 1991; Chou, 2012) and studies using Higgins' (1997) instrument (Hall, 2002; McMullen and Alat, 2002) was conducted to

determine an estimated effect size. The literature review revealed that a large effect size ($R^2 =$ .27) in a multiple regression model is a reasonable estimate to test whether the Model R^2 is zero. With $\alpha = .05$, power $= .95$, and assuming 14 predictor variables and 6 control variables, the projected minimum sample size needed for this study was approximately $N = 114$ for the simplest between group comparison. Since the estimated sample for this study is 160, it was reasonable to expect large effects if the number of variables is 20 or less (Field, 2009).

Application to the UMKC Social Sciences Institutional Review Board (IRB) was made to oversee the research protections for this project. Procedures were developed for securing informed consent of participants. The researcher completed required IRB training prior to involvement in the research. Detailed measures and procedures were instituted to ensure the data remain de-identified. The IRB determined that this study was "exempt" and recommended shortening the invitation letter to participate in the study (see Appendix for the letter of determination and revised recruitment invitation letters). An incentive—two Barnes and Noble gift cards worth $50 each—was offered to increase the response rate.

Instrumentation and Data Collection

A thorough search of the literature was conducted to identify measurement tools to assess DAP faculty beliefs. No measures of beliefs about DAP were found that specifically targeted teacher educators, but three instruments were found to assess DAP beliefs of early childhood teachers. The Teacher Beliefs Scale (TBS) found in the Teacher Questionnaire (Charlesworth et al., 1990, 1993) was used extensively in a number of studies to assess early childhood teacher DAP beliefs. The Primary Teachers Questionnaire (McMullen, 1999) was found to be used in a few studies that found some relationships between teacher DAP beliefs and classroom practice (Smith, 1993; Smith & Croom, 2000). The beliefs portion of the Early

Childhood Teacher Educator Beliefs and Practices Questionnaire was created as an adaptation to the TBS and showed strong internal consistency (Kim, 2005).

The TBS (Charlesworth et al., 1990, 1993) was selected to assess the dependent variable because of its extensive use in other studies, its discriminant factors of DAP and developmentally inappropriate practice (DIP), and its performance to align teacher beliefs with NAEYC guidelines for appropriate practices (Copple & Bredekamp, 2009). The TBS has been used or adapted in several studies to assess teacher beliefs since its development in 1990 (Hegde & Cassidy, 2009; Kim, K. R., 2005; Kim & Buchanan, 2009; Kim, H. K., 2011; La Paro, Siepak, & Scott-Little, 2009; Liu, 2007; McMullen et al., 2005; Sakellariou & Rentzou, 2011; Rohs, 2007; Vartuli, 1999; Vartuli, & Rohs, 2009; Wang, Elicker, McMullen, & Mao, 2008; Yang, 1997). The TBS is closely aligned with several dimensions outlined in *Developmentally Appropriate Practice in Early Childhood Programs Serving Children from Birth through Age 8, Third Edition* (Copple & Bredekamp, 2009). For example, the DAP guideline for assessing children's development and learning emphasizes teachers gather information from a variety of sources. Items on the teacher beliefs scale related to child assessment asks teachers to rate the importance of standardized tests, teacher observation, and performance on worksheets and workbooks. Some of the items are negatively coded (e.g., standardized tests and worksheets) as developmentally inappropriate. The TBS includes items related to children's physical development, motivation for learning, behavioral factors, language and literacy, emotional development, and social interactions. Because of its extensive used in previous research and its close alignment with NAEYC developmentally appropriate practice guidelines, the TBS was selected as the outcome variable for this study.

The 37-item TBS includes questions that describe Developmentally Appropriate Practices (DAP) or Developmentally Inappropriate Practices (DIP) assessed on a five-point Likert scale from *not important at all* to *extremely important*. The psychometric properties of the TBS were examined for factorial validity and compared to kindergarten classroom observational ratings (Charlesworth et al., 1993). In the psychometric evaluation process, the questionnaire was administered in 60 elementary schools and 204 kindergarten teachers responded. Results showed that the means for each item ranged from 2.03 to 4.74 (average *SD* = .79). Factor analysis revealed four factors associated with DAP and two factors associated with DIP with moderate to high reliability. Cronbach's alpha values to examine internal consistency of each of these six factors were found to be moderate to low: developmentally inappropriate activities and materials (*R* =.84), appropriate social item (*R* =.77), appropriate individualization (*R* =.70), appropriate literacy activities (*R* =.60), appropriate integrated curriculum beliefs (*R* =.66), and inappropriate structure (*R* =.58) (Charlesworth et al., 1993). Observations were conducted in 20 classrooms using the Checklist for Rating Developmentally Appropriate Practice in Kindergarten Classrooms. Comparing the TBS results to the classroom observations showed that 19 out of 20 teachers had classroom observation ratings that were congruent with their matched findings on the TBS. These findings suggest that the psychometric properties of the TBS are strong and the validity of the instrument was supported when compared to classroom observational assessments (Charlesworth et al., 1993).

Assessing programs to determine which of five types of institutional governance based on the Birnbaum model (1988) was accomplished using Part II of a scale developed by Phyllis Higgins, Ph.D. at the George Washington University (1997). For this study's purpose, it will

be referred to as the Higher Education Organizational Model Scale (HEOMS). This instrument was developed to examine the coupling relationships between on and off campus continuing education units (Part I) and to assign each respondent's organization to the institutional types as defined in the HEOMS (Part II). Higgins (1997) used it to assess coupling characteristics of members of the National University Continuing Education Association.

Programs were grouped from the self-report responses of faculty members into these five categories: collegial, bureaucratic, political, anarchical, and cybernetic. Collegial organizations are characterized by those that share power and values in a community of equals. They tend to be comparatively small and draw their values from a sense of institutional heritage. Bureaucratic organizations of higher education closely follow the lines of structural authority and communication as might be found on an organizational chart. Governance is primarily accomplished through established standard operating procedures and protocols. The defining characteristic of political organizations is that of sub-units competing for power and resources. Departments tend to operate autonomously while at the same time must maintain a degree of interdependence to acquire the political power to meet their diverse needs. Birnbaum describes the anarchical institution as a complex organization that functions as a community of autonomous actors. These large complex organizations tend to struggle with defining institutional goals, may be unclear about how inputs can be converted to outputs, and may have inconsistent or fluid participation from staff and faculty. The dialectical tension across the system creates an environment Birnbaum describes as "organized anarchy" (1988, p. 153). Cybernetic organizations are those that integrate two or

more types where governance is accomplished using the characteristics of each in an adaptive

and fluid manor specific to various units and situations (Birnbuam, 1988).

The HEOMS Part II was found to have a standardized alpha score of .8636 and

standardized scores were derived for each of Birnbaum's four distinct organizational types as

follows: collegial, .8751; bureaucratic, .8174; Political, .7850; and anarchical, .8718. Higgins

assumed the cybernetic model as a combination of two or more of the other four types and

was not examined separately. The Scheffe (1959) post hoc multiple comparison procedure

was calculated and found significant difference between the bureaucratic ($M = 42.5625$, $SD =$

9.9731) and anarchical ($M = 53.9474$, $SD = 12.9592$) models, and between the bureaucratic

($M = 42.5625$, $SD = 9.9731$) and the political ($M = 53.363$, $SD = 9.9927$) models as expected

to differentiate the types.

Part II included 24 five-point Likert items that ranged from (to little or no extent) to 5

(to a very great extent). To assess each of Birnbaum's (1988) four types, six items were

assigned to each category of governance organization. Total scores for each of these four

types were computed and then converted to z-scores. To assign organizational typology, each

respondent's *z*-scores for the four types were compared. The largest *z*-score value determined

which type would be assigned to the respondent's organization. If two or more *z*-scores were

within .5 standard deviation of one another, the cybernetic type was assigned as defined by

Birnbaum (1988). The .5 *SD* cut point was consistent with previous research using this

instrument (Higgins, 1997; Hall, 2002).

The self-reported items in the survey instrument were analyzed to measure reliability

by calculating Cronbach's alpha (Warner, 2008). This statistic is widely used as an index of

internal consistency reliability for multiple items scales. It is used to assess the degree that the

responses are consistent across several measures of the same construct, which in this instance is the governance, management, and leadership of the reported colleges and universities. The Cronbach's coefficient uses the mean of all the inter-item correlations for each item in the instrument (Warner, 2008). Alpha values were computed independently for the TBS, HEOMS, and the MCSDS.

Other demographic information was collected for use as control variables. These data will include race, ethnicity, and age of the respondent, their years of experience as a college or university teacher educator, and the number of years of experience teaching children. Data about the faculty member's full- or part-time status was also collected. The contribution of these aspects about participants to variability within the model was examined for significance. These data may also be useful in examining the survey results in future studies.

Respondents were asked to identify their institution, academic unit, degrees offered to identify the organizations' classification. The Carnegie Classification system provides and institutional lookup feature that yields a profile of the college or university (Carnegie Foundation, *n.d.*). Data collected about the institutions from these profiles included: level (2-year or 4-year); control (public or private); and student enrollment. Student population data was reported as actual numerical data.

In order to control for response bias, participants also completed the Marlow-Crowne Social Desirability Scale – Form C (Reynolds, 1982). This 13-item scale is easy to administer and measures social desirability response tendencies. Reynolds (1982) found that the short form (Form C) was reliable ($R_{KR-20} = .76$) and was concurrently valid with the original 33-item Marlowe-Crowne standard version. The total score from the Scale was entered into the

model in the first step to account for social desirability effects in the model (Liete, 2010) before examining other variables related to the hypotheses.

Data Analysis

SPSS (20.0.0) was used to conduct the data analyses of this study. The data were examined for errors and missing values. Missing values were replaced by further analyzing the data to determine the correct value or by computing the mean. Preliminary data screening was performed to identify any outliers as they can substantially affect the regression slope and intercept to a great degree (Field, 2009). Histograms were generated to examine the distribution shapes and boxplot graphs were produced to identify specific outliers. Found outliers were removed before data analysis.

Scores on the TBS were analyzed using SPSS multiple linear regression with four independent variables (institutional classification, student population, whether the early childhood programs led to teacher certification, and organizational type as defined by Birbaum) to predict differences in faculty beliefs. Standard multiple regression is appropriate to use in this non-experimental study with categorical independent variables when the dependent variable is continuous (Field, 2009). This statistical technique was chosen over a one-way analysis of covariance (ANCOVA) because ANCOVA is particularly sensitive to interaction effects among the covariates and additional screening for assumptions is required over regression (Warner, 2008). Since this is a design using a national sample of early childhood teacher educators from two primary professional associations, multiple regression does not require a sampling strategy that limits the use of data from most of the respondents. Multiple regression also provides an effective means for analyzing control variables.

However, multiple regression with categorical variables only works with binary data (Field, 2009), so dummy coding was used for the categorical predicator variables (employment status, race, institutional class, whether the early childhood programs led to teacher certification, and the Birbaum types). Employment status had three factors (full-time faculty – tenured or tenure track, full-time faculty non-tenure track, and adjunct or part-time instructors). Initially, race had four factors (white, Asian, Black or African-American, and multiracial), but due to a small number of respondents for all the categories except "white," the racial data were recoded into a binary variable with values "white" and "non-white." The institutional class variable was consolidated into 3 factors (public 2-year, public 4-year, and private 4-year; there were no private 2-year institutions in this sample). The teacher preparation programs grouped by whether they lead to certification had 3 factors (leads to certification, does not lead to certification, and programs that offered both tracks). The HEOMS had 5 factors (collegial, bureaucratic, political, anarchical, and cybernetic).

A standard multiple regression was performed with three steps. Scores from the MCSDS was entered into Model 1 to remove any variation due to social desirability bias. The second model in the regression added the main variables of interest that tested the hypotheses—institutional classification, student population, whether or not the programs lead to state teacher certification, and types of organization and leadership (Birbaum's model, 1988). In Model 3, the other control variables (age, years teaching in higher education, years teaching children, employment status, ethnicity, and race) were added to the model.

Standardized residuals and Pearson's correlations were examined from the regression output to detect multivariate outliers. The Mahalanobis Distance statistic was also requested and analyzed to ensure there were no outliers. The regression output was examined to ensure

that assumptions for multiple regression were not violated including, multicollinearity, homoscedasticity, independence of residuals, normal distribution, and linearity (Field, 2009). Histograms were examined to confirm normal distributions. The standardized predicted values were plotted against the standardized residuals for no pattern, trend, or heteroscedasticity. Analysis of scatter plots for each variable were inspected for no violation of homoscedasticity. The Levene test was requested to ensure that the homogeneity of variance assumption was not violated (Warner, 2008). To test for no violation of multicollinearity the correlation matrix, VIF values, and tolerance statistics were examined. The Durbin-Watson statistic was requested to test the model for autocorrelation. Interaction terms were computed for each combination of predictor variables and separate regressions were performed to test for homogeneity of regression slopes, using a p value of .001 to determine significance of the regression coefficients.

Prior to performing the regression, one-way analysis of variance (ANOVA) was used to independently examine the relationship between each of the independent variables and faculty beliefs. The one-way ANOVAs provided additional insight into the relationship between the predictor variables and the DAP beliefs of faculty members. While this method was not as conservative as the regression model, the descriptive analysis identifies important significant relationships that are explored in more depth in the regression. The Tukey HSD post hoc test was used to account for multiple comparisons as the Tukey compares all the possible pairwise combinations to identify which groups among the sample differ significantly.

To confirm that significant differences associated remained robust with categorical variables as the dummy coded reference variable, the regression used in Model 3 was repeated

with each possible dummy-coding scheme. For example, in setting up the original dummy coding for the Carnegie classification, "public 2-year" was used as the reference variable. When repeating the regression to confirm the coefficients were similar, "public 4-year" and "private 4-year" were substituted as the reference variable for in the dummy coding scheme. Likewise, the dummy coding schemes for whether the teacher preparation program led to certification and organizational type was reconfigured for every possibility and the regression repeated.

To increase statistical power, this study was designed to control for variation in the participant characteristics. The control predictors in this analysis included: the faculty member's age, their years of experience as a college or university teacher educator, and the number of years of experience teaching children. Each of these variables was continuous. Additionally, demographic categorical variables (race and ethnicity) were entered into the model.

The main effect size was derived from the initial standard regression. SPSS calculated the coefficient of determination (r^2) to explain the portion of the total variance explained in the model as well as the variance explained for each of the independent variables and covariates (Field, 2009). Effect sizes were also calculated from the sequential regression by squaring the semi-partial correlations to explain any variation in addition to the main effect across group means (Warner, 2008). The effect sizes of both the main effect (R^2) and the effects from control predictors (sr^2) were computed.

Chapter 4

Results

Multivariate regression was used to address the research questions: 1) Do the beliefs of early childhood teacher educators differ if they teach in early childhood programs that lead to state teacher certification from those that do not lead to state teacher certification; 2) Do the beliefs of early childhood teacher educators differ among higher education organizations of various Carnegie classifications; and 3) Do the beliefs of early childhood teacher educators differ based on their governance structure and administrative processes as defined by Birnbaum (1988). Characteristics about early childhood teacher educators were derived from the respondents in this sample. Analysis of the results using the Higher Education Organizational Model Scale (HEOMS) (Higgins, 1997) and the Teacher Belief Scale (TBS) (Charlesworth et al., 1990, 1993) for this sample were examined. Percentages reported may not total to 100% due to rounding computations.

Participants

Early childhood teacher educators were recruited for this study from members of professional associations: the National Association of Early Childhood Teacher Educators (NAECTE) and the Associate Degree Early Childhood Teacher Educators–ACCESS to Shared Knowledge and Practice (ACCESS). Members of these organizations were encouraged to forward the email invitation to participate in the study to other early childhood teacher educators. The researcher also recruited participants from personal acquaintances and faculty in early childhood programs from the California Early Childhood Mentor Program. This additional outreach had the potential for duplication, although it is unlikely that participants would have completed he questionnaire more than once.

The survey was open online for 50 days and 203 responses were received during that period. Of these, 153 participants completed the questionnaire—a 75% completion rate. One participant did not provide the name of their institution and was removed from the sample because Carnegie classification data could not be determined. One outlier with an extreme score on the TBS was discovered during preliminary data screening and removed from the sample. The final sample size for the study was 151, exceeding the a priori statistical power analysis of 114 participants.

The average age of the participants was 53, ranging from 28 to 80 years. Teacher educators provided information about their teaching background with an average of 15 years as a teacher educator, ranging from 1 to 42 years. Similarly, participants reported how long they had taught children averaging 15 years—ranging from 1 year to 42 years—with one participant that reported not having taught children. Of 151 teacher educators that reported their employment status, 61% (92) were full-time tenured or tenure track faculty; 25% (37) were full-time faculty that were not tenured or seeking tenure; and 15% (22) were reportedly adjunct faculty or part-time instructors. The racial distribution of the sample was 93% (141) white, 3% (4) multiracial, 2% (3) black or African-American, and 2% (3) Asian. Five percent (7) of participants self-identified as Hispanic and the remaining 95% (144) were not Hispanic. In a similar study of early childhood teacher educators—sampling from the same professional associations—Early and Winton (2001) found the racial/ethnic distribution was 83% white, 7% black or African-American, 2% Asian, 3% Hispanic, 2% Asian/Pacific Islander, and 2% American Indian/Alaska Native. The differences between the two studies, over a period of 14 years, are notable. Table 1. summarizes the characteristics of the participants.

Table 1. Characteristics of Participants

Characteristics	*M (SD)*	*f*	%
Age	53 (9.30)		
– 25 to 34 years		6	4%
– 35 to 44 years		20	13%
– 45 to 54 years		46	30%
– 55 to 64 years		70	46%
– 65 to 74 years		8	5%
– 75+ years		1	1%
Race			
– White		141	93%
– Multiracial		4	3%
– Black or African-American		3	2%
– Asian		3	2%
Ethnicity			
– Not Hispanic		144	95%
– Hispanic		7	5%
Employment Status			
– Full-time tenured or tenure track		92	61%
– Full-time faculty not tenured or tenure track		37	25%
– Adjunct faculty or part-time instructor		22	15%
Experience as Teacher Educator	15.44 (9.12)		
– 1 to 10 years		53	35%
– 11 to 20 years		61	40%
– 21 to 30 years		27	18%
– 31 to 40 years		9	6%
– 40+ years		1	1%
Experience Teaching Children	14.88 (9.40)		
– 0 years		1	1%
– 1 to 10 years		62	41%
– 11 to 20 years		59	39%
– 21 to 30 years		17	11%
– 31 to 40 years		11	7%
– 40+ years		1	1%

N = 151

Higher Education Organizations

Respondents provided information about the colleges and universities and the associated early childhood programs where they worked as teacher educators. Participants represented colleges and universities from 125 different campuses in 35 states. Of these the Carnegie Classification identified, 42% (53) were 2-year organizations and 58% (72) were 4-year institutions. Fifteen (12%) were private institutions and 110 (88%) were public colleges and universities. The enrollment ranged from 757 to 53,401 students with a mean of 12,207 and a median of 8,427 students—for a total approximate enrollment of 1.5 M students in the sample institutions. The Carnegie Classification codes organizations by size based on full-time equivalents (FTE) of enrolled students. Using this coding, the sample distribution by institutional size was as follows: 7% (9) very large; 35% (44) large; 40% (50) medium; 13% (16) small; and 5% (6) very small. Participants were asked to indicate if their early childhood undergraduate program leads to state teacher certification or licensure or if the program offers two tracks where—one track leads to certification and one track does not. Results showed that 50 (40%) of programs led to certification, 35 (28%) did not lead to certification, and 40 (32%) programs offered both tracks to provide options for students. Respondents also reported about different degrees offered in their early childhood program: 21% (27) Associate of Arts (AA); 34% (42) Associate of Applied Science (AAS); 7% (9) Associate of Arts – Transfer (AAT); 11% (14) Associate of Science – Transfer (AST); 49% (62) Bachelor of Arts (BA); 28% (35) Masters of Arts (MA); and 14% (17) Doctoral Degrees. Table 2. summarizes the characteristics of higher education organizations.

Table 2. Characteristics of Higher Education Organizations

Characteristics	M (SD)	f	%
Number of institutions		125	
Number of states		35	
Institution Level			
– 2-year		53	42%
– 4-year		72	58%
Institutional Control			
– Public		110	88%
– Private		15	12%
Size			
– Very large		9	7%
– Large		44	35%
– Medium		51	41%
– Small		16	13%
– Very small		6	5%
Student Population	12,207 (9,740)		
Early Childhood program leads to teacher certification			
– Program leads to certification		50	40%
– Program does not lead to certification		35	28%
– Program offers both tracks		40	32%
Degrees offered			
– Associate of Arts (AA)		27	21%
– Associate of Applied Science (AAS)		42	34%
– Associate of Arts – Transfer (AAT)		9	7%
– Associate of Science – Transfer (AST)		14	11%
– Bachelor of Arts (BA)		62	49%
– Masters of Arts (MA)		35	28%
– Doctoral Degrees		17	14%

$N = 126$

Preliminary Screening and Data Transformations

Prior to analysis, data screening was conducted to check for missing values, errors,

and extreme values. One respondent, who did not provide the institution's name, was removed

because values could not be derived using the Carnegie Classification Institutional Lookup.

Two respondents' institutions were not found in Carnegie, but values for level and control

were derived from the individual participants' other answers in the questionnaire. Missing values for student population were replaced with the mean value of other institutions with similar characteristics. Carnegie did not report the student population for one institution, so the mean value of other "very small" colleges in the dataset was entered.

Reversed items in the questionnaire that comprised the Marlow Crowne Social Desirability Scale (MCSDS) (items 1, 2, 3, 4, 6, 8, 11, and 12) were transformed from a value of "0 = false" to "1 = true." Total raw scores were computed for the MCSDS. Three missing values were replaced for the MCSDS with a value of 1, which was the rounded mean for each of the respective items.

Total raw scores were computed for each of four types derived from the Higher Education Organizational Model Scale (HEOMS) items. Six items for each model were totaled as follows: Collegial—items 1, 5, 9, 13, 17, and 20; Bureaucratic—items 2, 6, 10, 14, 18, and 22; Political—items 3, 7, 11, 15, 19, and 23; and Anarchical—items 4, 8, 12, 15, 21, and 24. SPSS was used to automatically replace 99 missing values on the HEOMS to the series mean.

Negative items in the Teacher Belief Scale (TBS) section of the questionnaire (items 1, 3, 6, 10, 13, 14, 15, 16, 18, 19, 21, and 23) were reverse coded as follows: a value of "1" to "5;" a value of "2" to "4;" a value of "4" to "2;" and a value of "5" to "1." Total raw scores were computed for the TBS. SPSS was used to automatically replace 14 missing values for the TBS to the series mean.

Frequency distributions with histograms were generated to examine the distribution shapes and boxplot graphs were produced to identify specific outliers. One extreme outlier on the TBS was found and removed. Examination of the histogram for the dependent variable—

TBS scores—was roughly normal. The mean for the outcome variable TBS was 168.55

(standard deviation 9.18; scores ranging from 141 to 185. Dividing the average score by the

number of items (37) the mean item score was 4.56—greater than the mid-point—suggesting

that overall teacher educators' beliefs were more developmentally appropriate than not. Table

3. displays the means and standard deviations for the raw scores on the three scales.

Table 3. Outcome and predictors raw scores

Variable	*M*	*SD*
Marlow Crowne Social Desirability Scale (MCSDS)	8.80	2.71
Higher Education Organizational Model Scale		
– Collegial	19.92	3.96
– Bureaucratic	19.04	2.96
– Political	16.07	3.13
– Anarchical	27.72	1.89
Teacher Belief Scale	168.55	9.18

N = 151

The Cronbach Alpha's reliability test was performed to measure the reliability of the

scales with this dataset by testing how each item correlated with other items within each scale.

The following alpha values were computed independently for the TBS $\alpha = .837$, HEOMS

(collegiality $\alpha = .698$, bureaucratic $\alpha = .436$, political $\alpha = .412$, and anarchical $\alpha = .532$.),

MCSDS $\alpha = .722$. Alpha values for the HEOMS in this sample did not perform at the levels

found in the literature from several other studies. Higgins (1997) original research when the

instrument was developed found alpha values that affirmed its reliability (collegial $\alpha = .875$;

bureaucratic $\alpha = .817$; political $\alpha = .785$; and anarchical $\alpha = .872$). The instrument performed

with similar results to Higgins' in other studies (Douglas, 2013; Hall, 2002; Jones, 2002;

Williamson, 2000).

To assign an organizational type as defined by Birnbaum (1988) to each college or

university the HEOMS total raw scores for each of the four types were converted to z-scores.,

the HEOMS z-score values were examined and largest value determined the assigned type for

that a particular case. The cybernetic type was assigned if two or more z-scores were within a

.25 standard deviation of one another, which was consistent with previous research methods

using this instrument (Douglas, 2013). The frequency distribution for each of five

organizational types is displayed in Table 4.

Table 4. Frequency of organizational types

Organizational Type	n	%
– Collegial	25	17%
– Bureaucratic	22	15%
– Political	31	21%
– Anarchical	34	23%
– Cybernetic	39	26%

($N = 151$)

The following categorical variables were transformed using dummy coding for the analysis:

institutional classification, programs leading to certification, Birnbaum type, and race. Table

5. shows the dummy coding scheme for these variables.

Table 5. Dummy coding scheme for categorical variables with more than two values

Variables	D_1	D_2	D_3	D_4
Institutional Classification				
– Private, 4-year	1	0		
– Public, 4-year	0	1		
– Public, 2-year	0	0		
Leading to Certification				
– Leads to certification	1	0		
– Does not lead to certification	0	1		
– Offers 2 tracks	0	0		
Organizational Type (Birnbaum)				
– Collegial	1	0	0	0
– Bureaucratic	0	1	0	0
– Political	0	0	1	0
– Cybernetic	0	0	0	1
– Anarchical	0	0	0	0

The race category was recoded with only two values—white and non-white—because the number of participants in the multiracial, black or African-American, and Asian categories were so small (4, 3, and 3 respectively). Converting race into a bivariate category was more useful in the regression and analysis.

Analysis

Multiple linear regression analysis was used to assess whether institutional classification, student population, programs leading to certification, or type (Birnbaum model) significantly predicted developmentally appropriate faculty beliefs. All 151 cases were included in the regression analysis. Examination of histograms, scatter plots, standardized residuals, Pearson's correlations, and Mahalanobis Distance statistic did not indicate any nonlinear relations or bivariate outliers. The correlation matrix was examined and none of the predictor variables were highly correlated, the VIF values were less than 10, and the tolerance values were greater than .2—thus no violation of multicollinearity was assumed. When the standardized predicted values were plotted against the standardized residuals no pattern, trend, or heteroscedasticity was found. No significant values were found from performing the Levene's test, indicating that the homogeneity of variance assumption was not violated (Warner, 2008). The Durbin-Watson statistic (2.08) was reasonably close to 2.00 indicating no autocorrelation and the assumption of the independence of residuals was not violated. No significant interaction effects were found when testing for homogeneity of regression slopes.

The results of the regression analysis for Model 1 showed that the relationship between response bias and TBS was not significant and accounted for less than 1% of the variability in the model; $R^2 = .007$. However, when adding the variables of main interest (to test the hypotheses), Model 2 was significantly predictive of developmentally appropriate

beliefs; $R = .53$, $R^2 = .28$, adjusted $R^2 = .23$, $F(10,140) = 5.47$, $p < .001$. It explains

approximately 23% of the variability in TBS scores. The negative Beta values reflect the

direction in the relationship between the reference variable and each of the dummy variables

to which it is compared. The variables added were those for institutional classification

(student population, the dummy variable for private 4-year institutions, and the dummy

variable for public 4-year institutions); dummy variables regarding whether the program leads

to teacher certification; and the dummy variables created for organization type (Birnbaum,

1988).

In Model 3, the control variables (age, years as a teacher educator, years teaching

children, race, and ethnicity) were added. Overall, Model 3 also predicted developmentally

appropriate beliefs; $R = .59$, $R^2 = .34$, adjusted $R^2 = .27$, $F(15,135) = 4.71$, $p < .001$. Model 3

explains approximately 27% of the variability in TBS scores. One control variable—

ethnicity—differed significantly, ($\beta = -.22$, $t(15) = -2.88$, $p < .01$). The squared semipartial

correlation for ethnicity (Hispanic vs. non-Hispanic) was $sr^2 = .040$; uniquely predicting about

4% of the variance in model. However, the Hispanic group was represented by only 7

participants, so assumptions were not explored about the meaning of these significant

differences.

The categorical variables used in Model 3 remained robust when the regression was

repeated with each possible dummy-coding scheme. When the Collegial Type was used as the

reference category, significant associations were found with Bureaucratic Type ($B = 5.91$, SE

$= 2.37$, $\beta = -.23$, $p < .05$); Political Type ($B = 4.64$, $SE = 2.06$, $\beta = -.37$, $p < .05$); and

Cybernetic Type ($B = 7.63$, $SE = 2.21$, $\beta = -.21$, $p < .001$). When the Bureaucratic Type was

used as the reference category, a significant association was found with the Collegial Type (B

= 5.91, *SE* = 2.37, β = -.24, *p* < .05). When the Political Type was used as the reference category, a significant association was found with the Collegial (*B* = -4.64, *SE* = 2.21, β = -.19, *p* < .05). When the Cybernetic Type was used as the reference category, significant associations were found with Collegial (*B* = -7.63, *SE* = 2.06, β = -.31, *p* < .001). Although these associations were significant, the beta-weight values suggest that the influence of organizational types only provides a small effect on TBS scores. Small beta values could also indicate that the HEOMS—considering reliability issues indicated by low alpha scores—is not providing strong estimates of the associations among variables. No additional significant associations were found among the variables related to whether the program leads to certification or the institutional classification when their respective alternative dummy coding schemes were substituted.

Thus, faculty beliefs could be reasonably predicted from institutional classification, programs leading to certification, and type, when controlling for social desirability, age, number of years as a teacher educator, number of years teaching children, race, and ethnicity. Table 6 shows the Pearson correlations between all variables in the regression. Table 7 shows the results of the regression analysis.

Table 6. Correlation Matrix

Variables	1	2	3	4	5	6	7	8
2 Social Desirability Bias	.08							
3 Student Population	-.14*	.01						
4 Private, 4-year	-.03	.01	-.09					
5 Public, 4-year	-.16*	.11	.17*	-.33***				
6 Leads to certification	-.08	.03	.04	.13	.17*			
7 Does not lead to certification	.04	.11	-.15*	-.01	-.27***	-.50***		
8 Collegial	-.31***	.11	.06	.03	-.01	-.08	.05	
9 Bureaucratic	-.04	-.14*	.05	-.01	-.10	.04	.04	-.18*
10 Political	-.19	-.15*	.12	.05	.13	.12	-.09	-.23**
11 Cybernetic	.10	.11	-.11	.01	.03	-.12	-.05	-.26**
12 Age	.20**	.04	-.01	-.10	-.03	.02	.05	-.09
13 Years teacher educator	.07**	.04	.13	-.21**	.17*	.02	-.02	-.16*
14 Years teaching children	.07	-.01	-.15*	.06	-.15*	.05	.03	.08
15 Race	>.00	-.17*	-.09	.09	-.06	-.05	-.08	-.03
16 Ethnicity	-.20**	.20**	.03	-.07	.10	.08	-.06	-.01

	9	10	11	12	13	14	15
10 Political	-.21**						
11 Cybernetic	-.24**	-.30***					
12 Age	-.02	-.21	.02				
13 Years teacher educator	-.02	-.08	.01	.55			
14 Years teaching children	-.02	-.10	-.01	.30	-.03		
15 Race	-.04	-.13	.04	.08	.02	>.00	
16 Ethnicity	>.00	.12	.01	-.04	-.01	.11	-.32

N = 151, **p* < .05, ** *p* < .01, *** *p* < .001

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Table 7. Regression Model Results

Variables	Model 1 B (SE)	Model 1 β	Model 2 B (SE)	Model 2 β	Model 3 B (SE)	Model 3 β
Constant	166.07 (2.54)		175.68 (2.88)		177.75 (6.00)	
Social Desirability Bias	0.28 (0.28)	0.083	0.36 (0.26)	0.107	0.46 (0.26)	0.134
Institutional Classification						
– Student Population			< .01 (0.00)	-0.072	< .01 (0.00)	-0.091
– Dummy - Private, 4-year			-1.58 (2.42)	-0.052	-1.33 (2.40)	-0.043
– Dummy - Public, 4-year			-3.05 (1.52) *	-0.167	-3.12 (1.50) *	-0.171
Leading to Certification						
– Dummy - Leads to certification			-2.03 (1.61)	-0.109	-2.36 (1.58)	-0.127
– Dummy - Does not lead to certification			-2.02 (1.83)	-0.098	-2.77 (1.80)	-0.135
Organizational Type (Birnbaum)						
– Dummy - Collegial			-13.14 (2.15) ***	-0.534	-12.52 (2.20) ***	-0.508
– Dummy - Bureaucratic			-7.20 (2.24) **	-0.277	-6.61 (2.24) **	-0.255
– Dummy – Political			-8.94 (2.07) ***	-0.395	-7.88 (2.16) ***	-0.348
– Dummy - Cybernetic			-5.43 (1.93) **	-0.259	-4.89 (1.92) *	-0.234
Control						
– Age					-0.02 (0.09)	-0.016
– Years teacher educator					0.13 (0.09)	0.129
– Years teaching children					0.09 (0.08)	0.087
– Race					-5.25 (2.81)	-0.143
– Ethnicity					-9.61 (3.34) **	-0.221

$N = 151$, *$p < .05$, ** $p < .01$, *** $p < .001$

Results of Research Question 1: State Teacher Certification

Examining the coefficients from the regression, there was not a significant relationship between programs leading to certification and faculty beliefs; program does lead to certification (β = -.13, t(15) = -1.50, *ns*), program does not lead to certification (β = -.14, t(16) = -1.54, *ns*). The null hypotheses was retained—there are no differences in the beliefs of early childhood teacher educators whether early childhood programs lead to state teacher certification or those that do not compared to programs that offer both tracks.

Results of Research Question 2: Organizational Classification

A one-way ANOVA was performed prior to the regression analysis to examine if there were significant differences in teacher beliefs among three classifications that existed in the sample of colleges and universities: public 2-year, public 4-year and private 4-year institutions. No significant differences were found when organizational classifications were examined independently. A simple regression analysis was performed to compare the size of the institutions' student population to that of TBS scores, but was not significant.

Analysis of the full regression model (see Model 3), however, showed that institutional characteristics—identified by the Carnegie Classification system—differed significantly with regard to the beliefs of early childhood teacher educators when public 2-year institutions were assigned as the reference category. Classification was significantly related to TBS. More specifically, when all other predictor and control variables were held constant, 4-year public universities had significantly lower TBS scores compared to 2-year public colleges; (β = -.17, t(15) = -2.08, p < .05). The squared semipartial correlation for public 4-year institutions as a predictor of faculty beliefs was sr^2 = .021; thus it uniquely predicted about 2% of the variance in TBS scores. Though this finding indicates significant differences, the small beta value and the

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small amount of variance explained suggest that the practical effects are minimal. Private 4-year institutions were not found to be significantly different from public 2-year colleges; (β = -.05, $t(15)$ = -.65, *ns*). Furthermore adding the control variables did not substantively change results for the relationship between the size of the student population and faculty beliefs; (β = -.07, $t(16)$ = -.97, *ns*).

Therefore, the null hypothesis—there are no differences in the beliefs of early childhood teacher educators between different types of higher education organizations based on their classification—was rejected. When controlling for the effects of social desirability, age, number of years as a teacher educator, number of years teaching children, race, ethnicity, and size of the student population—faculty beliefs significantly differed in public 4-year institutions from public 2-year colleges and universities, but the small practical effects suggest this finding is not robust.

Results of Research Question 3: Governance Structure and Administrative Processes

Prior to performing the regression, a one-way analysis of variance (ANOVA) was used to independently examine the relationship among the five types of the Birnbaum model (1988) and faculty beliefs. The results indicated significant differences: $F(4,146)$ = 11.50, $p < .001$. The ANOVA showed that the mean total score for anarchical ranged from 6.69 to 13.14 points higher than the other four institutional types and the standard deviation was much smaller. Programs assigned to the anarchical type tended to have teacher educators who scored higher on the TBS than other types. Table 7 shows the results of the ANOVA.

Table 8. Faculty Beliefs Related to Institutional Type

Variable	M item score	M total score	SD	n
Collegial	4.38	162.10	9.64	25
Bureaucratic	4.53	167.60	7.59	22
Political	4.46	165.15	8.47	31
Anarchical	4.74	175.24	5.86	34
Cybernetic	4.56	168.55	9.18	39

$N = 151$

To better understand which types varied significantly on TBS scores, the Tukey HSD test was used to compare all possible pairwise combinations for significant mean differences. Four parings were found to differ in the mean scores for faculty beliefs. Significant mean differences were found between anarchical and collegial types (M difference = 13.14), bureaucratic (M difference = 7.63), and political (M difference = 10.09). In addition, collegial was found to have a significant mean difference 7.99 points higher than organizations assigned to the cybernetic category. The differences for the significant parings found in the Tukey HSD test are shown in Table 8.

Table 9. Significant Differences in Mean Faculty Belief Scores by Institutional Type

Variable	M Difference	SE
Anarchical – Collegial	13.14*	2.14
Anarchical – Bureaucratic	7.63**	2.22
Anarchical – Political	10.09*	2.02
Cybernetic – Collegial	7.99**	2.08

$N = 151$, *p < .001, ** p < .01

Chi-square analysis comparing the anarchical type to institutional classification showed a distribution consistent with the total sample; 50% (17) public 2-year, 44% (15) public 4-year, and 6% (2) private 4-year institutions.

Since the most of the significant differences in the ANOVA analysis were associated with the anarchical type, it was chosen as the reference category for dummy coding the other

variables related to governance structure and administrative processes. The regression model significantly predicted faculty beliefs based on organizational types as defined by Birnbaum (1988) for all four of dummy variables showing significant differences: collegial ($\beta = -.51$, $t(15) = -5.70$, $p < .001$); bureaucratic ($\beta = -.26$, $t(15) = -2.95$, $p < .01$); political ($\beta = -.35$, $t(15) = -3.65$, $p < .001$); and cybernetic ($\beta = -.23$, $t(15) = -2.55$, $p < .05$). Faculty members in organizations from each of the four governance types scored lower on the TBS than those in anarchical institutions (the reference category), when all other variables in the model were held constant. The squared semi-partial correlation for organizations with a collegial governance type as a predictor of faculty beliefs was $sr^2 = .158$, uniquely predicting about 16% of the difference in the dependent variable. Similarly, the squared semi-partial correlations for bureaucratic institutions was $sr^2 = .042$, uniquely predicting about 4% of the variance in the model; for political institutions was $sr^2 = .065$, uniquely predicting about 7% of the variance in TBS scores; and for cybernetic universities was $sr^2 = .032$, uniquely predicting about 3% of the difference in the dependent variable.

While the effects of these significant associations were greater than those of the Carnegie Classification group differences, some of the beta values are small. The association between collegial and anarchical types is moderate ($\beta = -.51$) and explains approximately 16% of the variance in the model, controlling for other variables. However, the effect sizes for the bureaucratic, political and cybernetic types were not as strong and they predicted less of the variability.

Therefore, the null hypothesis for the third research question—there are no differences in the beliefs of early childhood teacher educators between different types of higher education organizations based on their governance structure and administrative processes—was rejected.

However, there are limitations to this finding that must be considered. The reliability scores of the HEOMS were low and indicate caution is needed in interpreting the results. Small practical effects for three of the variables should also be taken into account when making conclusions about the meaning of the differences among organizational types.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

Introduction

This chapter discusses the results of this research to examine differences in developmentally appropriate beliefs of faculty members in early childhood teacher preparation programs by various categories of the colleges and universities where they are employed. Institutions were grouped by whether they lead to teacher certification, by classification (student population, public vs. private, 2-year vs. 4-year), and differences by organizational governance types based on Birnbaum's theory (1988). Characteristics of faculty engaged in early childhood teacher preparation were examined as well as the organizations where they served. This chapter will discuss the interpretation of the findings and implications for early childhood teacher preparation and higher education administration. Finally, limitations of this study and recommendations for future research are described.

Faculty in Early Childhood Teacher Preparation

Scant research is available that specifically examines the population of faculty members in early childhood teacher preparation. While the sample size for this study was not large enough to make generalizations about the overall population, it provides some insight into the characteristics of early childhood teacher educators and the similarities and differences to other sectors across the Academy. Of the sample of 151 teacher educators, more than half (61%) were full-time tenured faculty or were on a track leading to tenure. Tenured faculty status has declined over the last 40 years in the United States with more than 70% of faculty members employed in non-tenure-track positions (AFT, 2009; Cohen, 2010; Kezar and Maxey, 2014). It is likely that the high percentage in this sample was influenced by recruiting from members of

professional associations, but such a high number may suggest that early childhood teacher preparation programs are staffed with individuals that are committed to the discipline and field.

Another trend in higher education is the aging of university faculty as baby boomers begin to retire at a greater rate than they can be replaced with qualified new hires (Harrison & Hargrove, 2006). This was confirmed when examining the participants in this study. The average age of the faculty members responding to this survey was 53, and over half of the instructors (53%) were age 55 or older. More than half (64%) had been teacher educators for 11 or more years. Finding and retaining qualified early childhood teacher educators has been challenging over the past few decades (Early & Winton, 2001) and higher education administrators of early childhood teacher preparation programs may need to prepare for additional shortages of instructors in the future.

The respondents in this study were sizably less diverse than overall higher education faculty as well as those in teacher preparation. This sample of early childhood teacher educators was disproportionately White (92%) and non-Hispanic (95%), which was a greater disparity than that found by Early and Winton in 2001. Previously, 84% of early childhood faculty were White. The disproportionate balance in racial and ethnic diversity in higher education personnel compared to the general population and student bodies has been a concern of academic leaders for decades (Altbach & Lomotey, 1991; American Federation of Teachers, 2010; Early & Winton, 2001; Mueth, 2009). These findings suggest that additional study is needed to understand and explore the racial and ethnic differences between early childhood teacher educators and other faculty in higher education. It also raises questions about barriers and mobility in the field of early childhood that would lead to such a dramatic difference.

Organizations Sponsoring Early Childhood Teacher Preparation Programs

This study also provided information about 125 colleges and universities, in 35 states, that offer early childhood teacher preparation programs. Slightly more than half of the sample (58%) was 4-year colleges and universities and the remainder (42%) were 2-year institutions. Most (88%) were publicly controlled organizations with only 12% of the respondents working in private institutions. These data were somewhat different from the nationally representative sample in the Early and Winton study (2001)—47% 4-year institutions; 53% 2-year institutions; 76% public; and 24% private (*n* = 438). This 2001 scan of early childhood teacher preparation also recruited participants from NAECTE and ACCESS and added individuals from other sources. While this information is insufficient to suggest trends, it is interesting to note that the majority of institutions shifted from 2-year to 4-year institutions and the percentage of private colleges was half of those in 2001 (24% vs. 12%). Regarding institutional size, 83% of the organizations in this study were medium or larger institutions with an average student population of 12,207. This raises questions about the capacity of small colleges to support early childhood teacher preparation programs.

Faculty Beliefs and Programs that Lead to State Teacher Certification

Results of this study indicated that there were no statistical differences among the beliefs of early childhood teacher educators between early childhood programs that lead to state teacher certification from those that do not lead to state teacher certification. Since overall faculty beliefs strongly tended toward developmentally appropriate practice (4.56 on a 5-point scale), the results of this study indicate that teacher educator beliefs are more DAP than DIP regardless whether they teach in programs that lead to state certification, in programs that do not, or in programs that offer both tracks. While previous research found significant differences regarding

DAP practices among teachers with certification in early childhood, elementary education, and dual elementary/early childhood certification (Charlton, 2010)—this non-significant finding did not differentiate the type of certification or whether the teachers received specialized coursework in early childhood education. All of the programs in this study focused on early childhood teacher preparation and included coursework in early childhood preparation.

It is encouraging that DAP faculty beliefs appear to be resistant to the competing pressures from political, societal, and systemic factors impacting the colleges and universities where they work. Though faculty must prepare students to work in schools that comply with an array of regulations and professional expectation—including state teacher certification or licensure requirements, the common core, or other state or federal degree requirements (Hyson, 2012)—their core beliefs about DAP remain relatively constant. With evidence that faculty beliefs are transferred to their students and ultimately impact classroom teaching practices (La Paro, Siepak, & Scott-Little, 2009; Vartuli, 1999; Vartuli & Rohs, 2009), it is reasonable to assume that pre-service teachers are influenced by faculty that hold to DAP beliefs whether their programs lead to certification or not.

Faculty Beliefs and Classification of Higher Education Institutions

A small amount of significant variation in the beliefs of early childhood teacher educators was found when comparing groups based on their Carnegie classification. Faculty belief scores differed between public 4-year institutions and public 2-year institutions. However, these differences only accounted for about a 2% difference in the TBS scores, so caution should be exercised in interpreting this result. No relationship was found between the size of the student body and faculty beliefs. When analyzing TBS scores independently using ANOVA before the regression was performed, no significant differences were found. However,

when all the other predictor variables were included in the regression model, significant differences emerged in the TBS scores between public 4-year universities and public 2-year colleges. Deans and other higher education leaders should be aware that teaching in the public sector may impact faculty DAP beliefs, but in light of the robust findings regarding organizational type, it seems that more attention should be given to those factors over classification.

Faculty Beliefs and Organizational Type and Governance Structure

This study revealed that organizational type, as defined by Birnbaum (1988), predicted DAP faculty beliefs in teacher preparation programs. However, the low reliability values for the HEOMS must be considered in interpreting this finding. As discussed in Chapter 2, the Birnbaum types are related to the organizational governance structure, internal processes, and coupling relationships with internal and external actors. Because the TBS mean score for the anarchical type was about 10 points higher in the preliminary ANOVA analysis, it was selected as the reference category for dummy coding scheme in the regression model. The average mean item score for the anarchical type was 4.74 on a 5-point scale—nearly perfect. This suggested that faculty teaching in organizations which they perceived to be anarchical in their governance type were more likely to have DAP beliefs, and indeed this premise was confirmed in the regression. The regression model showed that when all the predictor variables were added to the model at the same time, all the organizational types were significantly different when compared to the anarchical type. This also held true when controlling for age, years as a teacher educator, years teaching children, race, and ethnicity.

According to Birnbaum (1988), anarchical type institutions are complex organizations with governance structures that react in seemingly irrational ways to power centers internal to

the campus and external actors related to the college or university. Chi-square analysis of the anarchical type institutions in this sample did not show that they were necessarily different than the rest of the respondents with regards to classification—they were almost split between public 2-year and 4-year organizations with a couple of private 4-year colleges. This rules out that the reason for the anarchical typology is related to a particular classification. For example, it is not necessarily associated with community colleges over large public universities.

It is the autonomous nature of anarchical institutions that may explain why they are more resistant to influencing faculty DAP beliefs. Though they appear to be chaotic, anarchical organizations operate in an open system environment where departments and academic units are loosely coupled. Similar to open-source computing, information and influence that impacts decision making for the overall organization is characterized by competing priorities and fluid participation. Certain units or departments may choose to exert its influence—weigh-in—on particular issues, but remain silent on others. This kind of autonomy is quite different from collegial institutions that depend on and demand the full participation of the faculty to contribute to the decision-making process. Thus the anarchical typology may act as a buffer for influencing DAP faculty beliefs because the early childhood unit (or school of education) functions autonomously. While this does not exempt the unit from complying with institutional mandates or governmental actions (e.g., strategic planning priorities or the common core standards), it affords the unit leaders a certain degree of flexibility in emphasizing their importance. If this kind of autonomy and flexibility is incorporated into the organizational climate, it may explain why faculty members in anarchical environments are more likely to adopt developmentally appropriate beliefs about teaching and learning that are considered best practice in the field.

Mean TBS scores for the other four organizational types (collegial, bureaucratic, political, and cybernetic) clustered between 4.38 and 4.56 on a 5-point scale. Though narrowly clustered, the reasons they differ from the anarchical type may vary by nature of the characteristics of each typology. In collegial organizations the actors share power and operate from a unified perspective of common values. This may explain why the greatest difference in TBS scores was found between collegial and anarchical types. Where open anarchical organizational climates tolerate—even celebrate—divergent beliefs, collegial systems are characterized by consensus and shared purposes. These findings raise questions about whether the process of consensus building compromises the faculty DAP beliefs. Tight coupling relationships among faculty and academic units may influence faculty members as they aspire to shared philosophies and ideology. Loose coupling with external entities may cause faculty to resist influence from external organizations, like NAEYC that promotes DAP, if they perceive the external organization challenges the shared ideology of the college.

Where faculty beliefs in collegial institutions are influenced by consensus building, faculty in bureaucratic organizations are influenced by data-driven rationale, advanced through institutional goals that are aligned to community needs. Bureaucratic organizations tend to be more tightly coupled with external entities and responsive to their interests. Since bureaucratic institutions operate from clearly defined rules and regulations, official positions may impact academic units and require faculty to adopt them by mandate. Thus, it is reasonable that differences in DAP faculty beliefs would exist between bureaucratic and anarchical organizations.

Political organizations are characterized by competing subunits vying for power and resources. In this environment, alliances may form based on mutual benefits of the collaborating

partners. Because the focus and goals of political institutions are continually shifting from pressure exerted by these coalitions, the organizational climate can be inconsistent and prevailing ideology is contingent upon the presence of coalitions and their strength. Coupling relationships are tight among collaborative partners and loose with other actors internal and external to the institution. The significant difference found in the DAP beliefs of respondents who work in political organization could be influenced by the influence, but it is not as clearly explained as with collegial or bureaucratic institutions.

Like anarchical colleges and universities, cybernetic organizations operate with open system environments. However, where anarchical organizations focus energy and resources on problem solving, cybernetic institutions are more reactionary to critical issues or situations that threaten the university. They tend to be self-correcting by adapting to inputs as catalysts of change. Characteristics associated with collegial, bureaucratic, political, and anarchical types my simultaneously exist within the institution and coupling relationships are complex and unique to academic units and departments. Attributing the significant differences in faculty beliefs between those found between cybernetic organizations and anarchical types is not clear because of the complexity of the cybernetic group.

Implications

This study contributes the knowledge about early childhood teacher educators and preparation programs. Since Early and Winton's research in 2001, a national study has not been conducted on early childhood teacher educators as the unit of analysis to identify characteristics and examine the programs where they work. The aging of tenured faculty in early childhood teacher preparation is a concern for this population that is shared with other sectors of higher education. The racial and ethnic demographics in this study raise concern about the diversity of

faculty in early childhood teacher preparation and whether it is keeping pace with the changing demographic makeup of college students and the general population. These findings contribute to the substantial evidence that diversity among college faculty is not consistent with that of the general population or the students enrolled in early childhood teacher preparation programs. to address this possible trend, higher education administrators and policy makers must consider strategies that will result in hiring a more diverse faculty. In programs where currently minority groups are underrepresented, faculty members of dominant culture groups must assume a leadership role to ensure that social justice is embedded throughout the curriculum and graduates of early childhood teacher education programs enter the field as advocates for diverse and equitable schools. Additional research—specific to early childhood teacher preparation—is needed to accurately identify the disparity between early childhood teacher educators and students in their classrooms.

As early childhood programs expand at the state and local levels, higher education will face challenges in meeting the demand for highly qualified early childhood teachers. Degreed teachers are becoming the standard for expansion programs, particularly in early childhood school-based settings. Quality rating and improvement systems are now embedded sustainable programs in many states that incentivize programs for improving the qualifications of their administrative and teaching staffs.

This research raises questions about possible shifts in the ratio of 2-year to 4-year early childhood teacher preparation programs. It may be in response to increased demand for teachers with higher qualifications, but this is still unknown. The percentage of medium and large size institutions (83%) represents questions about the capacity of smaller institutions to support distinct early childhood units.

It is encouraging that faculty beliefs tend to be developmentally appropriate across different institutional classifications and programs—whether they lead to certification or not. The persistent work of early childhood advocates appear to be successful in changing attitudes and beliefs—at least among faculty—about what is appropriate practices in teaching young children. These results would suggest that the beliefs of faculty members in early childhood teacher preparation are not contributing to the field's performance gap (Goffin, 2007).

Implications of the findings in this study about how anarchical type governance and organizational structures impact faculty beliefs are particularly salient for leaders in higher education. While deans and unit leaders may not be able to change the organizational type of their institution, they do have considerable influence over coupling relationships with internal and external entities. They can implement policies, programs, and activities to increase participatory governance, acceptance and communication of diverse ideology, and advocate for evidence-based best practice—like DAP. These results may indicate that loose coupling may offer more autonomy for faculty members and less influence that could compromise their beliefs about best practices.

Administrators may benefit from employing adaptive leadership strategies (Heifetz, Grashow, & Linsky, 2009) in order to stay ahead of the changing landscape in early childhood education, leading their organizations rather than just reacting to critical negative influences. The efficacy of the anarchical model to influence faculty beliefs suggests that an adaptive leadership approach in teacher preparation may be beneficial for addressing complex challenges in organizations that are fluid and value diverse ideologies. Evidence in this study suggests that addressing technical issues in early childhood preparation programs may be easier than affecting system changes that involve coupling relationships among key university leaders,

inter-department alliances, partnerships with community stakeholders in the dynamic political environment of early childhood education.

Adaptive leaders are able to work in a productive zone of disequilibrium (Heifetz et al., 2009) to motivate individuals and groups regardless of the organizational typology. For example in a collegial organization, the adaptive leader might seek opportunities to contribute to and shape the collective ideal—influence the collegium to adopt best practices. In bureaucratic organizations, the adaptive leader could convene a task force to develop strategic initiatives in response to increasing community needs for highly qualified early childhood teachers. In political institutions, the adaptive leader might host a symposium to examine pre-K to third grade transitions with and agenda of ensuring DAP was implemented in a school districts' early childhood classrooms throughout the educational continuum. In anarchical organizations, the adaptive leader could serve in a role as an early innovator, bringing critical issues to the attention of the faculty and ensuring that all voices were heard in organizational debates. And in cybernetic higher educational settings, the adaptive leader might want to be highly sensitive to linchpin individuals or groups to help them interpret the changes or trends in early childhood education.

Limitations of the Study

A number of limitations should be considered regarding the use of this research. First, the sampling strategy of using distribution lists from professional associations does not encompass the universe of early childhood teacher educators. Representation in the sample included 125 distinct colleges and universities, in 35 states, from approximately 1,200 programs in the country. Caution should be exercised in generalizing these finding to all U.S. early childhood faculty or the programs where they teach.

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The questionnaire was somewhat lengthy, which may have contributed to the 75% completion rate. It is unknown to what degree the loss of these additional respondents may have added bias to the sample. Some higher education classifications were not represented or under-represented; private 2-year or technical schools were not represented in the sample, private 4-year colleges only comprised 6% of the respondents. The measures used for assigning to groups and to assess faculty beliefs were self-reported. No other methods were used to validate the self-reported assessment of program types or faculty beliefs.

Another limitation was that while the HEOMS was found to be highly reliable in several previous studies, its performance was problematic with this sample. Chronbach's alpha scores ranged from .412 to .698 when computed on the raw scores for each of the four organizational types. Correlations were not consistently reflected in the alpha values. Low reliability causes correlations to be over- or underestimated and the instrument's performance in this study could have caused individuals to be assigned to the wrong group. Reasons for lower alpha scores in this sample are unknown. Perhaps this sample of early childhood teacher educators is not representative of the population of higher education faculty.

Recommendations for Future Research

While this research is limited for generalizing the findings, they suggest that a larger, more comprehensive examination of early childhood teacher educators is needed. Educational leaders in higher education could benefit from additional information about the aging faculty workforce. Anticipating increased demand in early childhood teacher preparation future research or trend analysis could be useful to planning new or expanded programs.

Additional research on race, ethnicity, and other demographic patterns would be useful for college and university administrators. Future research could be useful for identifying

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patterns to reduce the disparity between the demography of the faculty and the pre-service teachers in their classrooms. Evidence of successful policies or methods for closing gaps between faculty and students could meaningfully impact the field and guide administrators to providing a multicultural curriculum.

Validation and examination of questions raised in this study about a possible reduction in the number of small colleges and universities that offer early childhood teacher preparation programs could be the focus of further research. Administrators, in smaller programs, face increased financial and personnel challenges that include balancing the ratio of full-time and part-time faculty.

Future research could also address a number of other dimensions related to faculty beliefs. Research questions might include:

1) Do DAP faculty beliefs correlate with beliefs about DAP held by students?

2) Are there other types of beliefs that impact curriculum and instruction to explore other than DAP beliefs measured by the TBS?

3) To what degree do DAP faculty beliefs influence their teaching in the college classroom?

4) To what degree do DAP faculty beliefs influence the DAP beliefs of students?

The TBS has not been revised to align it with *Developmentally appropriate practice in early childhood programs serving children from birth through age 8, third edition* (Copple and Bredekamp, 2009). A new version could be developed and validated to align it with the standards as well as ensure that it measures teacher beliefs in the current context of early childhood classrooms.

Additional research is needed to determine if the low alpha values for the HEOMS holds with other samples of early childhood teacher educators. If so, modifications to the instrument may be necessary it ensure better internal consistency. Research using other models for understanding organizational type could also be investigated.

Finally, future research could be conducted to better understand the effectiveness of adaptive leadership in higher education and how it operates in the context of organizational types. The finding that teacher beliefs were predicted in anarchical organizations raises a number of questions for higher education. Future research could explore the nature of anarchical organizational types on early childhood teacher preparation programs including coupling relationships in early childhood teacher preparation programs and organizations.

APPENDICES

APPENDIX A. SSIRB NOTICE OF EXEMPT DETERMINATION

UMKC
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UMKC
Office of Research Services

NOTICE OF EXEMPT DETERMINATION

Principal Investigator: Bonita Butner
328 Education Bld
Kansas City, MO 64110

Protocol Number: 14-563
Protocol Title: Faculty Beliefs in Early Childhood Teacher Preparation
Type of Review: Exempt

Date of Determination: 12/23/2014

Dear Dr. Butner,

The above referenced study was reviewed and determined to be exempt from IRB review and approval in accordance with the Federal Regulations 45 CFR Part 46.101(b).

This study was classified as exempt in accordance with exemption criteria #2 in the Federal Guidelines 45 CFR Part 46 as follows: "Research involving the use of educational tests (cognitive, diagnostic, achievement), survey procedures, interview procedures or observation of public behavior, unless: (i) information obtained is recorded in such a manner that subjects can be identified, directly or through identifiers linked to the subjects; and (ii) any disclosure of the human subjects responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability or reputation".

This determination includes the following documents:
Attachments
      Abel Dissertation Proposal - Chapters 1 & 2
      Abel Dissertation Proposal - Chapter 3
      Marlowe-Crowne Social Desirability Scale - Permission to Use
      Study Questionnaire 12-1-14
      Teacher Beliefs Scale - Permission
      Birnbaum Instrument - Permission Higgins
      Incentive - Raffle Questionnaire 12-1-14
      Invitation Email #2_Dated_12-22-2014
      Invitation Email #1_Dated_12-22-2014

You are required to submit an amendment request for all changes to the study, to prevent withdrawal of the exempt determination for your study. When the study is complete, you are required to submit a Final Report.

Please contact the Research Compliance Office (email: umkcirb@umkc.edu; phone: (816)235-5927) if you have questions or require further information.

Thank you,

Simon MacNeill
UMKC IRB

APPENDIX B. REVISED RECRUITMENT INVITATION LETTERS

[Initial Recruitment Letter—sent via email]

Dear teacher educator:

As part of my dissertation research at the University of Missouri – Kansas City, I am conducting a national survey of college and university faculty in early childhood teacher preparation programs about their beliefs regarding teaching and learning. The purpose of this research is to determine if faculty beliefs differ across various types of programs and higher education organizations. Your thoughts are important to this research and I would appreciate your participation by completing a questionnaire. As an incentive to take part in this study, you will have the opportunity at the end of the questionnaire to enter your name in a raffle drawing to win one of two gift cards to Barnes and Noble worth $50 each.

You can participate by clicking on his link to SurveyMonkey™, where you will find instructions for answering the questionnaire. It should take about 20 minutes to complete. Taking part in this study is voluntary and if you choose to participate, you are free to stop at any time and for any reason. All data will be collected anonymously and any identifying information about your organization will be used only for coding and will not be linked to your other answers.

Thank you for your consideration. Please feel free to forward this email to your colleagues who are early childhood teacher educators. Additional responses will strengthen our understanding about faculty beliefs. If you have questions or if you have any difficulties with the questionnaire, please contact me at abelm@umkc.edu or (816) 651-0510.

Sincerely,

Mike Abel
IPhD Candidate
University of Missouri – Kansas City

[Follow-up Recruitment Letter—sent via email]

Dear teacher educator:

A few weeks ago, I send you an email invitation to participate in a dissertation research study through the University of Missouri – Kansas City. The study involves a national survey of college and university faculty in early childhood teacher preparation programs about their beliefs regarding teaching and learning. The purpose of this research is to determine if faculty beliefs differ across various types of programs and higher education organizations. If you have not already completed the questionnaire, I would appreciate if you would take a few minutes to do so. As an incentive to take part in this study, you will have the opportunity at the end of the questionnaire to enter your name in a raffle drawing to win one of two gift cards to Barnes and Noble worth $50 each.

You can participate by clicking on his link to SurveyMonkey™, where you will find instructions for answering the questionnaire. It should take about 20 minutes to complete. Taking part in this study is voluntary and if you choose to participate, you are free to stop at any time and for any reason. All data will be collected anonymously and any identifying information about your organization will be used only for coding and will not be linked to your other answers.

Thank you for your consideration. Please feel free to forward this email to your colleagues who are early childhood teacher educators. Additional responses will strengthen our understanding about faculty beliefs. If you have questions or if you have any difficulties with the questionnaire, please contact me at abelm@umkc.edu or (816) 651-0510.

Sincerely,

Mike Abel
IPhD Candidate
University of Missouri – Kansas City

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VITA
MICHAEL B. ABEL

Michael Abel is currently the Director of Research and Evaluation at the McCormick Center for Early Childhood Leadership, National Louis University, in Wheeling, Illinois. He assumed this position in January, 2014. In this role, he designs and implements original research studies regarding assessment tools and activities to improve the quality of practice in early childhood programs. He also conducts evaluation studies of the center's training initiatives, writes quarterly research briefs, and submits scholarly papers for publication. He is responsible for overseeing data collection protocols and manages systems for storing and retrieving archived data. As a member of the leadership team, he collaborates with state and national entities to promote research in the early childhood field.

Prior to his current position (2006 to 2013), he worked as a research associate at the Institute for Human Development at the University of Missouri–Kansas City (UMKC-IHD). While at UMKC-IHD, Michael conducted applied research projects that included a national cross-site evaluation for U. S. Department of Health and Human Services, Abandoned Infants Assistance programs; Missouri's Early Childhood Comprehensive Systems project; the Indian Mound Neighborhood Quality of Life planning project; assessment of an early childhood director support initiative; program evaluation of a project for children of incarcerated fathers; and evaluation of Kansas City's early childhood Quality Rating Systems and program administration initiatives. Responsibilities included serving as principal investigator, data collection and analysis, report writing, presentations, community organizing, and leadership for program initiatives

Other experience included operations manager and adjunct instructor at the Francis Child Development Institute at Metropolitan Community College—Penn Valley, in Kansas City Missouri (1999 to 2006). He was responsible for coordinating the development, management, problem solving, and oversight regarding all financial policies and processes for the Institute's programs and projects.

Michael was also the chief executive of Northland Cathedral Child Care, Inc. (1984 - 1999) and operations manager for Northland Cathedral Academy (1989 – 1992), a private elementary and middle school (K-8th grades). Both schools were located in Kansas City, Missouri. The state licensed child care center served 150 children, birth through 12 years. Responsibilities included reporting to Directors, managing budget, hiring and supervising staff of 35, program and staff development and working with families. Development activities included grant writing, fundraising and donor solicitation. As the Academy Operations Manager, Michael was responsible for the operations and development of the school. He served on a senior management team with a school administrator and a head teacher. Michael hired and supervised faculty and staff, reviewed and selected curriculum, conducted and coordinated in-service training, coordinated student assessment, worked with parents. At the Academy, Michael also taught science: 3rd – 8th grades.

Michael earned a B.S. degree in Horticulture from the University of Missouri—Columbia in 1980. He holds two master's degrees—M.A. in Elementary and Secondary Educational

Administration, from the University of Missouri—Kansas City (1996) and M.A. in Early Childhood Education, from Concordia University – St. Paul (2005). Michael is currently a candidate an Interdisciplinary Ph.D. candidate (anticipated completion 5/2015) in Educational Leadership Policy and Foundations with a co-discipline of Education – Curriculum and Instruction at the University of Missouri—Kansas City.

Michael's professional service of 30 years includes Missouri Association for the Education of Young Children (AEYC) President, National AEYC Early Childhood Associate Degree Accreditation peer reviewer, Missouri AEYC Affiliate Council Representative, and member of the NAEYC Affiliate Council Executive Committee. Other professional service includes Preschool/Day Care Representative to the Association of Christian Teachers and Schools, council member for the Missouri Department of Elementary and Secondary Education State Interagency Coordinating Council, committee member of the Missouri Department of Elementary and Secondary Education Joint Committee on Education, and member for the Missouri Department of Social Services Children's Division Advisory Council.

Michael's selected publications include the following:

Journal Articles:

> Bloom, P. J., & Abel, M. A. (2015). Expanding the lens—Leadership as an organizational asset. *Young Children, 70*(2), 8-13.
> Abel, M., Mauzy, D., Thornburg, K.R., and Heger, M. (2008). Navigating the road for aspiring early childhood leaders: Missouri's response. *Young Children***,** 63 (3) 87-89.

White Paper:

> Abel, M., & Fuger, K. (2009, June). *Missouri's early childhood workforce and professional development system*. A background paper prepared for the Early Childhood and Youth Development Education Summit sponsored by the Missouri P-20 Council, Columbia, Missouri.

Research Briefs:

> McCormick Center for Early Childhood Leadership (2014, Winter). *Indicators of Quality and Child Outcomes in Family Child Care.* Wheeling, IL: National Louis University.
> McCormick Center for Early Childhood Leadership (2014, Summer). *The Relationship between Administrator Qualifications and Family Engagement.* Wheeling, IL: National Louis University.
> McCormick Center for Early Childhood Leadership (2014, Fall). *The Impact of the Work Environment on Job Burnout.* Wheeling, IL: National Louis University.

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> Fuger, K., Abel, M., Stephens, D., & Newkirk, M. K. (2014). *Abandoned Infants Assistance Program Cross-Site Evaluation Report Summary: September 30, 2011 – September 29, 2012*. Kansas City, Mo.: University of Missouri - Kansas City, Institute for Human Development.
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Course Preparations include:
- *Introduction to Early Childhood Education*
- *Fundamentals of Early Childhood Education*
- *Child Care Management*
- *Creative Experiences for Young Children*
- *Child Health and Safety*
- *Issues Theories In Early Childhood Education*
- *Learning Environments*

Michael is actively involved in state and national efforts regarding early childhood education, family issues and related policy matters and is a frequent speaker at regional and national conferences.