

# Exploring the Value of the Bachelor's Degree for Teachers in the Early Childhood Education Field: A Research Synthesis

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EXPLORING THE VALUE OF THE BACHELOR'S DEGREE FOR TEACHERS IN THE  
EARLY CHILDHOOD EDUCATION FIELD: A RESEARCH SYNTHESIS

by

Melissa A. Hogan

A thesis submitted in partial fulfillment of the requirements  
for the Honors in the Major Program in Early Childhood Education  
in the College of Community Innovation and Education  
and in the Burnett Honors College  
at the University of Central Florida  
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Thesis Chair: Marisa Macy, Ph. D.

## **Abstract**

The implementation of standardized testing has changed education in the United States resulting in a content ripple effect from the higher grades down to preschool-aged children. To match that ripple effect early childhood education can be evaluated and reformed accordingly by exploring many factors that make up the early childhood education system. This manuscript addressed one factor, early childhood teacher preparation, through a synthesis of literature related to the potential benefits of earning a Bachelor of Science degree in Early Childhood Development and Education, or a BS. The theories of early brain development were explored first and then studies of the social components affecting an Early Childhood Educator's, or ECE's, choice in teacher preparation were reviewed. The review then defined and compared the Child Development Associate or CDA, the Associate of Arts degree, or AA, and the BS. Professional recommendations and standards according to the National Association for Young Children, or NAEYC were included to understand how valuable the BS is to these trend setters of the field. The review then explored how the BS is currently being used nationally in a state-funded program known as VPK, utilizing the National Institute for Early Education Research, or NIEER. This data provided a snapshot of the national demand for the BS in the early childhood field. The pay disparities were then correlated with levels of education and compared with primary and upper grade compensation. The final value explored was research of how the BS directly affected results of the quality in the early childhood classroom and teacher-child interactions. These studies used two quality rating scales, the ECERS and CLASS, which were defined and compared. The

findings of the synthesized literature review provided understanding of a young field that is growing and implies where further research and change could happen to match the effects of an evolving education system in the United States of America.

## Dedications

This thesis is dedicated to the early childhood teachers who work relentlessly to change and prepare the lives of our most precious resource for the future...our children. To my own children who inspire me to work hard every day in hopes of providing a world where they themselves, their children and their children's children will thrive with solid foundations, peace, joy, hope and love. To all of the professors who have touched my life along this journey of discovery and exploration into the evolution of early childhood development and education.

## Acknowledgements

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## CHAPTER ONE: INTRODUCTION

The dialogue began many years ago in the field of early childhood education of how valuable a bachelor's degree is for early childhood educators and most importantly, the children that they are meant to serve. This is not the first consort, nor will it be the last, as research continues to support and unveil the professional growth needed in early childhood education nationwide. This work is a synthesis of some of that research. As education in the United States continues to focus on testing and increasing the amount of content children learn at younger ages, there is a ripple effect of the content being taught that is now affecting preschools. Preschool teachers are currently teaching content above grade level to compensate for this educational shift. Since, the teachers at the primary grade levels and up are required to hold a Bachelor of Science degree or higher in order to be a practicing teacher in a classroom to utilize these standards, then shouldn't the requirements of preschool teachers be adjusted to meet the same standards? Currently, the qualifications to be a lead teacher in an early childhood classroom depending on the region and type of educational facility (Head Start is not included here) are; a high school diploma, state mandated courses, a Child Development Associate (CDA) credential or similar, and possibly an Associate of Arts, or AA degree. One reason is that the budget of preschools and daycares rarely generate enough income to hire and fairly compensate teachers who hold a formal college degree or higher. The word *fairly* in this context means that the amount of pay compensates for the time, effort and expense of getting a college education, which common sense would say should be higher than minimum wage. There are programs that require or strongly suggest such education for its teachers such as VPK and Head Start, but these

programs do not reach all children who will enter the public education system from private preschools. To prepare all preschool students, quality of the classroom environment and its teacher-child interactions can be assessed and intentionally affected to meet the needs of that transition.

Through a literature review, this manuscript explores the values of earning a Bachelor's degree in early childhood development and education through the identification of theoretical implications including brain research of the development of preschool aged children and the factors that influence an ECEs choice of teacher preparation. Further exploration of that value includes teacher preparation programs such as the CDA, the AA and the BS, in the early childhood field which are defined and compared. Regional data is included in efforts to understand how the VPK program utilizes the BS nationally showing who holds it as a valuable benchmark in the state-funded program. The literature review also includes the value of the BS by investigating impacts on classroom quality and teacher-child interactions in a study with preschool teachers at various educational levels. Two rating scales are used to measure this quality known as the Early Childhood Environmental Rating Scale, or ECERS and the Classroom Assessment Scoring Scale, or the class. In order to explore financial value of earning a degree, the pay disparities are compared between levels of education and with the teachers of Elementary grades and above. The early childhood educational professional standards established by NAEYC, was inserted throughout the manuscript as their standards directly support the BS in that "higher education institutions are best positioned to prepare early childhood educators" (NAEYC, 2018, p. 33).

## CHAPTER TWO: REVIEW OF THE LITERATURE

The following literature review supports the theoretical framework of early brain development and how a BS would be valuable during such critical periods. A research study implicated the factors that affect the choice of teacher preparation for ECEs. The review then addresses alternate types of teacher preparation that exist, including a comparison of the CDA (an early childhood credential) and the typical college coursework of a four year degree, including a brief notation of the AA degree, providing understanding of how the BS could be a more valuable source of teacher preparation. Data is then presented of how teacher preparation is being utilized in the federal program, VPK, a more recent addition in the evolution of early childhood education which receives government funding and policymaking. This data originated within multiple reports from the National Institution for Early Education Research, or NIEER. To implicate financial value of the BS, early childhood teacher pay disparities are listed at the various educational levels of the CDA, AA, and BS and then compared to that of primary grade teachers and higher. This is followed by defining the domains of the CLASS and ECERS in a study on the quality of the classroom environment and its teacher-child interactions. The findings include teachers at multiple levels of education, identical to the aforementioned, in efforts to show value of the BS as it relates to classroom quality.

### **Young Children and Brain Development**

Brain research is the highest order of evidence available to formulate what is defined as quality teacher training. “During the first 3 to 4 years of life, the anatomic brain structures that govern personality traits, learning processes, and coping with stress and emotions are established, strengthened, and made permanent. If unused, these structures atrophy” (American Academy of Pediatrics, 2000, para. 1). Each child’s early experiences will create the foundations for the rest of their lives. Adequate teacher preparation therefore includes both the content knowledge and pedagogy needed to meet the needs of early critical periods in brain development.

“One of the most important lessons for teachers about the brain is that it is changed through use. Good instruction builds better brains” (Bergin & Bergin, 2016, p.49). This not only indicates the need for nurturing brain usage, but that the early brain is in a building stage in early childhood and is in need of *good* teachers. These authors go on to mention that people with a college education have more dendrites in the language area of the cortex (Bergin & Bergin, 2016), indicating that this type of highly effective thinking power offers more than that of a person who did not attend college. Would American society not want that thinking power utilized in the education of its youngest of learners by having teachers obtain the early childhood development and education degree?

### **Factors that Influence Teacher Preparation in the Early Childhood**

In a recent study, Megina Baker (2017), a current research assistant at The Harvard Graduate School of Education, Cambridge, USA, delves deep into the value and effectiveness of professional development using a qualitative case study in an urban district. The data sources include classroom observations, teacher interviews, and curriculum fidelity data. While this research focuses mostly on professional development of two Kindergarten teachers that already

have their college degrees, it is important to note how the levels of context impact the teaching and learning experience. Understanding the many variations of background, beliefs, attitudes and local culture of the area will give a more accurate lens of which to view a drive for professional pedagogy at the college level. (See Figure 1.)

Figure 1: Critical Ecology Framework (Baker, 2017)

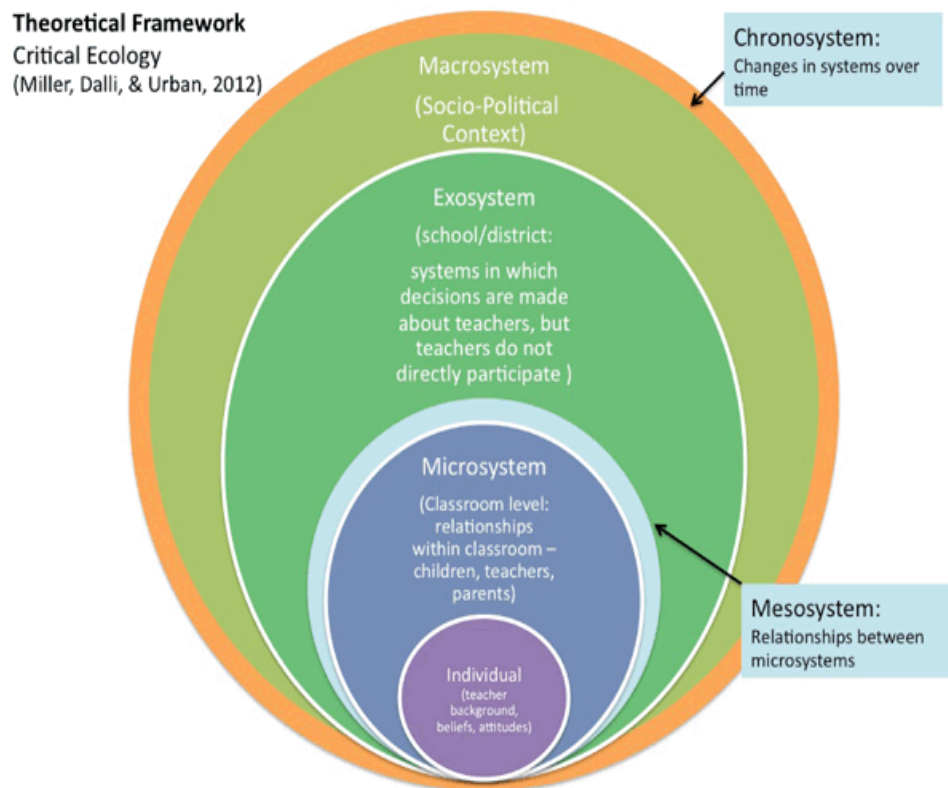


Figure 1 offers a snap shot of the ecological systematic approach, to teacher learning and how factors such as individual beliefs, relationships with parents, school districts and politicians all effect how a teacher views their profession and what the best preparation would include, at a personal level. NAEYC states that the ECE workforce is very fragmented in the varying levels of education (NAEYC, 2018). If the standard of education were the same for everyone then these optional factors such as the CDA or its state equivalencies, could be eliminated and the focus would be on obtaining the BS, and how to do so on a personal level.

The primary goal of any professional educator is providing the best possible practices of child development in their classroom, while meeting the needs of the children, families and communities (NAEYC, 2011). NAEYC offers research-based standards (see Table 1) that are meant to be visionary and empowering for professionals in the early childhood field so that teacher training can be flexible to meet the changing needs of our society (NAEYC, 2011.) As research, technology, family dynamics, and values improve or deteriorate, so must the approach to teaching, yet never forgetting the core values of education. The NAEYC standards outline what Early Childhood Education or ECE professionals are expected to know and do, and defines what the learning outcomes are in professional preparations programs.

### **A Comparison of the CDA, the AA, and the BS in Early Childhood Development and Education**

There are many types of teacher preparation available currently in the Early Childhood field. To consider the Bachelor's degree as the most valuable, a comparison can be made between the CDA, the AA degree and the BS degree. Other programs do exist that offer alternatives for early childhood teacher education such as online degrees and child care credentials. While these programs may hold valuable information, do they offer the whole package? Economist, journalist and broadcaster, Tim Harford, tells a story of a high school teacher that required students to use fonts that were more difficult to read, in an assignment. When the students tested on the material, the scores were higher because the difficulty caused the students to slow down and work harder (Harford, 2016). Since teachers must be properly equipped to provide "A flexible, research-based repertoire of teaching/learning approaches to promote young children's development" (NAEYC, 2011, p. 35), would not the hard work and extra time spent on quality higher education in early childhood, only increase the outcome of

creativity and the problem solving ability of the teacher, much like that of the high school students in Tim Harford’s story?

In 1971, the Federal Office of Child Development designed and implemented the CDA and it was regarded by them as a dream come true for the professional goals they had in the field. The CDA defined a role in addition to regular college channels and was not intended to be a substitute for college. The focus was to increase the quality and quantity of staff by designing a training method to improve teacher competence for existing teachers and staff. It awarded a professional credential specific to the field. However, in 1981 the statement was made that even though the CDA accomplished its three main goals, “There is still a great need in the area of providing quality training to improve the competence of the staff” (Hamby, T., And Others, & University Research Corp., 1981, p. 8). The CDA *has* been tremendously effective in meeting its goals. It is for anyone at any educational level and was described as “the best first step” (Council for Professional Recognition, 2011a, para. 2). As previously noted, finance and time are obstacles for many educators, and the CDA is highly effective at closing that gap. The extensive work and research done by the U.S. Dept. of Health and Human Services, the Administration of Children, Youth and Families (ACYF), and Head Start, provide a foundation for ECEs outside of college and is to be highly regarded (Hamby, et, al., 1981). The requirements of the CDA are directly aligned with NAEYC’s standards for professional development (see Table 1.)

Table 1: Early Education Competencies (Council for Professional Recognition, 2011b).

NAEYC STANDARDS	CDA SUBJECT AREAS
I. Promoting child development and learning Students prepared in early childhood degree programs are grounded in a child development knowledge base. They use their understanding of young children’s characteristics and needs and of the multiple interacting influences on children’s	Subject Area 1: Planning a safe, healthy learning environment Safety, first aid, health, nutrition, space planning, materials and equipment, play Subject Area 8: Understanding principles of child development and learning Typical developmental expectations for children from birth through age 5, individual variation including children with special needs, cultural influences on development



<p>development and learning to create environments that are healthy, respectful, supportive, and challenging for each child.</p>	
<p>2. Building family and community relationships Students prepared in early childhood degree programs understand that successful early childhood education depends on partnerships with children’s families and communities. They know about, understand, and value the importance and complex characteristics of children’s families and communities. They use this understanding to create respectful, reciprocal relationships that support and empower families and to involve all families in their children’s development and learning</p>	<p>Subject Area 4: Building productive relationships with families Parent involvement, home visits, conferences, referrals, communication strategies</p>
<p>3. Observing, documenting, and assessing Students prepared in early childhood degree programs understand that child observation, documentation, and other forms of assessment are central to the practice of all early childhood professionals. They know about and understand the goals, benefits, and uses of assessment. They know about and use systematic observations, documentation, and other effective assessment strategies in a responsible way, in partnership with families and other professionals, to positively influence the development of every child.</p>	<p>Subject Area 7: Observing and recording children’s behavior Tools and strategies for objective observation and assessment of children’s behavior and learning to plan curriculum and individualize teaching, developmental delays, intervention strategies, individual education plans</p>
<p>4. Using developmentally effective approaches to connect with children and families Students prepared in early childhood degree programs understand that teaching and learning with young children is a complex enterprise, and its details vary depending on children’s ages, characteristics, and the settings within which teaching and learning occur. They understand and use positive relationships and supportive interactions as the foundation for their work with young children and families. Students know, understand, and use a wide array of developmentally appropriate approaches, instructional strategies, and tools to connect with children and families and positively</p>	<p>Subject Area 2: Advancing children’s physical and intellectual development Large and small muscle, language and literacy, discovery, art, music, mathematics, social studies, science, technology, and dual language learning Subject Area 3: Supporting children’s social and emotional development Adult modeling, self-esteem, self-regulation, socialization cultural identity, conflict resolution</p>

influence each child’s development and learning.	
5. Using content knowledge to build meaningful curriculum Students prepared in early childhood degree programs use their knowledge of academic disciplines to design, implement, and evaluate experiences that promote positive development and learning for each and every young child. Students understand the importance of developmental domains and academic (or content) disciplines in early childhood curricula. They know the essential concepts, inquiry tools, and structure of content areas, including academic subjects, and can identify resources to deepen their understanding. Students use their own knowledge and other resources to design, implement, and evaluate meaningful, challenging curricula that promote comprehensive developmental and learning outcomes for every young child.	Subject Areas 2 & 3 provide an introduction to the essential concepts, inquiry tools and structures of the academic content disciplines that are part of an early childhood curriculum. However, the Child Development Associate is not expected to design or evaluate curriculum.
6. Becoming a professional Students prepared in early childhood degree programs identify and conduct themselves as members of the early childhood profession. They know and use ethical guidelines and other professional standards related to early childhood practice. They are continuous, collaborative learners who demonstrate knowledgeable, reflective, and critical perspectives on their work, making informed decisions that integrate knowledge from a variety of sources. They are informed advocates for sound educational practices and policies.	Subject Area 5: Managing an effective program operation Planning, record keeping, reporting, community services. Subject Area 6: Maintaining a commitment to professionalism Advocacy, ethical practices, work force issues, professional development, goal setting, and networking.

There are six competencies of the CDA (Council for Professional Recognition, 2011c):

- I. To establish and maintain a safe, healthy learning environment
- II. To advance physical and intellectual competence
- III. To support social and emotional development and to provide positive guidance
- IV. To establish positive and productive relationships with families

- V. To ensure a well-run, purposeful program responsive to participant needs
- VI. To maintain a commitment to professionalism

Based on those competencies, Table 2 compares the competencies for the 120 hours of instruction for the CDA (Council for Professional Recognition, 2011a), and the possible college courses that would meet the 60 college credit hour criteria. This is in addition to the core courses of the AA degree to earn a BS in Early Childhood Education (UCF, 2018 and Teacher Certification Degrees, 2018). The AA degree is college coursework that's focused on general education for the first two years of college, with degree-centered courses interwoven as electives. In some states, the AA degree can replace the CDA with a waiver and the CDA no longer is required to be renewed (Department of Children and Families, 2009). The instructional hours of one college credit course is substantially more than the 120 hours of the CDA. One college course worth three credit hours typically requires three hours per week of instruction and study. For a fourteen week course that would be  $3 \times 14 = 42$  instructional hours per course. Taking four college courses would be  $4 \times 42 = 168$  instructional hours in just one semester. To finish the BS, six semesters would be  $6 \times 168 = 1008$  hours of instruction.

Table 2: A Comparison of CDA and Bachelor Coursework (Successful Solutions Training in Child Development, 2018; UCF, 2018; Teacher Certification Degrees, 2018.)

CDA Coursework and content	College Coursework and content
Planning a safe and healthy learning environment	*Child Health and Safety *Child Abuse: Treatment and Prevention
Advancing Children's Physical and intellectual development	*Language Development *Beginning Literacy *Language Arts and Reading *Science for Young Children

	<ul style="list-style-type: none"> <li>*Basics of Curriculum</li> <li>*Early Childhood Music and Movement</li> <li>*Early Childhood Art and Creativity</li> <li>*Social and Emotional Development of Young Children</li> <li>*Young Children with Special Needs</li> <li>Motor Development and Learning</li> </ul>
Supporting children’s social and emotional development	<ul style="list-style-type: none"> <li>*Child Psychology</li> <li>*Human Behavior and the Social Environment</li> <li>*Behavior Research</li> </ul>
Building productive relationships with families	<ul style="list-style-type: none"> <li>*Introduction to Diversity for educators</li> <li>*Cultural and Family Systems</li> </ul>
Managing an effective program operation	<ul style="list-style-type: none"> <li>*Classroom Management</li> <li>*Organization and Management</li> </ul>
Maintaining a commitment to professionalism	<ul style="list-style-type: none"> <li>*Student Teaching and Professional Practicum</li> </ul>
Observing and recording children’s behavior	<ul style="list-style-type: none"> <li>*Assessment and Evaluation in ECE</li> <li>*Infant and Toddler Assessment</li> </ul>
Understanding principles of child development and learning	<ul style="list-style-type: none"> <li>*Introduction to Early Childhood Education Theory and Practice</li> <li>*Introduction to Child Development</li> </ul>

*\*The classes offered at the college level vary in title, but not content. This chart was created solely to express the plethora of specific knowledge of the Early Childhood Education field.*

The Infant/ Toddler CDA Competency Goals and Functional Areas are the same of Preschool CDA Competency Goals and Functional Areas, yet an age-leveled endorsement is offered where the focus is on one or the other. The BS degree offers training for birth to third grade, encompassing a wider knowledge content base, and giving the teacher more “tools” to meet the flexible needs of early childhood education, as the number of children in various age

groups changes from year to year (Council for Early Childhood Professional Recognition, W. D., 1986).

According to NAEYC (2011), “An equally important concern is the tendency for teacher education programs to give inadequate attention to children’s critical early years, especially the birth–age 3 periods. Teachers who take positions in infant-toddler care but whose preparation has slighted that period may fail to support children’s learning and development because the curriculum and teaching strategies they were taught to use are more effective with older children.” Table 2 shows that ages birth through age eight are included in the course content of the BS degree.

To absolve the misconception that college coursework varies so much in our nation from institution to institution, it is appropriate that “every degree program that specializes in early childhood education has a responsibility to address all of the standards each in its own way and with its own best decisions on breadth and depth” (NAEYC, 2011). NAEYC sets standards for ECE preparation and continues to be updated as new research emerges, federal and state policies change, and developmental practices evolve. The revisions reflect upon and then identify roles and real life as it pertains to the field (NAEYC, 2018).

In comparison, both the CDA and the B.S. require working with young children in the field; however the practicum for the B.S offers the opportunity to be a student teacher, where practices can be applied under the supervision of another teacher. Too often, CDA candidates are left in charge of classrooms alone, as the requirements are only that said candidates are working with young children for 480 hours with no stipulation of supervision (CDA, 2011a).

### **Teacher Preparation and VPK**

The value of the BS can be explored through its use in federally-funded programs. The national voluntary Pre-Kindergarten program is the culmination and transition from preschool to primary grades and can be considered a focal point for teacher education and certification, since it has been given public funding in 2002. This era of Preschool programs now funded by the state, hold a new requirement to achieve academic standards and benchmarks and benefit children's academic and social skills (Curby, LoCasale-Crouch, Konold, Pianta, Howes, Burchinal, & Barbarin, 2009). The National Institute for Early Education Research, or NIEER, is a research program that provides supportive information for policy in early childhood education. The research-based analyses assist policymakers, journalists, researchers and educators. with the availability of annual reports of state-funded prekindergarten programs (NIEER, 2018). Even though the responsibility for education relies on local and state government, 44/51 (86%) of the states have adopted the federally funded Pre-K program known as VPK. The seven states (14%) that have not adopted the program, do offer other initiatives for early childhood and its educators. For example, in Montana, an Early Grades endorsement (age three to grade three) is offered to meet the educator preparation program requirements for the early grades.

When looking at the regions of the United States of America (Table 3), the statistics of earned college degrees meeting PRE-K requirements for lead teachers are increasing since the program began. Nationally, only 24 out of the 44 participating states (55%) met the educational benchmarks of holding a Bachelor's degree as of the 2016/2017 school year, with 7 out of 51 (14%) states not meeting the criteria or not participating.

Table 3 National Benchmarks by Region

States that meet the current teacher education benchmarks for pre-k	Meets the Benchmark	Does not meet the Benchmark
1. Bachelor's degree	GA, NC, WV, MD, NY, NJ, RI, ME, AL, MS, TN, KY, IL, MI, WI, LA, TX, OK, MO, KS, NE, NV, AK, HI (24)	FL, SC, VA, DC, DE, PA, CT, MA, VT, OH, IN, AR, IA, MN, NM, CO, AZ, CA, OR, WA (20)
2. Teacher specialized training ECE, CD, ECE, and SpEd  Specializing in pre-K	GA, SC, NC, WV, VA, DE, MD, PA, NY, NJ, CT, MA, RI, ME, AL, MS, TN, KY, OH, IL, MI, WI, LA, TX, AR, OK, MO, KS, IA, NE, MN, NM, CO, CA, NV, OR, WA, AK (38)	FL, DC, VT, IN, AZ, HI (6)
3. Assistant teacher degree CDA or equivalent	GA, WV, RI, ME, AL, MS, MI, AR, NE, MN, NM, OR, WA, AK (14)	FL, SC, NC, VA, DC, DE, MD, PA, NY, NJ, CT, MA, VT, TN, KY, OH, IN, IL, WI, LA, TX, OK, MO, KS, IA, CO, AZ, CA, NV, HI (14)
4. Staff professional development 15 hours/school year; PD plans; Coaching	GA, SC, NC, WV, VA, DE, MD, PA, NY, NJ, CT, MA, RI, VT, ME, AL, MS, TN, KY, IN, IL, MI, WI, LA, TX, AR, OK, MO, KS, MN, NM, CO, AZ, CA, NV, OR, WA, AK, HI (39)	FL, DC, OH, IA, NE (5)

**\*\* NO PROGRAM:** NH, SD, ND, WY, MT, ID, and UT *these states do not offer the national VPK Program or do not meet the criteria for this source which are: 1% of the target population enrolled*

Since, the Bachelor's degree is a benchmark for a lead teacher in the VPK program; would that indicate higher test scores? In the research of doctoral student Teresa Wright entitled, *The Impact of the Education Level of Voluntary Prekindergarten Teachers upon Kindergarten Student Readiness Rates* (2012), she proves that no significance was found on Kindergarten readiness scores when children had formally educated instructors. However, should Kindergarten readiness scores be used as the sole indicator of success in the preschool classroom? The whole child is the goal of early childhood educators, not just test scores. All developmental domains are interrelated and are the primary focus of early childhood education. Even though the test scores were not affected, other research literature establishes that programs with the *well-educated* adequately compensated and low staff/ child ratio teacher produced higher educational gains (Wright, 2012). Wright's (2012) research found that some teachers begin teaching without the benefit of college education, because too often the focus is on content such as the competencies in Table 1 of the CDA. Although adults mostly have a basic knowledge of early childhood curricula, the lack of full understanding of the underlying concepts affect children's learning. The best example was an adult may know the alphabet and sounds but lack the most effective way based on research, to introduce concepts such as these, to young children (Wright, 2012).

### **Teacher Pay Disparities**

Another value of earning the BS is the anticipated additional compensation. Financially, consider the methods of trainings offered in the United States. Perhaps they give some insight into how this entrepreneur- focused and capitalist society, will always strive for economic sense and financial gain. Finances have a role to play in the decisions of curriculum, accountability and how teachers prepare for a career in the ECE field (Haslip & Gullow, 2018). Earning a formal education includes higher pay (Table 5), but is that enough to pay the costs of college education



and living expenses? Common sense would imply that fair work earns fair pay, right? “Too many individuals within the early learning workforce earn low wages—sometimes at or near the Federal poverty line—even when they obtain credentials and higher levels of education” (Baker, 2017, p.1). “Clearly, the number one issue for everyone who works in the early childhood field is for all early childhood teachers to receive adequate pay and benefits (Neugebauer, 1999; Sargent, 2002). I believe these should be at least comparable to salaries and benefits of public school teachers, According to Fagan (1996), Cunningham (1998; 1999), Neugebauer (1999), Sanders (2002) and Wardle, (2003)” (Wardle, 2008, para. 11). Table 4 shows data from the United States Department of Labor as of 2017 that shows the difference between child care workers and primary school teachers.

Table 4: Occupational Employment Statistics (United States Department of Labor, 2017)

<b>Industry</b>	<b>Employment</b>	<b>Percent of industry employment</b>	<b>Hourly mean wage</b>	<b>Annual mean wage</b>
Elementary and Secondary Schools	72,810	0.86	\$24.06	\$50,040
Child Day Care Services	283,830	32.18	\$13.98	\$29,080

Table 5: National Mean Hourly Wage (The Early Childhood Workforce Index/ 2018 Center for the Study of Child Care Employment, 2018)

<b>Education Level</b>	<b>Pre - K</b>
Bachelor's or Graduate Degree	\$17.86
Associate Degree	\$13.11
No College Degree/ CDA	\$10.73

### **Defining and Measuring Quality in an Early Childhood Classroom**

The purpose of this manuscript is to research the value that the four year college degree has/ does not have on the quality of both the early childhood classroom and the teacher- child interactions in those classrooms. Teacher-child interactions are the back and forth exchanges between a child and the teacher. The quality of these daily interactions is found to be critical in developing both academic and social-emotional skills (Early, Maxwell, Ponders, B. & Pan, 2016). Different measures do exist to capture the elements of teacher-child interactions, but the Classroom Assessment Scoring System or CLASS, has proven to be well-known, reliable and

validated (Curby, et al., 2009). As measured with this popular instrument, the CLASS, classroom quality includes Climate, Teacher Sensitivity, a Regard for Student Perspective, Behavior Management, Productivity, Instructional Learning Formats, Concept Development, Quality of Feedback and Language Modeling. The scoring systems use qualified teacher and child interactions and the dimensions of quality through the method of observation (Pianta, La Paro, & Hamre, 2008). Another widely used rating scaled used in this study is the Early Childhood Environmental Rating Scale, or the ECERS. The ECERS differs in that the physical classroom environment is evaluated. However the analyses of the ECERS showed that single factors do not capture item variability and lists instead four factors. These factors are learning opportunities, gross motor, teacher interactions and math activities (Early, Sideris, Neitzel, LaForett, & Nehler, 2018). The ECERS also differs from the CLASS in that there is emotional quality measured in the CLASS, where the ECERS does not offer such in depth measurements focused on emotional skills.

In the study, *Teachers' Education, major, and credential related to Classroom Quality and Children's Academic Gains in Pre-Kindergarten?* (Early, Bryant, Pianta, Clifford, Burchinal, Ritchie, & Barbarin, 2006), researchers measure four factors. The first two factors use the ECERS and include teaching and interactions and provisions for learning. The second two factors are measured with the CLASS. These factors are the emotional climate and instructions climate of the observed classrooms. There was no significant data reported with regards to educational level and all of the factors with the exception of one; the teacher-child interactions. The data reported showed that teachers with  $\frac{3}{4}$  of the teachers with high school diplomas had CDAs and the score of all four factors had no significance. The teachers with AA degrees showed a score of 3.96 for teacher-child interactions. More than half of the teachers with

Bachelor's degrees in this study majored in early childhood development and education, while the rest were elementary or education-based. The scores for these teachers regarding teacher-child interactions were 4.29, using the ECERS.

In another study, *Are Teachers' Education Major, and Credentials Related to Classroom Quality and Children's Academic gains in Pre-Kindergarten* (2006), researchers used both the CLASS and the ECERS and found that there were direct correlations to well-educated or teachers with a Bachelor's degree or higher, and quality, but it was marginal. In 2008 another research conducted known as *Formal education, credential, or both: Early childhood program classroom practices* by authors Vu, Jeon and Howes, found a significant increase in classroom quality with lead teachers who were in weakly supported programs such as private care institutions. However for state public school settings, the early childhood classroom showed no difference of teachers with a BS degree in ECE. This was perhaps derived from the fact that there were plenty of degreed professionals in the educational program that supported the less educated (Vu, Jeon, & Howes, 2008).

In the study, *Improving teacher-child interactions: A randomized controlled trial of Making the Most of Classroom Interaction and My Teacher Partner professional development models* (2016), researchers used the CLASS in Pre-K classrooms that had early childhood teachers whom were well-educated with a Bachelor's degree or higher. This was correlational compared to the previous study that used random assignment, which is a true experiment of the BS and quality, implying causation. Plenty of research is available regarding using the CLASS tool and the BS as part of what relates to gains in quality. The purpose of the 2016 study was to measure the effectiveness of the professional developmental plans called the MMCI or MTP. The researchers based the creation of these professional development plans off of a 14 week

college-level course. This course was found to have effectively improved the teacher-child interactions, the emotional support and the instructional support noted within the dimensions of the CLASS. So as early childhood teachers benefit from professional development or PD, the source of this PD comes from effective college coursework (Early, et al., 2016).

## CHAPTER THREE: METHODOLOGY

### Statement of the Problem

The early childhood education field has changed drastically over the centuries to a place that now recognizes the academic and emotional educational value of the early critical periods in a preschool child's brain development. Teachers are able to procure a successful degree without a college education in the early childhood field. Preschool teachers can become leaders, directors, preschool owners without the Bachelor's degree. The question this thesis sets to explore concerns the assessing the value of earning a Bachelor's degree when it is not required to be successful in an early childhood educational career, "especially when too many individuals within the early learning workforce earn low wages—sometimes at or near the Federal poverty line—even when they obtain credentials and higher levels of education" (Baker, 2017, p. 1).

### Procedure

A keyword search using UCF Databases like ERIC and EBSCO HOST was conducted. Keywords included were Early Childhood Education, Bachelor's Degree, Teacher Preparation, Classroom Quality, Teacher-Child Interactions, CLASS, ECERS, CDA, Teacher Pay Disparity. Common authors, such as Early and Pianta, were identified and a search of their work regarding the CLASS and ECERS, reviewed. NAEYC, NIEER and the Council for Professional Development's websites were explored for what their research has unveiled on the key terms and added to the literature review. Once these sources were identified, several means of comparison could be executed, including that of the course content and instructional hours of the CDA, AA, and BS; data of teacher preparation benchmarks used in the state-funded VPK program

nationally; teacher pay disparities as they related to both the educational levels of the CDA, AA, and BS within the field and then collectively with compensation for teachers of the primary and secondary grades who hold BS degrees.

## CHAPTER FOUR: FINDINGS

Through a literature review, many values were explored including, meeting the needs of early developing brains, understanding how society and individual communities have a part to play in the choice of teacher preparation, a comparison of the CDA, AA, and BS, as well as a national report on how the Bachelor's is being used in VPK, and finally how quality in the classroom and teacher-child interactions are affected with teachers who have a BS versus teachers who do not. Each piece of the review has implications that can be synthesized to create a complete understanding of how the Bachelor's degree is valuable in the early childhood field. Furthermore, research and policy reviews can provide additional evidence that the degree can be implemented as a mandatory training requirement for preschool teachers. The findings are as follows:

- A comparison of the CDA, AA, and BS, the CDA is a good starting point. The coursework is more extensive in the BS programs and requires more training hours with a supervised internship that offers the teacher a sense of breadth and research-based understanding in the field, that the CDA or AA alone do not. Combined, it could be inferred that this teacher would be fully prepared to meet the need of change in the evolutionary early childhood classroom.
- When looking at the BS regionally in the United States, the Southeast was at 44%, the Northeast had 50%, with the exception of NH not offering the program, and the East South Central met the benchmark for a college degree at 100%! In the Midwest East North Central zones 60% met the goal and in the West South Central region, 75% of



VPK lead teachers had degrees. In the Midwest West North Central 100% met the benchmarks, with the exception of ND and SD who did not offer the VPK Program. Finally out west, Western only 33% met the educational benchmark with the exception of WY, MT, ID, UT who were not offering the program (NIEER, 2018). Many of the regions have a high number of highly educated pre-k teachers, but too many still do not reflect the value of a college education during these important years of brain development (NIEER, 2018).

- There were studies indicating the use of the CLASS and ECERS to understand the effect of the BS on classroom quality and teacher-child interactions (Early, Bryant, Pianta, Clifford, Burchinal, Ritchie, & Barbarin, 2006; Vu, Jeon, & Howes, 2008; Early, Maxwell, Ponders, & Pan, 2016). The first study by authors Early, Bryant, Pianta, Clifford, Burchinal, Ritchie, & Barbarin, (2006), was a random research study that found a slightly higher quality in teacher-child interactions using ECERS when taught by teachers with a BS in Early Childhood Development and Education, but did not reveal any other impactful factors defined in the rating scales. Currently, the CLASS is now the most widely used measure of teacher-child interactions and overall quality in early childhood classrooms. Perhaps, this fact would have changed the 2006 study when deciding to use the ECERS instead of the CLASS to measure teacher-child interactions. There are now ten dimensions rated using the CLASS which are organized into three domains. These domains are Emotional Support, Classroom Organization, and Instructional Support (Early, D., et al., 2016). While NAEYC states the BS is the most effective form of teacher preparation, very few studies support this statement to date. The second study by authors Early, Maxwell, Ponders, and Pan (2016), found college

coursework to be the foundation of creating professional development programs and this coursework and was also used as the foundation of the CDA (Council for Professional Recognition, 2011a )

- The compensation of ECE teachers with a BS was found to be low compared to that of the primary and secondary grade teachers with Bachelor degrees. When considering the levels of education with a CDA, AA, or a BS of the preschool teacher *The National Mean Hourly Wage* (2018) increases as educational level increases. This also implies that the BS is more valuable in comparison to the CDA and AA degree because the pay is higher.

Table 6: Occupational Employment Statistics (United States Department of Labor, 2017)

<b>Industry</b>	<b>Employment</b>	<b>Percent of industry employment</b>	<b>Hourly mean wage</b>	<b>Annual mean wage</b>
Elementary and Secondary Schools	72,810	0.86	\$24.06	\$50,040
Child Day Care Services	283,830	32.18	\$13.98	\$29,080

Table 7: National Mean Hourly Wage (The Early Childhood Workforce Index/ 2018 Center for the Study of Child Care Employment, 2018)

<b>Education Level</b>	<b>Pre - K</b>
Bachelor’s or Graduate Degree	\$17.86
Associate Degree	\$13.11
No College Degree/ CDA	\$10.73

If teachers are well-educated to meet the needs of standardized education, then fair compensation and training, equivalent to that of an elementary school teacher or in a grade level beyond, that is providing the same service of meeting academic standards, is implied.

#### Limitations and Influential Factors

The synthesis of research literature did not take into account the value of an assistant teacher who adds to quality in the classroom. Studies of addressing years of experience in the education field versus degree level were also not included as they relate to quality but not the research question regarding the BS. The amount of current research using the CLASS and ECERS rating scales as it pertains to the BS as a direct random experiment is minimal. Most studies available are correlational possibly because many quality teachers have a CDA and are successfully advancing in the field without the BS. Yet, they lack the breadth of knowledge and research-based inquiry acquired through obtaining the BS, which is needed to provide the highest quality teaching available in the ECE classroom. Additionally, accreditation of ECE classrooms and schools is another resource educational programs have in place. The economics of being able

to afford teachers with BS degrees was not addressed as the full financial aspects were not the focus of this study. Head Start, another state-funded program, was not considered in this study because of its unique attributes.

## CHAPTER FIVE: CONCLUSIONS

The implementation of standardized testing has changed education in the United States resulting in a content ripple effect from the higher grades down to preschool-aged children. To match that ripple effect early childhood education can be evaluated and reformed accordingly by exploring many factors that make up the early childhood education system. This manuscript addressed one factor, early childhood teacher preparation, through a synthesis of literature related to the potential benefits of earning a Bachelor of Science degree in Early Childhood Development and Education, or a BS. The first five years of life are the most crucial for healthy brain development. The teachers who are meant to serve these young brains should be well-educated, as they are a key player in the community of people who teach a child during these critical periods of development.

To continue to explore the value of the BS, studies of the social components affecting an Early Childhood Educator's, or ECE's, choice in teacher preparation were reviewed and found to be diverse. Teachers are able to advance in the field of early childhood without a degree. If they come from communities where parents and early childhood facilities lack financial means, the CDA becomes enough to just hold a job. This is where the importance of a standardized training requirement for early childhood teachers in any setting should be the BS. That standardization then leaves the question of how to obtain funding for low income programs to hire and fairly compensate teachers with a Bachelor's degree, and how teachers will cover the costs of obtaining their degree. The need for financial review is only indicated and not thoroughly discussed in this thesis.

The review then defined and compared the Child Development Associate or CDA, the Associate of Arts degree, or AA, and the BS. The findings of these comparisons indicate that the college degree offers both content knowledge and pedagogy superseding all other forms of teacher preparation and training. If our education system moves too fast with expedited or less content-rich methods such as a CDA, in order to meet just the goals of the CDA competencies or those of standardized testing in the early primary grades, yet miss out on key components in teacher training such as creativity, brain research and teaching strategy, what will the outcome be? It will be children who do not have intrinsic value and the emotional health that comes from having a teacher that is trained to provide such things.

When looking at Professional development, the findings imply that it is often based off of college coursework and that coursework is proven to improve teacher-child interactions, again validating college coursework as valuable. NAEYC also values the BS and they, being a trendsetter in the standards of the early childhood field, recommend the four year degree for ECE Teachers.

The review then explored how programs value the BS as it is currently being used nationally in a state-funded program known as VPK. Through data obtained from the reports of the National Institute for Early Education Research, or NIEER, a snapshot of the national demand for the BS in the early childhood field was given. Even though it is not required, the Bachelor's degree in early childhood education is growing in demand throughout the United States, especially in federally funded programs like VPK, but still has much room to grow in certain regions. Continuing to monitor the reports offered annually by NIEER can help to direct where the strongest efforts to improve program quality should be as a nation.

Financial value was explored by considering teacher compensation in the field. Research shows compensation to be higher when obtaining a Bachelor's degree in early childhood education compared to earning a CDA or AA degree, but not by much. The data supports the fact that early childhood educators are often paid well under what the amount of education and the amount of daily work requires when teaching young children. The findings of this thesis are a call for change more than a negative implication of earning a degree. Preschool teachers need Bachelor's degrees in early childhood development and education to meet the needs of our new educational structure.

The final value explored was research of how the BS directly affected results of the quality in the early childhood classroom and teacher-child interactions. These studies used two quality rating scales, the ECERS and CLASS, which were defined and compared. My review of research literature shows marginal increases in quality of the classroom and teacher-child interactions. A possible factor of the marginality could be that the ECE workforce is very fragmented in the varying levels of education. Since NAEYC continues to reflect upon its standards as policies, practices and research change, then Early Childhood teacher preparation should do the same. Perhaps what worked before in providing quality classrooms and teacher-child interactions may no longer work now. The need for child care has shifted from just keeping children safe to providing for educational needs as well (Cox, 2018). The literary search conducted infers that research is lacking on this topic, even though the topic is still a current issue within the field. The research regarding the CLASS and ECERS are correlational in regards to the BS. This is most likely a result of the fact that teachers can obtain a career and advance in that career without obtaining a college degree, so why study the BS, when it is not a standardized requirement for success in the field? To look at it from another point of view, what if credentials

were the only requirement for grades K-12? Since standards have changed to include children of preschool age, then so should the requirements of its teachers. With new research and financial revisions, this may become a reality as the field continues to grow and change in the United States.

This topic of the BS continues to gain attention in professional articles, such as “Quality early-childhood education demands a well-trained workforce” by Michele Miller-Cox (2018), which debuted September 21, 2018 in *Education Week* and “Daycare or School: There’s a Third Way” by Rhian Evans Allvin (2016) in the National Association of the Education for Young Children, or *NAEYC News* magazine available on the NAEYC website. The topic of credentialing and professionalizing the field of ECE will persist far beyond the scope of this thesis.

#### Future Research Recommendations

In the future, a quantitative study with random samples of preschool classrooms and teachers with four year college degrees in Early Childhood Development and Education versus teachers with a CDA, using the CLASS, can be conducted to add to the lack of current research directly implying causation of quality in the classroom and teacher-child interactions from teachers with the content and pedagogy that comes from earning a Bachelor’s degree. This synthesis can be revised as new studies emerge and other resources are found over time. As for VPK and the national use of the Bachelor’s degree, continuing to follow the annual reports and focus efforts on those states who do not yet meet teacher educational benchmarks would only allow the United States to increase quality as a nation in the early childhood field.



## REFERENCE LIST

- American Academy of Pediatrics (2000) *Development Issues for Young Children in Foster Care – Early Brain and Child Development*. Retrieved from <http://pediatrics.aappublications.org/content/106/5/1145>
- Baker, M. (2017). Early Childhood Teachers at the Center: A Qualitative Case Study of Professional Development in an Urban District. *Early Childhood Education Journal*, 46(2), 231-240.
- Bergin, C. C., & Bergin, D. A. (2016). *Child and Adolescent Development in Your Classroom (3<sup>rd</sup> ed.)*. Stamford, CT: Cengage. ISBN 978-1-305-96424-2.
- Council for Early Childhood Professional Recognition, W. D. (1986). Home Visitor: Child Development Associate Assessment System and Competency Standards. Retrieved from <https://login.ezproxy.net.ucf.edu/login?auth=shibb&url=https://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=ED277468&site=eds-live&scope=site>
- Council for Professional Recognition (2011a). CDA Credentialing Program Facts. Retrieved From <https://www.cdacouncil.org>
- Council for Professional Recognition (2011b). Suggested Relationship Between the CDA Formal Child Care Education Requirement and NAEYC Standards for Professional Preparation Program [PDF Document]. Retrieved from [https://www.cdacouncil.org/storage/documents/Downloadable\\_Forms/CDA\\_and\\_NAEYC\\_Standards\\_Relationship.pdf](https://www.cdacouncil.org/storage/documents/Downloadable_Forms/CDA_and_NAEYC_Standards_Relationship.pdf)
- Council for Professional Recognition (2011c). CDA Competency Standards. Retrieved from <https://www.cdacouncil.org>

- Cox, M. (2018, September 21). Quality early-childhood education demands a well-trained workforce. *Education Week*. Retrieved from <https://www.edweek.org/ew/articles/2018/09/26/in-the-rush-to-improve-early-education.html?cmp=eml-enl-eu-news1&M=58619441&U=411141>
- Curby, T. W., LoCasale-Crouch, J., Konold, T. R., Pianta, R. C., Howes, C., Burchinal, M., Barbarin, O. (2009). The Relations of Observed Pre-K Classroom Quality Profiles to Children's Achievement and Social Competence. *Early Education and Development*, 20(2), 346–372. <https://doi-org.ezproxy.net.ucf.edu/10.1080/10409280802581284>
- Department of Children and Families (2009). *Resource Page* [PDF Document]. Florida Child Care Staff Credential Verification Application. Retrieved from: <http://www.cdealliance.org/wp-content/uploads/2013/12/Staff-Credential-Renewal-Form.pdf>
- Early, D. M., Bryant, D. M., Pianta, R. C., Clifford, R. M., Burchinal, M. R., Ritchie, S., Barbarin, O. (2006). Are teachers' education, major, and credentials related to classroom quality and children's academic gains in pre-kindergarten? *Early Childhood Research Quarterly*, 21, 174–195. Retrieved from: <https://doi-org.ezproxy.net.ucf.edu/10.1016/j.ecresq.2006.04.004>
- Early, D., Maxwell, K., Ponders, B., & Pan, Y. (2016, October 13). Improving teacher-child interactions: A randomized controlled trial of Making the Most of Classroom Interactions and My Teaching Partner professional development models. *Early Childhood Research Quarterly*. 38, 57-70

Early, D. M., Sideris, J., Neitzel, J., LaForett, D. R., & Nehler, C. G. (2018). Factor structure and validity of the Early Childhood Environment Rating Scale – Third Edition (ECERS-3). *Early Childhood Research Quarterly*, 44, 242–256. <https://doi-org.ezproxy.net.ucf.edu/10.1016/j.ecresq.2018.04.009>

Hamby, T., And Others, & University Research Corp. (1981). *The Child Development Associate Program: A Guide to Training*. (Second Edition). Retrieved from <https://login.ezproxy.net.ucf.edu/login?auth=shibb&url=https://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=ED229099&site=eds-live&scope=site>

Harford, T. (2016). How frustration can make us more creative. Retrieved from [http://www.ted.com/talks/tim\\_harford\\_how\\_messy\\_problems\\_can\\_inspire\\_creativity](http://www.ted.com/talks/tim_harford_how_messy_problems_can_inspire_creativity)

Haslip, M. J., & Gullo, D. F. (2018). The Changing Landscape of Early Childhood Education: Implications for Policy and Practice. *Early Childhood Education Journal*, 46(3), 249–264. <https://doi-org.ezproxy.net.ucf.edu/10.1007/s10643-017-0865-7>

Kirby, G., Caronongan, P., Esposito, A. M., Murphy, L., Shoji, M., Del Grosso, P., & National Center for Education Evaluation and Regional Assistance (ED). (2017). Progress and Challenges in Developing Tiered Quality Rating and Improvement Systems (TQRIS) in the Round 1 Race to the Top-Early Learning Challenge (RTT-ELC) States. NCEE 2018-4003. *National Center for Education Evaluation and Regional Assistance. National Center for Education Evaluation and Regional Assistance*. Retrieved from <https://login.ezproxy.net.ucf.edu/login?auth=shibb&url=https://search.ebscohost-com.ezproxy.net.ucf.edu/login.aspx?direct=true&db=eric&AN=ED577788&site=eds-live&scope=site>

National Association for the Education of Young Children. (2011). NAEYC Professional Preparation Standards [PDF Document]. Retrieved from <https://www.naeyc.org/sites/default/files/globally-shared/downloads/PDFs/our-work/higher-ed/NAEYC-Professional-Preparation-Standards.pdf>

National Association for the Education of Young Children (2018). DRAFT: Professional Standards and Competencies for Early Childhood Educators. Retrieved from: <https://www.naeyc.org/resources/position-statements/draft-professional-standards-competencies>

National Institute for Early Education Research – NIEER (2018). State of Preschool Yearbooks. *Rutgers Graduate School of Education*. Retrieved from <http://nieer.org/state-preschool-yearbooks>.

Rhian, A. (2016). Daycare or School: There's a Third Way. *NAEYC News*. Retrieved from <https://www.naeyc.org/resources/blog/daycare-or-school>

Successful Solutions Training in Child Development. (2018, March 29). 120 Hours of CDA Training. Retrieved from <https://www.cdastars.com/cdaprocess/120-hours-of-cda-training>

Pianta, R., La Paro, K., & Hamre, B. (2008). *Classroom Assessment Scoring System-CLASS*. Charlottesville, Virginia. Teachstone Training LLC

Teacher Certification Degrees (2018). Early Childhood Education Degree Requirements and

Coursework. *Project 8 Labs LLC*. Retrieved from

<https://www.teachercertificationdegrees.com/degrees/early-childhood-education-degree/#m-menu>

The Early Childhood Workforce Index 2018 | Center for the Study of Child Care Employment.

(2018). Retrieved from <http://csce.berkeley.edu/early-childhood-workforce-2018-index/>

University of Central Florida (2018). Early Childhood and Development and Education,

Track 2: Early Childhood Development (B.S.) *Undergraduate Catalog*. Retrieved

From [http://ucf.catalog.acalog.com/preview\\_program.php?catoid=3&poid=790](http://ucf.catalog.acalog.com/preview_program.php?catoid=3&poid=790)

Vu, J. A., Jeon, H.-J., & Howes, C. (2008). *Formal education, credential, or both: Early*

*childhood program classroom practices*. *Early Education and Development*, 19(3), 479–

504. Retrieved from <https://doi-org.ezproxy.net.ucf.edu/10.1080/10409280802065379>

Wardle, F. Ph. D. (2008). Men in Early Childhood: Fathers & Teachers. *Early Childhood News-*

*The Professional Resource for Teachers and Parents*. September 4, 2018. Retrieved

From:

[http://www.earlychildhoodnews.com/earlychildhood/article\\_view.aspx?domainredirect=true&articleid=400](http://www.earlychildhoodnews.com/earlychildhood/article_view.aspx?domainredirect=true&articleid=400)

Wright, T. A. (2012). *Impact of the education level of voluntary prekindergarten teachers upon*

*kindergarten student readiness rates*. [Electronic resource]. Orlando, Fla. : University of

Central Florida, 2012. Retrieved from:

<https://login.ezproxy.net.ucf.edu/login?auth=shibb&url=https://search.ebscohost.com/login.aspx?direct=true&db=cat00846a&AN=ucfl.031988041&site=eds-live&scope=site>