

## ABSTRACT

WOOD, ADRIAN HARROLD. Examining Quality and Revenue Sources in Accredited and Self Study Programs Serving Children from Low-Income Families. (Under the direction of Robert C. Serow.)

The purpose of this study is to learn more about the dynamics surrounding quality and revenue of early childhood programs serving children from low-income families. The study looked at programs that had been accredited by the National Association for the Education of Young Children (NAEYC) as well as programs under self-study as part of the accreditation process. Both groups of programs served children predominantly from low-income families.

The increasing number of mothers in the workforce, combined with recent welfare legislation, has propelled the number of children in early childhood programs to skyrocket. While child care quality has been a topic of discussion for the last twenty-five years, it has not been examined in terms of identifying the type of care offered for children specifically from low-income families. The latest research not only suggests that these children most greatly benefit from high quality care, but also are least likely to access high quality programs.

This study's data supports recent literature citing that children from low-income families are receiving mediocre care and found that even those accredited programs are of mediocre quality, when serving large numbers of low-income children. In fact, the quality of self-study and accredited programs was very similar. Additionally, findings about revenue suggest that although accredited programs receive significantly higher parent fees per child, both programs receive similar total amounts.

**Examining Quality and Revenue Sources in Accredited and Self Study  
Programs Serving Children from Low Income Families**

by

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## Biography

Adrian Harrold Wood was born and raised in North Carolina, where she attended Salem Academy and received a Bachelor of Science degree in Child Development from Meredith College. Upon graduation, she attended UNC-CH and obtained a Master's of Education. Thereafter, she continued her schooling at NCSU where she completed a Ph.D. in Educational Research and Policy Analysis. While completing this program, she had a research assistantship with Science House, worked part-time at Frank Porter Graham Child Development Institute (FPG), and did contract evaluation work for Wake County Public Schools, as well as the Vice-Provost at NCSU. Most recently, she and her NCSU graduate husband, Thomas Benbury Paxton Wood, have been enjoying their four-month old son Thomas, while living in Edenton. Adrian plans to continue contract evaluation work in the field of early childhood in rural NC.

## Acknowledgements

After completing my coursework, I planned to take a semester off before getting married. The semester turned in to two years during which time I worked full-time as my husband finished law school. Upon his graduation, we moved east to Edenton and began an impromptu renovation, following Hurricane Isabel, of his family's 200 year old home on the Albemarle Sound. As this work was completed and we were then expecting our first child, I decided my Ph.D. could wait no longer. The prospect of returning to NCSU and beginning edits was frightening and I was only successful with the support of several people who need to be recognized for their commitment to my academic career.

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## CHAPTER ONE: INTRODUCTION

Ecological Systems Theory, one of the reigning models in child development research, hypothesizes that the multiple environments young children encounter impact the global development of the child (Bronfenbrenner, 1989). Research in this theoretical tradition suggests that high quality early childhood programs are essential to support the development of preschoolers who spend a substantial portion of their time in child care, regardless of the child's family income (Cost Quality and Outcomes Study [CQO], 1995). As the number of children involved in child care situations has grown significantly, child care has become a primary social system, second only to the home environment. In 2001, two of every three mothers with children under the age of six were working outside of the home (US Department of Labor, 2001). By 2002, 63% of all children were enrolled in child care programs, meaning that 11.6 million children of the 18.5 million children in the United States were cared for outside the home for an average of 32 hours per week (US Census, 2002). Although the majority of working families utilize child care programs for their young children (Wiltz & Klein, 2001), the quality of care offered by many programs tends to be mediocre (CQO, 1995; Whitebook, Sakai, & Howes, 1997). The Welfare to Work Act of 1996, which instituted mandatory employment for welfare recipients through time limits on welfare, contributed to low-income mothers entering the workforce and has increased the need for policymakers to more seriously consider the quality aspects of child care (Ceglowski, 2004; Gallagher, Clayton, & Heinmeier, 2001; Votruba-Drzal, Coley, & Chase-Lansdale, 2004).

Yet, literature suggests that high quality programs may not be accessible to low-income families. A number of recent studies indicate that programs serving low-income

children tend to be low quality themselves (Burchinal & Nelson, 2000; Burchinal & Cryer, 2003; Bryant, Maxwell, & Burchinal, 1999; Clements, Reynolds, & Hickey, 2004; Clifford, Barbarin, Chang, Early, Howes, & Burchinal, 2005; Fuller, Kagan, Caspary, & Gauthier, 2001; Votruba-Drzal et al., 2004). A recent study estimated that quality was significantly lower in classrooms with more than 60% of the children from homes below the poverty line (Pianta, Howes, Burchinal, Bryant, Clifford, & Early, 2005). This may be startling information in light of state moneys now allocated to community child care programs specifically serving low-income children and their families. It also offers a dim future for those children from low-income families as research suggests that low quality full-time programs are harmful to development. Those children have more difficulty socially, higher rates of behavior problems, and are at higher risk for clinical services (Votruba-Drzal et al., 2004).

In that high quality programs tend to be more expensive, low-income families indirectly lack access to high quality care for their children as “income is found to be the most important factor influencing child care choice” (Peyton, Jacobs, O’Brien, & Roy, 2001, p. 192). Although there are more state and federal moneys today than ever for child care assistance, less than 25% of eligible low-income families utilize them (Fuller et al., 2001). However, a lack of resources is still a problem as “inadequate funding drives up class size and prohibits programs from paying the salaries and benefits needed to hire and retain more highly qualified staff with the skills required to implement high quality programs” (Barnett, Tarr, & Frede, 1999, p. 13). In fact, one recent study found that children of low-income families were significantly more likely to be taught by a teacher without a bachelor’s degree (Clifford, et al., 2005). Although low-income families often

lack access to high quality child care, their children are likely to benefit from a high quality care setting, providing “well-planned, child-centered, play-oriented, developmentally appropriate programs” (Wiltz & Klein, 2001, p.213). A report by the United States General Accounting Office (2000) affirms research findings that indicate positive developmental outcomes for low-income children who receive high quality care. These positive outcomes include good levels of language and cognitive development, ability to resolve social conflicts, self-control, creativity, sociability, and cooperative play skills (CQO, 1995). The High/Scope Perry Preschool Program, which provided high care to three and four year olds from low-income families, modeled long-term positive outcomes of high quality care. For example, those children randomly assigned to the care group were “five times less likely to become chronic law-breakers by age 27” (Fuller et al., 2001). Low-income families also benefit from high quality child care programs; these benefits include higher self-efficacy, increased parenting knowledge, and social support that come from increased participation in parent workshops and involvement in the classroom (Massengill, 2004).

Given these findings, the purpose of this study is to learn more about the dynamics surrounding quality and revenue of early childhood programs predominantly serving low-income children. This will be done through an examination of inner city accredited and self-study programs in Chicago, Illinois. Programs that meet high standards of child care practice are awarded accreditation status by the National Association for the Education of Young Children (NAEYC) (Gormley & Lucas, 2000). There is limited research on the quality of self-study programs; “self-study is the process by which a child care program undergoes a quality assessment in order to meet standards

of accreditation set by NAEYC” (Whitebook, Sakai, & Howes, 1997, p. 97). Research on accredited child care is also scarce as there are relatively few accredited programs, especially those serving low-income children. Although research affirms that accreditation by the National Association for the Education of Young Children (NAEYC) “clearly improves program quality” (Bredekamp, 1999, p. 58), questions remain about the degree to which this finding applies to accredited and self-study programs primarily serving low-income families.

This investigation of programs will broaden available knowledge about the quality of care for low-income children provided in accredited and self-study program settings. Though accredited programs are six times more likely to be of higher quality than average programs, is this true for programs serving large numbers of low-income children (Bredekamp, 1999)? Findings will be presented on how quality may be related to program type and income.

The remainder of Chapter I will introduce and explain relevant terms related to accreditation, cost, and quality; the study’s analytical frameworks and related background information will also be provided. The general methodology of this study will also be described through the introduction of research questions, analytical techniques, and a description of the sample. In conclusion, the study’s implications will be discussed, as well as its limitations.

### Definition of Key Terms

As this study explores the quality of programs serving low-income children, it was necessary to define several terms that are used in reference to early childhood programs.

1. **Accreditation:** The certification given to a child care program, which meets certain standards of quality set by the accrediting organization. This study is using standards provided by the National Association for the Education of Young Children (NAEYC); those standards represent a level of quality that surpasses standards of care in most states and is assessed through the use of the Early Childhood Environmental Rating Scale-Revised (Whitebook, 1996; Whitebook, Sakai, & Howes, 1997).
2. **Child Care:** The full range of services used by families to educate and nurture young children (Mitchell & Stoney, 1998).
3. **Child Care Center or Early Childhood Program:** A “licensed facility in which care is provided to at least 15 young children, generally up to 12 hours per day, five days per week, year-round” (Whitebook, Sakai, & Howes, 1997, p.95).
4. **Cost Analysis:** The goal of cost analysis is “to determine the economic value of all resources used in the activity or program studied” according to Barnett and Escobar (1987).
5. **Early Childhood Environmental Rating Scale-Revised (ECERS-R):** The Early Childhood Environment Rating Scale- Revised (1998), one of the most widely used standardized measures of quality in the early childhood setting, “focusing on the day-to-day quality of classroom environments, activities, and interactions” (Whitebook, Sakai, & Howes, 1997, p.96). This 37-item scale is numbered 1-7. A score of 1 indicates an inadequate setting with major problems in meeting children’s needs; a score of 3 refers to a mediocre or minimal setting; a score of 5 refers to a “good” setting; and a score of 7 refers to an excellent setting in which the group and individual needs of a child are consistently met (Munton, Mooney, & Rowland, 1995).
6. **Ecological Systems Theory:** Ecological Systems Theory stresses the importance of understanding that children do not live in isolation, but are instead part of many social systems. There are four categories described by Bronfenbrenner’s (1989) model of ecological systems, all of which pertain to young children in a child care program: microsystem, mesosystem, exosystem, and macrosystem.
7. **Global Quality:** “A term used to describe the type of care provided to children in child care. Factors that affect quality can include but are not limited to the classroom environment and activities, teacher-child interactions, and the adult work environment” (Whitebook, Sakai, & Howes, 1997, p.97). Child care quality ranges from low to mediocre to high (ECERS-R, 1998).
8. **Low Income Families:** In this study, low-income families are defined as families whose annual incomes were less than or equal to 150% of the federal

poverty income guidelines. However, other literature will be examined that defines low-income in several other ways and this will be presented as well.

9. **Low Quality:** Level of quality, scored 1 to 2.9, as measured by the ECERS-R. A low quality care setting triggers more stress behaviors, behaviors that will inhibit learning. As learning is strongly linked to emotions, the environment must also be stimulating and safe. Thus, low quality care may be characterized by an environment that has poorly planned programs, limited activities and access to materials, and negative interactions with poorly trained and educated teachers (Wiltz & Klein, 2001; Rushton & Larkin, 2001).
10. **Mediocre Quality:** Level of quality, scored 3 to 4.9, as measured by the ECERS-R. A mediocre quality care setting may be lacking due to high child/staff ratios, lack of staff training and development, and few good interactions between staff and children (Gormley & Lucas, 2000).
11. **High Quality:** An early childhood program that is well managed and monitored has competent and committed teachers, a high degree of adult-child interaction, trained teachers, and regular assessment (Breedlove & Schweinhart, 1982). It may also be defined as a setting that is child-centered, warm and responsive to children, and cognitively enriching (Early, Saluja, & Clifford, 2000).
12. **Process Quality:** The process portion of quality refers to the day-to-day experiences of the child, indicating the importance of the child-teacher relationship. The ECERS-R measures process quality by examining space and furnishings, personal care routines, language reasoning, activities, interactions, and program structure.
13. **NAEYC:** The National Association for the Education of Young Children, a group whose purpose is to improve quality through a method of requiring child care facilities to meet certain standards of good practice before achieving accreditation (Gormley & Lucas, 2000).
14. **Self-Study Program:** A program that is undergoing a quality assessment so as to attain the standards of accreditation, as set by the National Association for the Education of Young Children (Whitebook, Sakai, & Howes, 1997).

### Analytical Framework

The analytical framework used for this study, the *Ecological Systems Theory*, applies to the relationship between a child and that child's environments. Ecological systems theory provides critical guidance for this study in two ways. First, it emphasizes

how the child care environment affects the development of the young child and second, it links how the home and child care environments may act as a dual ecology. As the number of children involved in child care situations has grown significantly, child care has become a primary social system, second only to the home environment, which influences young children and their development. To support this theory, Rushton and Larkin (2001) assert that “studies about how the human brain learns need to be interpreted in light of the classroom environment, because children spend a great deal of their time in these settings at a critical period of their development” (p.25). High quality settings, such as those found in some early childhood programs, are crucial in supporting young children’s development through a well-planned, child-centered, and play-centered curriculum that offers a wide range of activities (Wiltz & Klein, 2001). High quality child care programs “produce long-term benefits because they empower young children to carry out their own learning activities. These programs encourage parents to work with teachers in supporting children’s development, as well as enable teachers to engage in practices that support children and parents” (Schweinhart, 1994, p.1). Although research affirms that accreditation by the National Association for the Education of Young Children (NAEYC) “clearly improves program quality” (Bredekamp, 1999, p.58), questions remain about the degree to which this finding applies to accredited and self-study programs primarily serving low-income families.

Ecological Systems Theory stresses the importance of understanding that children do not live in isolation, but are instead part of many social systems. There are four categories described by Bronfenbrenner’s (1989) model of ecological systems, all of which pertain to young children in a child care program: microsystem, mesosystem,

exosystem, and macrosystem. All of these systems pertain to various types of development and influence how young children learn (Bronfenbrenner, 1989). This theory captures the reasoning behind the need for quality in early childhood environments, especially those serving low-income children. Early childhood researchers ascertain that “poor quality care, more than any single type of program or arrangement, threatens children’s development, especially children from poor and minority families” (Hayes, Palmer, and Zaslow, 1990, p.28). Therefore, an environment of low quality predicts a negative effect on the development of a young child from a low-income family.

According to Bronfenbrenner’s Ecological Systems Theory (1989), the *microsystem* is the most basic social system. It includes all people, activities, roles, and interpersonal relationships that children experience in their natural environments, such as home or a child care setting. Microsystems consist of four separate elements: physical space and materials, people, roles, and activities. Young children find themselves incorporated into many microsystems- the microsystem of their family, the playground microsystem, or the microsystem of their child care classroom, for example. In assessing the quality of early childhood programs, it is important to consider the interactions between children and their environment (Harms & Clifford, 1991). According to Harms and Clifford (1991), all of these settings shape a young child’s development in specific ways, and “the quality of early childhood classrooms is, to a large extent, determined by those interactions that take place between teachers and the children in those classrooms” (Kruif & Wakely, 2000, p.247). Young children in child care spend the majority of their waking hours in the microsystem of their child care programs, which primarily involves people and interactions in a place other than home, and with people other than the child’s

parents. This type of nurturing relationship has been found to occur most often in high quality settings (Burchinal & Nelson, 2000; Huffman & Speer, 2000; De Kruiff et al., 2000; Phillips, Mekos, Scarr, McCartney, & Abott-Shim, 2000; Rushton & Larkin, 2001; Wiltz & Klein, 2001). In fact, children from low-income families especially benefit from high quality care often found in accredited programs in which interactions with the environment and caretakers are nurturing, frequent, and supportive (Campbell & Taylor, 1996).

The combination of the child's various microsystems forms the *mesosystem*, which is a larger systemic structure that integrates a child's experiences and interactions in various systems (Bronfenbrenner, 1989). In the context of this study, the mesosystem will include the relationship of the child care environment with the home environment. Included also are the relationships of children with their parents, as compared to the relationship between children and their caregivers in a child care setting. However, accredited programs should support the various social, cultural, and individual needs of families and their developing children (Bredekamp, 1999).

The third system is the *exosystem* that represents various settings of those who interact with the child and, therefore, affect the child indirectly (Bronfenbrenner, 1989). For example, this system may include a parent's workplace, an environment that affects the child either positively or negatively, through its effect on the parent. If a child's parent works in a stressful environment, receives little support, and is expected to work long hours, these experiences will affect the child via the parent's mood or stress level. Once again, a high quality program is one that makes more of an effort to not only integrate parents into the environment, but to gain an understanding of the family

environment. Therefore, the exosystem of an accredited program provides parental support, which in turn has a positive influence on the young child (ECERS-R, 1998).

The largest and most complex system, the *macrosystem*, transcends and is comprised of the other three systems. Macrosystems integrate all interaction patterns that occur in the various microsystems, mesosystems, and exosystems (Bronfenbrenner, 1989). This system is the most abstract and is only delineated by the philosophies that govern it. Patterns of beliefs and behaviors define the macrosystem, as it represents the passing of beliefs to generations and social structures within the large environment. The attitudes and beliefs that this overarching system embodies influence children's development through their impact on the microsystems in which children are included (Kostelnik, Soderman, Stein, & Whiren, 1993). Wiltz and Klein (2001) support Bronfenbrenner's Ecological System's Theory through their statement that "child care must be viewed as a vital part of the complex, multi-faceted environment in which children live, and it must be studied" (p.210). In the context of this study, the concept of the macrosystem is important because whether at home or child care "children learn best when interacting in a rich environment" (Rushton & Larkin, 2001, p.32).

In brief, Ecological Systems Theory is significant for this dissertation, as it provides a rationale for linking high quality environments and positive child development. It states that children are part of many social systems, all of which pertain to their physical, social, and emotional development, influencing how young children learn (Bronfenbrenner, 1989). Furthermore, this theory specifies criteria for articulating and analyzing the basic concept of quality as it relates to childcare. It also emphasizes the dual ecology that exists between home and the child care program and its relationship

to quality. The Ecological Systems Theory will structure discussions of the various systems that the child interacts with in a child care setting, and their potential impact on the child's development and that child's setting.

### Research Questions

The purpose of this dissertation is to learn more about the dynamics surrounding quality and revenue of accredited and self-study early childhood programs predominantly serving low-income children. Through an examination of these programs, the study will first seek to identify overall global quality in accredited and self-study programs. Process quality indicators, which contribute to the overall global quality rating for both accredited and self-study programs, will also be examined. Lastly, financial aspects of programs will be examined, specifically various revenue sources such as parent fees and government subsidies.

Question One: How do accredited and self-study early childhood programs predominantly serving children from low-income families compare in the area of quality, as defined by the ECERS-R?

- a) How do accredited programs and self-study programs compare in terms of global quality, as measured by the ECERS-R?
- b) How do accredited programs and self-study programs compare in terms of process quality, including space and furnishings, personal care routines, language-reasoning, activities, interactions, and program structure, as measured by the ECERS-R?

Question Two: How do accredited and self-study early childhood programs compare in the area of revenue?

- a) Do revenues for accredited programs differ significantly from revenues for self-study programs, in the specific areas of parent fees, government subsidy, and total revenue?

The first question has two sub questions that are used to specifically address global and process quality. These questions address the potentially complex connections between program status and the quality of accredited and self-study early childhood programs which serve them. The ECERS-R is used to examine the quality of accredited and self-study programs in the following areas: space and furnishings, personal care routines, language- reasoning, activities, interactions, and program structure. Question Two is also accompanied by a sub-question that examines the relationship of program status and program revenue, specifically parent fees and government subsidy. Examining program revenue, specifically parent fees and public subsidies, and its possible relationship to program status provides meaningful information on who is funding these programs serving low-income children.

#### Description of Sample

This study uses secondary data from a sample of fifty-two early childhood programs serving preschoolers, largely from low-income families. The original sample was chosen as part of a 2001 evaluation performed by Frank Porter Graham Child Development Institute (FPG) for the McCormick Tribune Foundation, located in Chicago, Illinois. Prior to the evaluation, early childhood programs in Chicago were the recipients of a multi-million dollar child care quality initiative sponsored by the

McCormick Tribune Foundation and the City of Chicago's *Chicago Accreditation Project*. This public-private partnership was developed to support NAEYC accreditation through a blending of funds for programs (Whitebook, Sakai, & Howes, 1997). Therefore, the original sample included both accredited programs and self-study programs. The sample in this study includes a total of fifty-two accredited and self-study programs serving preschoolers largely from low-income families; of these, 29 are accredited and 23 are self-study. Of accredited programs, 65% served children from low-income families compared to 92% of self-study programs.

The sample size is not a representative group because programs were included in the study as part of the evaluation, rather than solely for research purposes. Programs were included that participated in the *Chicago Accreditation Project* and/or NAEYC accreditation. However, the decision to compare accredited programs to those self-study programs is worthwhile and makes the sample especially meaningful as all those programs are inherently trying to improve their quality.

Research on this topic has called for a study of high quality programs, as children from low-income families are largely under-represented in early childhood research, as those children generally lack access to high quality care (Burchinal & Nelson, 2000). Given this need, only programs demonstrating a commitment to accreditation standards were included in this study; thus the sample is made up of accredited and self-study programs, those programs documented in the research as being more likely to be higher quality than the average program.

The selection of twenty-nine accredited programs came from a sample of those accredited programs supported by the Chicago Accreditation Project, as well as

accredited programs that have not been supported through the accreditation project. Accredited programs tend to be of higher quality than those not accredited, according to the assessment of the Early Childhood Environmental Rating Scale (ECERS), a scale that has been validated and is used widely in the quality assessment of child care programs (Phillips et al., 2000; Cryer & Phillipsen, 1997). Twenty-three self-study programs, working in collaboration with the McCormick Tribune Foundation, were randomly selected from a group of programs that had not yet become accredited, but participated in the accreditation project.

#### Limitations of This Study

This study uses data that were collected for an evaluation conducted by Frank Porter Graham Child Development Institute (FPG) in 1999. The City of Chicago and the McCormick Tribune Foundation sponsored quality initiatives that occurred before and during data collection. Consequently, the findings may not be generalizable to other types of programs or to similar programs in different environments. Programs in Chicago have been the recipients of a multi-million dollar child care quality initiative sponsored by the McCormick Tribune Foundation (Whitebook, Sakai, & Howes, 1997) and there has been a focus on accreditation in Chicago for over the past nine years. Phillips, Mekos, Scarr, McCartney, & Abbott-Shim (2000) ascertained that although the classroom is an appropriate locus for research on quality, additional factors happening beyond the classroom must be considered. Those factors may act as “potentially powerful influences on the quality of care that children actually receive,” such as a “corporate climate that supports private contributions to child care and access to local specialists who lend their expertise to child care settings” (p.477). Although this was one of several possible

explanations, it is also a basis for the study's purpose in considering quality specifically related to programs serving children from low-income families.

Because the entire sample was not chosen randomly, data were collected only from accredited and self-study programs in Chicago, it is not possible to estimate sample means that can be generalized across all child care programs serving low-income children in Chicago. The description of this sample may be generally used in looking at any trends, including possible relationships between program type, quality, and revenue that occur in programs according to their accredited or self-study status.

### Significance of This Research

The purpose of this study is to examine the type of quality offered in early childhood programs serving predominantly children from low-income families. Specifically, findings will be presented on how quality may be related to program type, and program revenue. This study's significance for policy has several dimensions. The first major contribution of this study lies in its identification of a sample of programs that primarily serve children from low-income families. According to Burchinal & Nelson (2000), non-representative samples often include an under-representation of child care programs serving primarily low-income children. This is important as child care programs primarily serving low-income families have been largely excluded as the focus of large research studies (Bryant, Maxwell, & Burchinal, 1999; Cost, Quality, & Outcomes, 1995). High quality programs serving low-income children could be under-represented in research because those low-income children are under-represented in high quality programs. This may be due to the finding that low-income families are limited to less expensive programs, which in turn, are of lower quality (Peyton et al., 2001;

Schulman & Adams, 1998). Therefore, this dissertation examined a sample novel to the early childhood research community, as it includes programs that serve children from low-income families, specifically those programs that on the surface level seem committed to high quality. This investigation of programs will broaden available knowledge about the quality of care for low-income children provided in accredited and self-study program settings. This study will not only enhance the larger body of knowledge about how quality relates directly to the population, but also determine if accredited and self-study programs differ in the areas of quality and revenue.

Although research affirms that accreditation by the National Association for the Education of Young Children (NAEYC) “clearly improves program quality” (Bredekamp, 1999, p. 58), questions remain about the degree to which this finding applies to accredited and self-study programs primarily serving low-income families. A focus on quality is imperative as low-income children benefit greatly, in respect to their global development, from high quality settings. In using programs that have been accredited by the NAEYC and self-study programs that are working towards accreditation status, the sample includes only programs dedicated to quality. Accredited programs are six times more likely to be of higher quality than non-accredited programs (Bredekamp, 1999). Nationally, only about 5% of programs voluntarily seek accreditation and “that 5% may represent the programs that least need accreditation” because they have been found to provide higher quality care (Bredekamp, 1999, p.62). A study by the National Center for the Early Childhood Work Force identified self-study programs as being of higher quality than programs not working towards accreditation status (Whitebook, Sakai, & Howes, 1997).

The other major contribution of this study lies in its identification of quality and specific financial aspects of child care programs serving low-income children. Research about cost and quality is increasingly important for low-income children, as benefits of high quality are illustrated for those children and as correlations are found between quality and costs (Mitchell, Stoney, & Dichter, 2000). However, “research on quality in child care has also been largely restricted to factors that reside within the child care setting, to the neglect of the broader community and policy context within which the child care operates” (Phillips et al., 2000, p.493). Although there is a positive correlation between high parent fees and quality (Huffman & Speer, 2000; Peyton et al., 2001; Phillips et al., 2000; Wiltz & Klein, 2001), questions remain concerning the role that public subsidies have in making high quality care accessible to low-income families and their preschool children (Phillips et al., 2000). This area of research needs to be expanded upon as the availability of care limits parents in their selections, especially “low-income families who are not able to obtain subsidies for their children” (Peyton et al., 2001, p.192). Economic analysis is useful for planning in that “a competent analysis can inform decision-makers about the full resource requirements of an educational program, thus avoiding a significant underestimation in costs that can cause difficulty during program implementation”(Barnett & Escobar, 1987, p.322). By using cost analysis, a method that has been little utilized in early childhood, this study attempts to address a major gap in the body of research on child care (USGA, 2000). Funding of early childhood programs is “profoundly affected by the *economic climate* in the community” (Harms & Clifford, 1991, p.12). Though the economic climate is not traditionally viewed as having a direct impact on the child, researchers would agree that the indirect influence is substantial and

should be further examined. Therefore, this study will examine the relationship of quality and programs receiving significant subsidies in order to provide findings useful for child care programs and policymakers.

### Summary

The importance of examining child care program quality is shown through the high number of preschoolers that spend their days in child care programs. The Ecological Systems Theory describes the significant impact of the many environments that affect the young child today. Research supports the notion that these environments are of varying quality and that quality plays a critical role in the development of a preschooler. However, high quality programs are expensive, as cost tends to influence quality (CQO, 1995). Therefore, low-income families lack access to high quality programs although their children have been shown to benefit most in a high quality supportive setting. Given these findings, the goal of this study was to examine the quality and financial aspects of accredited and self-study programs that serve low-income children in order to learn more about the dynamics surrounding quality and revenue of accredited and self-study programs.

### Overview of Chapters

This chapter has introduced the study and discussed its potential significance. The remainder of the dissertation will be presented in chapters that discuss the literature review, methodology, findings, and implications for policy. The second chapter will be the literature review, including topics relevant to the study, such as the benefits of high quality care, the affordability of care, and the accessibility of care or the lack thereof for children from low-income families. A close examination will also be made here of

research and intervention studies that offer a portrayal of quality in programs serving low-income children. The third chapter will outline the methodology, including a description of the research questions, analytical frameworks, and analytical techniques. The fourth chapter will present findings for the study, as related to research questions, such as the level of overall quality in this study of early childhood programs serving low-income families. The fifth chapter will be a discussion of what we know about quality for low-income children and their families, as well as implications for policy as related to this study's findings.

## CHAPTER TWO: LITERATURE REVIEW

### Introduction

This review of literature addresses several major themes related to the importance of quality programs, particularly for children from low-income families. The prevalence of child care in the United States will first be discussed; this discussion will explore quality of this care and the need to address quality in early childhood programs. Second, quality will be defined more explicitly, and the need for high quality care, specifically accredited and self-study programs serving preschool children will be examined. Third, the positive outcomes associated with high quality care will be discussed for young children, especially those children from low-income families. Fourth, low-income families' access to affordable high quality childcare will be explored. Fifth, the high costs of quality care will be examined and shown to support a need for policy changes surrounding early childhood programs. Lastly, the importance of examining costs will be illustrated in order to fully understand how quality relates to program costs and revenue.

According to Culkin, Morris, & Helburn (1991), “the economics of child care is often discussed in terms of the ‘trilemma’ of providing available, affordable, and quality child care” (p.71). Child care refers to “the full range of services used by families to educate and nurture young children” (Mitchell & Stoney, 1997, p.1). This often divisive and politically loaded issue has been a concern for parents, policymakers, and researchers for the last fifty years (Howes, 1997). The “trilemma” for child care consists of three competing factors (Mitchell & Stoney, 1997): the availability of care for families, high quality care for children, and affordability for parents, particularly low-income families. Each side of this “trilemma” merits examination; it is important to discuss the increased

need for child care, as well as the importance of affordability as related to child care programs. Affordability will be examined as the costs of child care programs of differing quality are discussed. Ultimately, this discussion is concerned with what all these factors mean for families of various income levels, but focuses particularly on their effect on low-income families. According to Scurria and Kagan (1994), these families make up a large percentage of the “unreached population” as they often live in the inner city and, while unable to pay the full price of childcare, their income is not low enough to qualify for public benefits. A total of 1.6 million children live in families that earn \$18,000 or less each year (Bridgman & Phillips, 1996). Families earning \$15,000 or less per year spend about 25% of their income on care for their children (Barnett, 1996; Fuller, Raudenbush, and Wei, 1993).

Recent trends in the field of early childhood have increased the national focus on quality; research on child care’s impact on cognitive and social development, the need for a national accreditation system, and the incidence of low-income children receiving quality care are important factors in this emerging national focus, and are important issues in the context of this study. In addition, the importance of high quality child care and its relationship to development for children of low-income families represents a crucial element of this discussion and may be linked to the notion that “the current state of the early care and education field can easily be termed as hectic” (Scurria and Kagan, 1994, p.1).

### *The Increased Need for Care*

Research on the effects of care for children in day care centers began as the number of women in the workforce doubled between 1940 and 1975 (Belsky, 1984). As

more women began working, the need for child care became a pressing issue for families. In the last thirty years, the number of families relying on child care has risen significantly (Bridgman & Phillips, 1996). As of 1986, the majority of children younger than age six, including more than half of those less than one year of age, were in need of care while their mothers worked (Phillips, 1986). In 1993, almost 60% of preschool children in the US were enrolled in an early care and education program. This translates into 9.9 million children under the age of six who were in need of care while their mothers worked, according to the Survey of Income and Program Participation (US Census Bureau, 1995).

By 1995, the number of children under age 6 in child care had increased to 13 million (Adams, Schulman, & Ebb, 1998). Approximately 43% of three year olds and 70% of four year olds were enrolled in a formal child care arrangement (Howes & James, 2000). In 1998, Adams, Schulman, & Ebb reported that only 23% of all families with children under the age of six had one parent in the workforce and one parent at home. Thus, it was estimated in 1998 that 65% of 4 year olds and 75% of 5 year olds not yet in kindergarten were cared for in center based child care on a regular basis.

In brief, the majority of families in the United States relies on child care programs for their preschool children and has so for the last twenty-five years (Early, Saluja, & Clifford 2000; Howes & James, 2000). Given these statistics, “child care must therefore be viewed as a vital part of the complex, multi-faceted environment in which children live, and it must be studied from the vantage point of each participant” (Wiltz & Klein, 2001, p.210). For studies of child care, relevant participants include not only the families utilizing care programs, but their young children who spend their days in programs that are often of mediocre quality (CQO, 1995).

### *Focus on Child Care*

According to Steven Barnett (1996), several long-term social trends have stimulated the need for quality in child care programs. First, the incomes for families are higher today and so there is more money available in some situations for child care. Second, families are having fewer children and therefore investing more per child. As families have fewer children, there is a rising need for peer interactions and socialization that occurs in a caring environment. Third, the public is being made aware through media and research about the contribution of a young child's environment in relation to cognitive and social development. This last and most recent trend may be related to research on early brain development, as it has contributed to a growing awareness of the developmental importance of a young child's environment. During infancy, a child's brain has 100 billion cells, the most brain cells that he or she will ever have. By the time that child is three years old, his or her brain will have made over a 1,000 trillion connections—twice as many as the average adult (Stoney, 1998). As children develop, their environments must be considered as “classroom practices and children's cognitive development interact in complex ways” (Dunn & Kontos, 1997, p.4). In addition, low quality programs may be harmful, as “brain research has indicated that high levels of stress will inhibit learning” (Rushton & Larkin, 2001, p.28). Therefore, the optimal learning environment of the young child should be supportive as it relates to fostering cognitive, emotional, and social development.

Research has also focused on the impact of environmental factors in young children's social development, particularly children from low-income families. According to Howes and James (2000): “Children's social development can best be

understood as embedded within relationships with significant adults and peers ... these social relationships are embedded within larger contexts of social setting, culture, and societal organizations” (p.2). Ecological Systems Theory stresses the significance of these relationships, as they are part of the systems that affect the development of the young child (Bronfenbrenner, 1989). From this perspective, quality environments are crucial to the well-being of young children, yet the majority of children in the U.S do not receive quality child care (Scarr, Eisenberg, & Deater-Deckard, 1994), especially those children from low-income families.

### *Defining Quality*

The need to define quality began in the late 1980’s. In the field of early childhood research, or day care research as it was then referred to, researchers began to move from the general question whether or not day care was “good or bad” to a focus on the ingredients for quality in a child care program (Arnett, 1989). In order to identify quality environments, there must be a general definition of quality. However, *quality* is one of the most widely used, while most hotly disputed terms in the field of early childhood. As Blau (1990) states, “child care quality is not an easy concept to define” (p.4). According to Phillips (1986), quality is a nebulous concept that has been defined in a variety of ways throughout the body of early childhood research. Research in the field supports the argument that subjectivity limits an individual’s ability to define quality (Cryer, 1999; McGurk et al., 1993; Munton, Mooney, & Rowland, 1995). According to McGurk, Mooney, Munton, Rowland, & Martin (1993) “it should be recognized that all definitions of quality are value laden” (p.4). This perspective is supported by Cryer (1999) who agrees “in an attempt to define the quality of almost any service, it is obvious that

subjective values will come into play” (p.1). It has also been argued that quality principles are grounded in the norms and values of a White middle-class society (Bromer, 2001). Moss & Pence (1994) agree that quality, as related to child care for young children, is relative and therefore ever-changing as a result of the values, beliefs, and needs of all various stakeholders.

### *Stakeholders Defining Quality*

Stakeholder perspectives or the views of individuals involved in or impacted by child care are essential in generating a comprehensive definition of quality. One set of perspectives of stakeholders on the definition of quality was obtained through a study done in Minnesota; stakeholders included parents, employers, social workers, child care advocates, and government agencies (Ceglowski, 2000). This study found that while parents felt staff communication and training were indicators of quality, staff identified training and professionalism as indicators of quality. While it is possible to argue that these differences in stakeholders’ perceptions of quality point to fundamental problems in defining quality, this may not be the only interpretation of these findings. Though not identical, stakeholders’ views on quality overlap considerably, and where they differ, they do so in ways that are not antithetical. By looking at quality in this way, it may be seen as a more flexible concept, rather than a rigid construct; communication between stakeholders may broaden their perspectives about quality (Ceglowski, 2000).

### *Families Defining Quality*

Recent findings indicate, “most parents readily agree that children should learn whatever will ultimately enable them to become healthy, competent, productive and

contributing members of their communities” (Katz, 1999, p.2). In this sense, parents seem to define quality in similar ways to early childhood professionals. In a Minnesota study, both parents and childcare staff cite training and professionalism as indicators of quality (Ceglowski, 2000). Parents place high importance on criteria such as health, safety, positive interactions, staff warmth, a good educational program, as well as social and physical activities (Ceglowski, 2000; Cryer, 1999; Cryer & Burchinal, 1997). Specifically, parents of preschoolers value standards regarding safety, interactions, and health, although they overestimate the early childhood program quality for their children (Cryer & Burchinal, 1997); parents may assume that “the program is of high quality if their child is thriving” (Prescott, 1974, p.126).

#### *Researchers Defining Quality*

Although there is evidence supporting the belief that quality cannot be defined because of differences in stakeholder beliefs, other researchers have come to a general consensus over a broad definition of quality, as it pertains to child care programs. According to Howes and James, “there is general agreement among researchers that child care quality can be defined and reliably measured” (2000, p.17). The definition to which they refer recognizes the importance of process, structure, and outcomes involved in early childhood programs, and has been widely accepted in the United States (Blau, 1996; Cryer, 1999; Howes & James, 2000; Morris & Helburn, 2000).

Relevant to this study, the process piece refers to the day-to-day experiences of the child, indicating the importance of the child-teacher relationship. The structural portion of the definition includes features such as “warm, sensitive, and stimulating adult-child interactions” that are linked to positive developmental outcomes (Howes & James,

2000). In addition, Morris & Helburn (2000) have defined structural measures, those quantifiable aspects of care, as related to quality as child-staff ratios, staff education, and past experience of administrators. One recent multi-site study of center-based care concluded that teacher wages and teacher-child ratios were the only significant predictors of quality in preschool programs; teacher training and parent fees were not significantly linked to quality (Phillips et al., 2000). In summary, research supports the belief that quality may be defined as a “measure of what goes on in the center- how teachers interact with children, the nature of the curriculum, and the environment of the center” (Blau, 1996, p.5).

#### *NAEYC Defining Quality*

The National Association defines high quality child care for the Education of Young Children (NAEYC) and is outlined in a statement of developmentally appropriate practice (DAP) (Early, Saluja, & Clifford, 2000). In this position statement, high-quality child care has been defined as a setting that offers many developmentally appropriate activities in a child-centered, warm, responsive, and cognitively enriching environment (Bredekamp & Copple, 1997). The phrase “developmentally appropriate” indicates that the activity or behavior of the caregiver is appropriate for the developmental stage of the child, as well as his or her individual abilities (Ridley, McWilliam, & Oates, 2000). “Cognitively enriching” makes reference to an environment that enhances children’s development (Dunn & Kontos, 1997). NAEYC has also prescribed quality standards for center-based early childhood programs with the belief that no matter the setting, “children require the same kinds of basic inputs for developmental success” (Cryer, 1999, p.5). Unfortunately, NAEYC-prescribed accreditation standards for quality child care

have not been adopted in most states (Whitebook, 1996), although higher state standards regarding child care are linked to higher quality programs (Phillipsen, Burchinal, Howes, & Cryer, 1997).

There has been a call for research to move away from defining these components of quality, and work towards linking positive outcomes to definitions of quality (Moss and Pence, 1994). Researchers agree that the core elements of quality are associated with positive outcomes for young children (Blau, 1996; Schweinhart, 1989; Cryer, 1999; Moss & Pence, 1994). Standard-based practices of high quality programs, as defined by NAEYC, include direct care, education, and assessment; these strategies are linked to positive developmental milestones (Bagnato, Suen, Brickley, Smith-Jones, & Dettore, 2002). Arguing for outcome-based criteria for quality, these researchers propose that “the global indices of quality that have served regulators so well must now yield center stage to a generation of more refined measures and concepts that allow practitioners to determine whether and how specific practices have the desired effects on children’s learning and development” (Lamb, 1998, p.116). This view is also supported by the National Association for the Education of Young Children, as they have pressured the field of early childhood to focus on quality.

### *Impetus for Accreditation*

The National Association for the Education of Young Children (NAEYC), founded in 1926, has propelled a national impetus for child care quality (NAEYC, 2005). By 1980, the National Association for the Education of Young Children had become seriously concerned about the quality of child care for young children and the lack of uniform standards governing early childhood programs (Bredekamp & Glowacki, 1996).

One year later, NAEYC introduced the idea of a voluntary national accreditation system for child care programs serving children part or full time; by 1983 this project was completed and named the *Center Accreditation Project (CAP)* (Bredekamp, 1989). During the development of their accreditation system, a survey developed by NAEYC was given to 250 early childhood specialists in order to gain insight about the quality criteria. Respondents were asked to rate each of the accreditation criteria on a scale from 1 to 4: 4 being *essential*, 3 being *important*, 2 being *somewhat important*, and 1 being *unimportant*. For the 78% who responded, there was a mean of 3.5; thus, the accreditation system was validated early in its development (Harms & Clifford, 1991).

According to Bredekamp and Glowacki (1996), NAEYC had two main goals in planning the accreditation project:

To help program personnel become involved in a process that will facilitate real and lasting improvements in the quality of the program and “to evaluate the quality of the program for the purpose of accrediting those programs that demonstrate substantial compliance with criteria for high quality” (p.2).

Given these goals, there are three steps that child care programs must complete in order to attain accreditation. The first step is an intensive self-study process that involves directors, teachers, and parents who have children enrolled in the program. The second step is an observation or on-site validation visit at which time a trained and reliable validator measures program quality with the ECERS and/or ITERS. Once this is completed, the last step involves a decision for or against accreditation made by a Commission of nationally recognized early childhood professionals (Bredekamp, 1989).

Although this is a stringent process, Bredekamp (1989) indicates NAEYC recognizes that all programs have room for improvement, as “no program has been found to be in 100% compliance with the criteria” (p.6). If accreditation is awarded, the program will maintain that distinction for three years, at which time it must undergo a less intensive process in order to be re-accredited. (See Appendix A) Thus, NAEYC created a national accreditation program to improve the quality of child care programs.

### Accredited Programs

Since 1983, programs have been seeking accreditation from the NAEYC; these programs vary greatly in populations served, age of children, and length of daily service (Bredekamp & Glowacki, 1996). Programs that meet high standards of child care practice are awarded accreditation status by NAEYC (Gormley & Lucas, 2000). As of 2005, there were 100,000 early childhood professional members of the organization including everyone from early childhood teacher to researcher (NAEYC, 2005). NAEYC currently offers the only national accreditation program for early childhood programs and schools (USGA, 1990). As of 1997, about 5% of the 97,000 child care programs in the United States were accredited and 10% were classified as self-study programs, those currently seeking accreditation (Marcano, 1997; Morris & Helburn, 2000; Schulman & Adams, 1998; Whitebook, Sakai, & Howes, 1997). In 2005, NAEYC accredited the 10,000<sup>th</sup> program and revised standards to ensure high quality care for the 850,000 young children in accredited programs (NAEYC, 2005). These revisions included the ability of NAEYC to make an unscheduled visit to a program, as well as the mandatory rule for programs to submit an annual report (NAEYC, 2006).

Despite the fact that there are several organizations that promote center accreditation, the NAEYC is the most recognized in terms of accreditation support for early childhood programs (Whitebook, 1996). The costs of accreditation are significant; NAEYC spends about \$2,000 each time a program is accredited, although the accreditation system supports itself (Barnett, 1996). Governmental support for accreditation exists, as seen when President Clinton mandated that all eligible federal child care programs should be NAEYC accredited by 2000; however support is limited, and this mandate has not yet been fulfilled (Gormley & Lucas, 2000). Thus, there is reason for concern for the future in that “accredited child care programs operate in a severely under-funded industry” according to Barbara Willer of NAEYC (quoted in Marcano, 1997, p.1).

### Self-Study Programs

There is limited research on the quality of self-study programs; “self-study is the process by which a child care program undergoes a quality assessment in order to meet standards of accreditation set by NAEYC” (Whitebook, Sakai, & Howes, 1997, p. 97). One study found that a commitment to quality does correlate with a quality status, although not necessarily with the quality status of an accredited program (Whitebook, Sakai, & Howes, 1997). However, there is little additional research on high quality child care for low-income children. Research on accredited child care is particularly scarce as there are relatively few accredited programs, especially those serving low-income children.

## Outcomes Related to Quality

Although research has indicated that accreditation does not always equal high quality, it has been widely accepted that “high quality care is important for optimal development” (Kontos & Stevens, 1985, p.6). In fact, research illustrates that the quality of child care arrangements affects development about half as much as the child’s familial environment (Howes & James, 2000). Therefore, a child’s development depends on the combination of the child care environment and the home environment (Blau, 1996). As Phillips (1986) states, “global assessments of quality have confirmed common sense knowledge that better child care is better for children” (p.4). In short, a focus on quality in the child care environment is exceedingly important and is demonstrated through research findings on the effects of low and high quality care, as well as the benefits of high quality for young children, particularly those from low-income families.

Unfortunately, there are serious limitations to the research in that past studies have rarely included low-income children in more than 25% of the sample (Smith, 1998). In order to broaden the understanding of quality for all children in child care programs, researchers need to “maximize the representation of both high and low quality care settings in future child care studies in order to gauge the magnitude of influence that child care quality has on children’s development across all groups” (Smith, 1998, p.11).

### Outcomes as Related to Low Quality Care

To illustrate the importance of high quality programs, one must first review the effects of low quality child care. According to Ridley, McWilliam, and Oates (2000), children who experience poor quality care are more likely to be disengaged in the early childhood setting, displaying more solitary play and aimless wandering. Overall, research

suggests that low quality care contributes to decreased social and emotional well-being, in addition to an increased risk for performing poorly on measurements of language and cognition (Scarr, Eisenberg, Deater-Deckard, 1994). Cryer and Burchinal (1997) found that young children experiencing low quality environments perform more poorly on measurements of social, intellectual, and language development. This, in turn, places emphasis on the positive outcomes related to high quality care. In summary, the negative effects of a low quality care environment are global in relation to a child's development.

#### Outcomes as Related to High Quality Care

There have been many studies assessing the outcomes of high quality care for children. Children that attend high quality child care are positively affected in terms of their global development (Blau, 1996; Cost, Quality, & Outcomes Study, 1995; Doherty, 1991; Gormley & Lucas, 2000; Helburn, 1989; Howes & James, 2000; Kontos & Stevens, 1985; Mill, Bartlett-Pawsey, & White, 1994; Phillips & Howes, 1987; Ridley, McWilliam, & Oates, 2000; Scarr, Eisenberg, Deater-Deckard, 1994). Doherty measured global development in both low and high quality programs and found that children enrolled in higher quality settings have higher levels of language development, more complex play skills, and the ability to manage behavior and compliance with caregiver requests (1991). Mothers of those children experiencing high quality care have also noted that their preschoolers are more cooperative and compliant (Howes & James, 2000). Children in higher quality centers have more opportunities for learning and demonstrate complex play skills with peers and objects (Howes, Smith, & Galinsky, 1995). Children who experience high quality child care have been shown to be more confident and competent in social experiences in the child care setting (Mill, Bartlett-Pawsey, & White,

1995). According to the Cost, Quality, Outcomes study (1995), “children in higher quality preschool classrooms display greater receptive language ability and pre-mathematics skills, and they have more advanced social skills than children in lower quality programs” (p.41). These children score higher on language and social development measurements (Cryer, 1999; Kontos & Stevens, 1985). Early childhood teachers have also rated children who experienced quality care as being more social and considerate (Kontos & Stevens, 1985). These benefits of high quality care have also been found to be long lasting.

#### Long-term Effects of High Quality Care

Children who experience high quality care as preschoolers continue to be positively affected when they enter school. According to the Cost, Quality, and Outcomes study (1999), children who experience high quality care show positive benefits through kindergarten and often through the second grade. These children are less likely to show signs of aggression and to be more socially competent as they enter school (Howes & James, 2000). Teachers have noted a lower incidence of behavioral problems for children who had been in high quality care (Doherty, 1991). Higher language skills have also been found, at least through kindergarten, for children who experienced care in high quality environments (CQO, 1995).

Research has indicated that a high quality child care experience is a pivotal factor in the development of a young child (Mill, Bartlett, & White, 1995). Thus, research overwhelmingly supports Howes and James (2000) in their assertion that “the positive effects of child care quality on virtually every facet of children’s development,” as this is

one of the most consistent findings in developmental science (p.19). However, for low-income children, the effects of quality care are even greater.

### Quality Outcomes as Related to Low-Income Families

High quality programs for low-income children are important for several reasons. Research illustrates those low-income families and their children both benefit from the provision of high quality care. According to one longitudinal study, the Abecedarian Project, providing appropriate and stimulating learning environments for young children of low-income families and supporting parents in their roles provide positive outcomes for both parent and child (Campbell & Taylor, 1996). Frede (1995) reports that children of low-income families who were placed in developmentally appropriate early childhood programs performed better in academic areas and had higher levels of social development in kindergarten. The Abecedarian Project also cited positive outcomes for both parent and child in programs that provide appropriate and stimulating learning environments for young children of low-income families and supporting parents in their roles (Campbell & Taylor, 1996).

Second, “poor quality care, more than any single type of program or arrangement, threatens children’s development, especially children from poor and minority families” (Hayes, Palmer, & Zaslow, 1990, p.28). The Cost, Quality, and Outcomes study (1995) reports that children from low-income families are not only at greater risk for harm in low quality care environments, but that low-income children gain positive benefits from care that has been rated as high quality. Children of low-income families tend to enter school behind their peers and continue to fall behind throughout school because they were unable to access educational resources as young children (Barnett, Tarr, Esposito-

Lamy, & Frede, 2001). In addition, African-American children from low-income families are at risk for declining achievement, grade retention, and participation in multiple schools due to family moves (Huffman & Speer, 2000).

#### Long-Term Effects for Low-Income Children

Helburn's Cost and Quality Check study (1989) found that low-income children who attend high quality care are more likely to graduate from high school and are more prepared to join the workforce. According to Morris and Helburn (2000), society as a whole benefits from high quality child care, as public expenses are reduced for special education, teenage pregnancy, and prison; in addition, increased tax revenue is expected, as those children are more likely to join the workforce. One study has estimated that every dollar invested in preschool programs will save taxpayers seven dollars through the prevention of future remediation and intervening social programs (Weikart, 1998).

#### Literature As Applied to This Study

In examining the 'trilemma' of child care for families, there is a need to consider availability of the care, quality of care, and affordability of the care (Mitchell & Stoney, 1997). There is a correlation between cost and quality for early childhood programs, as more expensive programs offer higher quality care, which in turn, supports the development of young children, especially low-income children (CQO, 1995). Child-focused preschool programs that are of high quality enable children from low-income homes to derive significant and long-lasting cognitive and academic benefits (Cost, Quality, & Outcomes Study Team, 1995; Bridgman & Phillips, 1996; Helburn, 1989; Morris & Helburn, 2000; Schweinhart, 1989). However, low-income families have little choice in the placement of their children, as even an average-priced early childhood

program still is too expensive. Thus, children from low-income families tend to spend time in child care that is less expensive and which also lacks in quality (Schulman & Adams, 1998). This assertion is supported by a recent study that found “income to be the most important factor influencing child care choice” (Peyton, et al., 2001, p.192). This study affirms the finding that although parents from various income levels value high quality, choices are made based upon affordability and availability, particularly for low-income families (Katz, 1999; Peyton et al., 2001). Although cost and quality are related, merely increasing a program’s budget does not guarantee an increase in quality (Phillipsen, et al., 1997) as “the dilemma of poor quality, low-paid staff, and family affordability is true and multi-faceted” (Mitchell, Stoney, & Dichter, 2000). Therefore, not only is more funding necessary for low-income families, but also better ways of financing child care programs.

#### *Availability of Care*

Child care is not a one-time arrangement for most preschool children; instead, families utilize various child care arrangements that may occur simultaneously (Bridgman and Phillips, 1996). Young children are cared for in a variety of child care contexts that include care by a relative or non-relative in a center, home, or out-of-home setting (USGA, 2000). In 1993, 9.9 million preschoolers were cared for in 11.7 million child care arrangements (Census Bureau, 1995). In 1997, there were a reported number of 97,000 childcare centers in this country (Whitebook, Sakai & Howes, 1997). It has been estimated that about 60% of these arrangements are non-profit agencies and 40% are for-profit programs.

Community, non-profit, independent, and public agencies serve a large number of low-income children. In fact, almost three-fourths of children served in programs run by community agencies were publicly subsidized preschoolers from low-income, minority families (Morris & Helburn, 2000). A recent study has found that community agencies provide low quality care in programs serving preschool children (Morris & Helburn, 2000). Similar to findings in early childhood programs, research in school programs also illustrates lower levels of quality in classrooms where there are high numbers of low-income children (Hanushek, 1999; Pianta, LaParo, Payne, Cox, & Bradley, 2002). Although research in child care programs is extensive, much of it may be compromised by the fact that results have been generalized to all children, all child care programs, and all geographic areas. Thus, there is an urgent need to focus on quality, especially in community programs serving low-income children.

### Quality of Available Care

Research has indicated that child care in the United States is generally mediocre, as indicated through the Early Childhood Environmental Rating Scale (ECERS) and so the majority of preschool children are served in mediocre settings (Cryer, 1999). A setting is defined as mediocre when children's health and safety needs are partially met; caregivers provide limited warmth and support, and when children are provided minimal opportunities for learning (Cryer, 1999). According to the Cost, Quality, and Outcomes study, 24% of child programs serving preschool children were of good or excellent quality and 10% of programs were rated as providing poor quality care (1995). Table 2.1 shows the various categories of quality in child care programs.

Table 2.1 Quality Information Regarding Early Childhood Programs

Child Care Program Quality		
Good/High	Mediocre	Poor
24%	66%	10%

(CQO, 1995)

“Because good-quality and poor-quality care is evident in every type of arrangement,” the type of care cannot be used as a proxy for quality of care (Ceglowski, 2000, p. 5). However, although types of programs do not equal levels of quality, research findings suggest that certain program types are correlated with quality. For example, research supports the belief that non-profit programs have been found to offer higher quality childcare than for-profit settings (Morris & Helburn, 2000). Accredited programs tend to offer higher quality care (National Center on Early Development and Learning [NCEDL], 1999); one study found them to be six times more likely to be of high quality, as opposed to non-accredited programs (Whitebook, Sakai, & Howes, 1997).

NAEYC standards of quality are widely, but not universally, accepted in the field of early childhood (Morris & Helburn, 2000). The literature suggests that accredited programs do provide higher quality child care than those programs that are not accredited (Bredekamp, 1999; Bredekamp & Glowacki, 1996; CQO, 1999; Gormley & Lucas, 2000; Whitebook, 1996; Whitebook, Sakai, & Howes, 1997). However, recent studies also have found that of accredited programs, 40% have been designated as only mediocre in quality (Cost, Quality, Outcomes, 1999). In that only 5% of programs are accredited, families’ access to quality child care is significantly limited. Therefore, the need to focus on quality is urgent, especially in community programs serving low-income children. These

findings point to an unfortunate reality—that the availability of care, specifically high quality care, is all too often absent in the environment of a young child.

#### Availability of Care as Related to Low-Income Families

Though choosing child care is a parent’s responsibility, families that are low-income may be restricted by geography, supply, or economics as they look for programs (NICDH Study, 2004). Low-income families are often denied a “choice” of child care; economic constraints necessitate the employment of both partners, yet even mediocre care may be too expensive (Schulman & Adams, 1998). Often, these families are forced into low-end care in a two-tiered system that offers higher income families more quality options, and offers lower-income families minimal custodial care (Helburn, 1989).

In that the majority of mothers are working, the availability of affordable arrangements is crucial. Yet, the need for quality is also essential, as research illustrates the relationship between a child’s development and high quality child care (Helburn, 1989). Research studies agree that, “low socioeconomic status, particularly when combined with immigrant status or minority status, is negatively correlated with children’s school achievement and socialization;” yet, early childhood programs for these children are lacking (Chambers, Chamberlain, & Hurley, 2001, p.5). Lower-income working parents are often limited to informal care options in that their incomes are too high to make them eligible for support, though they cannot pay for unsubsidized care (Howes & James, 2000). Although child care access is important for all families, it is most crucial for low-income families that depend on child care assistance in order to maintain employment (Groginsky, Poppe, & Davis, 2000). Additionally, research has

focused on the positive outcomes of high quality care as these findings most directly affect policy.

In summary, lower income families are less able to “choose” because of the high cost of higher quality care arrangements (Barnett, 1996; Bridgman & Phillips, 1996; Helburn, 1989; Howes & James, 2000). As a result, disproportionately fewer preschool children from low-income families attend an early childhood program (Phillipsen, et al., 1997), although they would most benefit from this service (Campbell & Taylor, 1996). According to Schweinhart and Weikart (1997): “Although the costs of good early childhood programs for the nation are great, the eventual costs of not providing them are, in money and in decreased quality of life, greater” (p.83). This illustrates the “child care dilemma” that centers on the conflict of cost and quality. When families are provided affordable quality programs for their young children they are able to attend work consistently, are more punctual and feel less stress, as they are able to depend on reliable care (Helburn, 1989). According to the Census Bureau (1995), children also benefit because “reliable quality child care is especially important for preschoolers because young children are dependent on caregivers to fulfill their basic needs and to keep them from harm” (p.1). Restricted choices, however, prevent many low-income families and their children from receiving the benefits of this type of care.

#### Assessing Quality of Care with the ECERS-R

Child care quality has been proven to be an important factor in the social, emotional, and mental development of the preschool child. The Early Childhood Environmental Rating Scale measures classroom quality and at the most global level, it “describes the classroom physical environment and materials and the warmth and

responsivity of child-teacher interaction, aspects that predict both concurrent and future child competencies” (Pianta, et al., 2005). The ECERS-R was created to assess global quality in classrooms serving children from two to five years of age. It is scored on a seven-point rating scale: ranging from 1 (inadequate or poor quality), 3 (minimal), 5 (good), and 7 (excellent) (ECERS-R, 1998). Research suggests that child care quality, as defined by the ECERS, is linked strongly to child outcomes, such as increased cognitive development, for children from low-income families (Burchinal & Cryer, 2003). The quality of care for low-income children has been shown to be even more beneficial, as these children gain short and long-term benefits from high quality care.

#### *National Studies Including Low-Income Children*

The National Center for Early Development and Learning (NCEDL) conducted the Multi-State Study of Pre-Kindergarten programs (Clifford, et al., 2005). Pre-K is defined as “center-based programs for 4-year-olds that are fully or partially funded by state education agencies” (p.126). This was a study of 240 programs in six states and by chance, half of the children were from low-income backgrounds. Though 70% of teachers had bachelor’s degrees, children of low-income were significantly more likely to be taught by a teacher without a bachelor’s degree. The ECERS was used to assess quality and the overall mean quality score was 3.86, below the standard of good and also below good in the area of process quality including teaching and interactions (4.56). This was surprising considering the relatively high program standards associated with state funded pre-kindergarten programs, as well as other national studies of early childhood programs in which ECERS-R scores are typically found to be higher than 3.86 (CQO, 1995). In

summary, 11% of programs were found to be inadequate, 81% minimal and 8% good to excellent.

This study of pre-kindergarten programs found that minority children were more likely to be in pre-kindergarten classrooms with low-income children. Although 23% of White children were in classrooms with a high number of low-income children, a significantly higher percentage of African American (50%), Latino (75%), and Asian (66%) children “attended a pre-k class with a high concentration of children from low-income backgrounds” (Clifford, et al., 2005, p.133). This is a significant finding as quality was significantly lower in classrooms with more than 60% of the children from homes below the poverty line (Pianta, et al., 2005). Researchers pointed out that “the finding that most classes with a high concentration of poor children also were classes that were predominantly African American or Latino illustrates the difficult task of disentangling race and ethnicity from socioeconomic backgrounds” (p.141).

Although research has shown overwhelmingly children from low-income families benefit from high quality care, few of these children have access to these types of programs. Availability is limited to low-income families, in that high quality programs are not available to them for the reason of location, as low-income families often choose programs for convenience and affordability. Therefore, low-income families are stuck with child care that, although affordable and convenient, is of mediocre quality.

In terms of research, there is little literature on quality programs that primarily serve children from low-income families. As previously discussed, this paucity can be attributed to the limited availability and affordability of high quality child care programs. In that there is limited research in this area, this study is focusing primarily on programs

which are committed to high quality and which serve children from low-income families. In using this sample, there will be a focus on the quality of care available in programs that have made a commitment to quality, whether through accreditation or self-study. Given the research findings discussed in this chapter, this study focuses on the following question: How do accredited and self-study early childhood programs predominantly serving children from low-income families compare in the area of quality, as defined by the ECERS-R?

#### Affordability of Care

Insofar as the United States is without a single coordinated child care financing system, funding sources for early child education vary greatly, and costs have continued to skyrocket in the last ten years. Schweinhart and Weikart (1986) reported that the total cost for early childhood programs came to 14.9 billion. Yet in 1993, less than ten years later, a combination of public and private funds totaling 40 billion dollars was used to finance early care and education services (Stoney & Greenberg, 1996). Child care is funded through a collective effort in which families, governments, foundations, and philanthropists contribute.

Nationally, child care is one of the largest expenses that families incur in raising their children, although there is some disagreement on the precise figures (Schulman & Adams, 1998). Between 1991 and 1995, it was estimated that families of preschool children spent an average of 7 to 11% of their income on some type of child care arrangement (US Census Bureau, 1995; Culkin, Morris, & Helburn, 1991) This means that families of preschool children spent about \$79 per week or \$4,108 per year on child care in 1993, as compared to \$64 per week in 1986 (US Census Bureau, 1995). Families

spent about 23.6 billion in 1993 for child care, representing 70 to 75% of all expenditures for childcare. More recently, the Census Bureau (2000) estimated that, on average, families spent about 19% of their income on childcare or \$4,000 to \$10,000 per preschool child. One study suggested that financial assistance for childcare or provision of care for working women would become the most essential company benefit of the 1990's (Quinn, 1988). As noted above, this has rarely been the case as parents continue to be primarily responsible for the costs of child care.

Public subsidies are the second largest source of funds for early childhood programs. According to Steven Barnett (1996), public subsidies total about 10 billion a year if all subsidies and expenditures on direct provision are included. Philanthropic organizations and private foundations also contribute to the costs of child care in communities across the country. In 1993, it was estimated that 174 foundations had awarded 383 grants totaling \$18 million. However, contributions from the private sector make up less than 1% of the total costs of child care (Stoney & Greenberg, 1996). Reviewing foundation and business expenditures may be especially important; one North Carolina study whose sample included about 40% low-income children found that “a comprehensive community initiative can improve child care quality if significant funds and activities are focused on this issue” (Bryant, Maxwell, & Burchinal, 1999, p. 449).

At the same time, however, the federal government invests \$4.6 billion directly in preschool programs for low-income children, including Head Start, Even Start, and Title I. The federal government allocates an additional \$4.4 billion in federal block grants to support early education and development. State government contributions to support preschool programs total \$2 billion annually (USGA, 2000). One would think that these

contributions would greatly reduce costs for families and increase availability of programs, but research indicates otherwise.

Richard Clifford, a past President of NAEYC, stated: “child care, even mediocre care, is expensive” (1996, p.7). High quality centers are estimated to cost about 10% more than low-quality centers (CQO, 1995). Accredited centers are the most expensive in that the annual costs per child are \$4,200 per child (USGA, 1990). Mitchell and Stoney (1997) estimate that families spend \$8,000 to \$12,000 per child annually for high quality child care. Although cost and quality correlate, merely increasing a program’s budget does not in itself guarantee higher quality status (Phillipsen, et al., 1997).

#### *Affordability Related to Programs Serving Low Income Children*

In looking at programs serving low-income children, it is necessary to recognize effective methods of financing. In comparison to other fields, “there is very little direct public- or private-sector support for child care programs” (Mitchell, Stoney, & Dichter, 2000, p.88). However, according to Peyton, Jacobs, O’Brien, & Roy (2001), “providing subsidies to lower-income families who are not in poverty may help many mothers expand their child care options and result in higher quality child care experiences for children” (p.206). A recent study examined the quality of programs serving young children; in this study, 40% of the programs received a subsidy, a relatively large number, when compared to findings about subsidies in most research studies (Bryant, Maxwell, & Burchinal, 1999). However, state child care subsidy programs are so under-funded that eligibility cut-offs are far below federal standards, and far from meeting families’ needs, given that nine out of ten children from low-income families are not eligible for assistance (Adams, Schulman, & Ebb, 1998). This area of research is limited

as the availability of care limits parents in their selections, especially “low-income families who are not able to obtain subsidies for their children” (Peyton, et al., 2001, p.192). Although the costs involved in child care for typical families are great, these costs are even more significant, proportionally, for those families determined as “low-income.” Research in the field defines “low income” families as those families who earn \$15,000 or less per year. These families spend about 25% of their income on childcare (Barnett, 1996; Fuller, Raudenbush, and Wei, 1993). Another estimate by the US Census Bureau (2000) has the costs of child care for a single mother of two children estimated at 50% of total family income.

Unfortunately for most children, supportive teachers that are well trained and educated rarely are found outside of high quality settings in which salaries are competitive. Because the average salary, including wages and benefits, of a child care teacher is a little over \$12,000 per year, it is not surprising to learn that those teachers choose programs with higher salaries (Mitchell, Stoney, & Dichter, 2000). Therefore, it is reasonable that teacher-child ratios and teacher wages predict classroom quality in programs serving preschoolers (Phillips, et al., 2000). Although the focus of recent studies has been to define which components of quality are important in providing a good child care experience (Arnett, 1989), the focus of this study will encompass the relationship between quality and population served, in response to the relative paucity of research of this type.

#### *Affordability as Related To Low-Income Families*

Although the costs involved in child care for typical families are great, these costs are even more significant for those families defined as “low-income.” Defining “low-

income” has been done in a variety of ways, varying from state to state. A study by the National Center for Early Development and Learning (NCEDL) defined low-income by using eligibility for free and reduced price lunch; specifically, less than 135% of federal poverty guidelines. The multi-state pre-k study defined low-income as family household income below 150% of federal guidelines (Clifford, et al., 2005). High poverty classrooms in that study were defined as classrooms where 60% or more of the children were from families earning less than 150% of the federal poverty level. Although the definition of “low-income” does vary, it translates on average to families who earn \$15,000 to \$18,000 per year (Census Bureau, 2000). A total of 1.6 million children live in families that earn \$18,000 or less each year (Bridgman & Phillips, 1996). Families earning \$15,000 or less per year spend about 25% of their income on child care (Barnett, 1996; Fuller, Raudenbush, and Wei, 1993). Studies suggest that low-income and high-income families share similar standards for care, but the former are less able to “choose” because of this higher cost of high quality care arrangements (Barnett, 1996). In fact, “families with low or moderate incomes were much more likely to choose care based on practicality than those with high incomes” (Peyton, et al., 2001, p.200). However, mothers who choose care because of practical concerns are the least satisfied with the care their children receive (Peyton, et al., 2001).

The costs for providing child care vary, depending on the quality and type of program. Community programs have been unable to provide high quality services due to a lack of funding. “Inadequate funding drives up class size and prohibits programs from paying the salaries and benefits needed to hire and retain more highly qualified staff with the skills required to implement high quality programs” (Barnett, Tarr, & Frede, 1999, p.

13). According to Helburn (1989), diversity in programs as defined by variations in cost, quality, location, and program type has been viewed as positive, yet this diversity may be detrimental for the development of young children enrolled in early childhood programs. The variability in the quality of child care arrangements to families may actually demonstrate that unequal access to programs, due to cost and location issues, lessens the chance for young children to start school “ready to learn” (Cryer, 1999). Families choose child care programs according to cost and availability (Morris & Helburn, 2000) and, low-income families choose family home care programs that are less expensive (Fuller, Raudenbush, and Wei, 1993).

#### Importance of Cost Analysis

As the effects of quality programs are further investigated, gathering information about program costs is necessary to gain insight into the many factors involved in the provision of high quality child care. In a child care program, costs refer to the value of components necessary to serve young children and expenditures are defined as program expenses (Glantz, Goodson, & Layzer, 1991). As research shows that high quality care is strongly linked to financial areas, such as parent fees and teacher wages, it is important to analyze the cost structure of early childhood programs (Phillips, et al., 2000).

Cost analysis refers to the process of gathering and organizing information about the costs of a program, in order to break down various costs into individual components (Barnett, Frede, Cox, & Black, 1994). Cost analysis is one piece of a cost-benefit analysis that assesses both costs and outcomes of a program. Although worthwhile for policymakers, it is less frequently utilized due to the expense and time necessary. Although cost analysis assesses only the costs of a program or resources used to provide

a service, it provides more of a comprehensive basis for decision-making than a traditional evaluation because costs are added into the analysis (Barnett, 1986; Barnett & Escobar, 1990).

According to Rice (1997) evaluative analyses conducted for research purposes under-utilize cost analysis, although there is a demonstrated need for this type of analysis. This trend is even more widespread in educational evaluations in which the role of cost analysis is minimal. Barnett, Frede, Cox, and Black (1994) believe that cost analysis is a needed tool for program evaluators in that there are several advantages associated with this type of analysis. Interest in economic analysis, as applied to educational settings, is growing as research illustrates the advantages of cost analysis in evaluation and its potential for shaping policy (Tsang, 1997). To create a truly useful and comprehensive study, it is crucial to investigate the expenditures possibly necessary to produce quality, as these determinants influence available child care subsidies and standards monitoring early childhood programs (Blau, 1996). Findings from cost analysis may allow policymakers to make decisions that best utilize limited sources today (Barnett, et al., 1994; Rice, 1997). Through cost analysis, programs are able to identify areas in their budget that need further revision. Programs will better understand where they are spending money as the analysis separates costs according to various aspects of the program. Cost analysis provides detailed information that is easy for programs to comprehend and use for self-improvements, and is therefore an important tool in improving program quality.

In the field of early childhood, interest in economic evaluation has increased substantially (Barnett, 1986). Since the 1960's, support for early intervention or child

care programs has been justified as a way to reduce later costs for society (Barnett & Escobar, 1987). A number of voices in the field have articulated the need for research that focuses specifically on subsidies and parent fees when examining programs serving low-income families (Peyton, et al., 2001). This is important, as early childhood research should “heighten attention to the role of public and private subsidies in promoting equity of access to quality child care for all children” (Phillips, et al., 2000, p.494). As monetary support for early childhood programs increases, there is an increased need for cost analysis, as stakeholders demand to know how resources are being utilized and distributed in programs (Tsang, 1997).

#### Summary

The importance of high quality early education programs has been strongly supported in the body of literature addressing the best practices for young children. High quality environments are linked to positive developmental outcomes for young children; these outcomes are especially important as the children enter school. Conversely, research indicates that low quality care is linked to poor developmental outcomes for young children and that the majority of young children are in mediocre care settings.

Of greatest concern are low-income families who most often utilize poor quality programs, as their access to alternatives is limited due to availability and cost.

Encouragingly, research has found that those children of low-income families have the most to gain from high quality child care. In fact, for low-income children, high quality care is believed to be an intervention that offers significant long-term cognitive benefits and academic advantages throughout their school careers (Campbell & Taylor, 1996).

In summary, research in the field of early childhood has shown child care to be an issue embedded in a much larger context. That context includes the needs of families, the variety of early programs supporting the development of young children, the costs involved in the provision of quality environments, and the implications of quality environments for low-income children.

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## CHAPTER THREE: METHODOLOGY

### Introduction

This chapter describes the methodology employed to learn more about the dynamics surrounding quality and revenue of accredited and self-study early childhood programs serving low-income children. Through an examination of these programs, the study will seek to identify overall global quality in accredited and self-study programs. and includes the following sections: (a) description of research design, (b) description of secondary data sample, (c) description of instrumentation, (d) data collection methods, (e) reliability and validity, (f) discussion of data analysis, (g) limitations and (h) data collection methods.

### Research Questions

Question One: How do accredited and self-study early childhood programs predominantly serving children from low-income families compare in the area of quality, as defined by the ECERS-R?

- a) How do accredited programs and self-study programs compare in terms of global quality, as measured by the ECERS-R?
- b) How do accredited programs and self-study programs compare in terms of process quality, including space and furnishings, personal care routines, language-reasoning, activities, interactions, and program structure, as measured by the ECERS-R?

Question Two: How do accredited and self-study early childhood programs compare in the area of revenue?

- a) Do revenues for accredited programs differ significantly from revenues for self-study programs, in the specific areas of parent fees, government subsidy, and total revenue?

### Research Design

This study will use a non-experimental research design. An experimental design was not possible in that subjects were not randomly assigned to both groups and there was not an identified treatment group. Instead, the independent variable, program status, is nominal.

### Data Source

This study uses secondary data from a sample of fifty-two early childhood preschool programs. The original sample was chosen as part of a 2001 evaluation performed by Frank Porter Graham Child Development Institute (FPG) for the McCormick Tribune Foundation, located in Chicago, Illinois. The author was employed at FPG and worked primarily on this evaluation under the direction of principal investigators, Richard Clifford and Jana Fleming.

### *Background of Sample*

This section describes how this sample was originally constructed for the McCormick Tribune Foundation evaluation conducted by FPG in 2001; it also delineates the differences in the FPG evaluation and this study. Since 1994, the McCormick Tribune Foundation has spearheaded the *Focus on Quality Initiative*, aimed at increasing the number of NAEYC accredited centers in Chicago and raising public awareness about the importance of early childhood education. The City of Chicago worked with programs to

blend funds to pay for care including moneys from Head Start, child care resource state agencies, Chicago public schools, and state pre-k. Prior to the evaluation, early childhood programs in Chicago were the recipients of a multi-million dollar child care quality initiative sponsored by the McCormick Tribune Foundation. This public and private partnership initiative was focused on improving the quality of Chicago programs through accreditation (Whitebook, Sakai, & Howes, 1997). After six years, the McCormick Tribune Foundation sought to evaluate the commitment to accreditation that had been made and asked FPG to assess the quality of care in accredited centers in Chicago. And so, the original sample was drawn upon based on the Foundation's needs, rather than for research purposes. It included both accredited programs and self-study programs. The selection of twenty-nine accredited programs came from a random sample of those accredited programs supported by the Chicago Accreditation Project, as well as accredited programs that have not been supported through the accreditation project. Twenty-three self-study programs, working in collaboration with the McCormick Tribune Foundation, were randomly selected from a group of programs that did not become accredited, but participated in the accreditation project. Though the sample for the evaluation was chosen from accredited and self-study programs, the FPG team chose to analyze programs separated into three levels of quality (high, medium, and low).

For this study, the sample of accredited and self-study programs were of more interest. The decision to compare accredited programs to those in self-study makes for a novel sample as all of those programs had committed to the accreditation process so as to improve their quality. Furthermore, after reviewing the literature in the field of early childhood, the focus of the study was narrowed to programs that receive subsidies and

serve children from low-income families, as this is an area that receives little review. Research on this topic has called for a study of high quality programs, as children from low-income families are largely under-represented in early childhood research, as those children generally lack access to high quality care (Burchinal & Nelson, 2000). Given this need, the sample is using data collected from accredited and self-study programs, those programs documented in the research as being more likely to be higher quality than the average program.

### *Selection Criteria*

This section describes the criteria used to select fifty-two early childhood programs serving preschool children from low-income families, and how programs were identified for the study. The study design originally called for collecting in-depth cost and quality data on a sample of 50 full-day child care programs, including those with accredited status and self-study status; however, the final sample was made up of 52 programs. In order to achieve a balance of quality programs, replacement sampling was used to recruit two groups. The first group in the study, accredited programs, was selected from NAEYC-accredited programs in Chicago. The second group, self-study programs, was selected from programs working towards accreditation as part of the Chicago Accreditation Project (CAP). In that research has found that accreditation doesn't always equal quality, the quality status of the entire sample was assessed using the *Early Childhood Environmental Rating Scale (ECERS-R)*.

Several criteria were used to determine the sample of accredited and self-study programs. First, it was considered very important that each program serve low-income children, as the focus of this study is on the quality of child care provided for low-income

children. Low-income family status was defined according to federal or state subsidies that the child care program receives. To be considered a low-income program, centers had to have at least 50% or more preschool children receiving federal or state subsidy.

Second, the study's sample consisted of programs that serve only preschoolers in full-time care (at least thirty hours per week). This decision was made for several reasons. One, quality is defined differently for infants and toddlers and so a different quality scale would be needed in order to measure the environment in which they are served. Second, this decision was made because of limited funding, in that using another scale would mean additional training for data collectors. Preschoolers were defined as children aged two-and-a-half to five years of age. The program was excluded if it had a preschool classroom with 50% or more two-year-olds.

Third, the study was only able to use fifty programs and in using only preschool programs, requires a more homogenous sample. State Pre-kindergarten programs have also been eliminated from the sample in that our cost analysis instrument would not be sufficient as these programs have very different budget sources. Every program had to be willing and able to provide one full year of fiscal data. The study also considered the profit status of programs, although profit status was not used as a variable in that there are only five accredited for-profit programs in Chicago.

### Sample of Accredited and Self-Study Programs

Accredited programs are those programs that have been accredited by the National Association for the Education of Young Children (NAEYC). The FPG research team obtained a list of accredited programs from the McCormick Tribune Foundation. These programs were validated as their accreditation status also had to be reported on the

accreditation list provided by the National Association for the Education of Young Children (NAEYC). This was to ensure that those programs were still accredited or had become re-accredited. The sample included all accredited programs, of which there are 153 in Chicago. At the end of this process, one randomized sampling list was created for the accredited programs and 60 were deemed eligible, according to the requirements listed in the prior section of Selection Criteria.

Another list was created of self-study programs, those programs that have applied to begin the accreditation process. Non-accredited programs seeking accreditation, also referred to as self-study programs, were selected out of a sample of 164 self-study programs that are currently receiving support from the McCormick Tribune Foundation as they work towards accreditation. As shown in Table 3.1, this number was narrowed down to 69 because of sampling criteria. Program participation rates are provided in Table 3.1. This table details the total number of programs, total programs eligible for the study as determined by stated selection criteria, and final number of programs participating.

Table 3.1 Sample of Accredited and Self-Study Program Participants

	Accreditation Status		
	NAEYC	Self-Study	Total
Number of Eligible Programs	60	69	129
Final Number	29	23	52
Declined to Participate	30	45	75
Agreed to Participate	30	24	54
Participation Rate	50%	35%	42%

Self-study programs were found to serve a large number of low-income children or children receiving subsidies. In fact, self-study programs were found to serve twice as

many low-income children, 62 per program, than accredited programs, who served an average of 33 children per program. Low-income children were statistically significantly more likely to be served in self-study programs. In accredited programs, about 65% of children served were from low-income families compared to 92% of all children in self-study programs.

However, NAEYC accredited programs were statistically significantly more likely to serve fee-paying children. In fact, they were three times more likely to have fee-paying children in their program compared to self-study programs. Only 54% of total programs served fee-paying children; 78% of accredited programs compared to 23% of self-study programs.

Once the random samples for programs were generated, telephone calls to centers were made by the research team to request their participation in the study and to explain its purpose. The initial phone call was made to the program director to provide specific information about the project. Directors were asked a series of questions in order to ensure that they met program requirements for inclusion in the study. During this call, an effort was made to identify the most appropriate individual(s) at the center to be interviewed for the cost analysis. The person interviewed was required have extensive knowledge of the program's basic operations and finances.

If the program staff indicated interest in participating in the study, the above information was verified by the research team in the first telephone call. Programs that met all of the sampling criteria and fit into a complete sampling cell were asked to participate in the study. Centers that refused participation were noted and were replaced by the next randomly selected center on the same sampling list.

## Instrumentation

The purpose of this study was to examine subsidized child care programs serving low-income families. In examining accredited and self-study programs, information was collected on child care quality, as well as program finances. The first instrument described is the Early Childhood Environmental Rating Scale- Revised (ECERS-R); it is the most widely used scale in the United States to assess programs quality (Harms & Clifford, 1998). The second instrument, used to gather financial data, is a cost analysis interview tool.

### *Early Childhood Environmental Rating Scale- Revised*

In order to examine quality, this study relies on the ECERS (Early Childhood Environmental Rating Scale), a widely used and accepted early education program quality assessment instrument and is one of the resources used to set Developmentally Appropriate Practice (DAP) guidelines (Cryer & Phillipsen, 1997; Frede, 1995; Harms & Clifford, 1998; Munton, Mooney, & Rowland, 1995; and Phillips, et al., 2000). It was developed “to assess the extent to which child care providers provide sensitive and responsive interactions with children and create stimulating environments with the belief that should be related to their cognitive and social development” (Burchinal & Cryer, 2003, p.402). The rating scale, developed in 1983, had 37 items on 7 subscales; items were drawn from research, as well as performance indicators of quality care, and nominations from child care practitioners (Perlman, Zellman, & Le, 2004).

The ECERS was revised in 1998 in order to deal with issues that arose during data collection and through findings from recent research studies. Three focus groups were developed to look at validity in culturally diverse settings and inclusive settings.

The ECERS-Revised is better able to address classrooms serving young children with disabilities and those children from diverse backgrounds (Harms, Clifford, & Cryer, 1998). It now includes 43 items, but retains the original scale's comprehensive definition of environment, including the spatial, programmatic, and interpersonal features that affect children in early childhood settings (Fleming, Yazejian, & Doig, 2002). The ECERS is receiving increasing scrutiny as a psychometric tool as it is used in high-stakes settings where a facility's ECERS scores could be used as a pivotal factor in whether funding is granted. For example, in North Carolina, Smart Start bases reimbursement to child care programs based on the quality of care provided as rated by the ECERS-R (Perlman, Zellman, & Le, 2004).

Designed for use in preschool and child care, the ECERS-R uses a rating scale organized by quality component categories to assess the global classroom environment. These categories are addressed in items attached to a seven-point scale in which descriptors of quality amplify four points: *one* (adequate), *three* (minimal), *five* (good), and *seven* (excellent). Scoring is based on a two to three hour observation, which occurs in the morning when children are most actively involved in activities and with their caregivers (Cryer, 1999). Following the next section, Table 3.2 illustrates the components of the ECERS-R that are being included in this study. One category was excluded for this study, *provisions for parents and staff*, as the focus is to examine areas more directly related to the quality of the classroom.

Information on quality was collected by trained data collectors with the use of the ECERS-R, the revised assessment for measuring child care quality. Once data was collected and cleaned, descriptive statistics were used to report means and standard

deviations, as well as to indicate significant differences between accredited and self-study programs. A copy of the instrument is included in the Appendices.

### *ECERS-R Categories*

In Table 3.2, the first category described is *Space and Furnishing*. This category is important as it envelops the various locations in and out of the classroom where the child spends his time during the day in a child care center. It ensures that the classroom offers a variety of space, as well as a provision for an outdoor area. *Personal Care Routines* monitors health and safety practices for children and their teachers throughout daily activities, including when the children arrive, as well as during lunch and naptimes. The third category, *Language-Reasoning*, includes specific activities that ensure children are involved in meaningful conversations with their teachers and peers and have ample access to appropriate books and other literacy materials. *Interaction* includes relationships between children and each other, as well as children and their teachers. It also includes discipline and supervision of children in the classroom and on the playground. The fifth category, *Activities*, relates directly to the classroom centers available to children each day in the classroom. It looks for not only a variety of developmentally appropriate centers, but also using the centers to promote child development. The last category assessed with the ECERS-R, *Program Structure*, relates to the schedule of the day and how it meets children's needs through center play and group activities.

Table 3.2 ECERS-R: Categories of Quality

Early Childhood Environmental Rating Scale (ECERS-R): Categories of Quality		
<p><b>1. Space &amp; Furnishing</b></p> <p>Indoor Space            Furniture for routine care, play, &amp; learning            Furnishings for relaxation &amp; comfort            Room arrangement for play            Space for privacy            Child-related display  <b>Space for gross motor play</b></p> <p>Gross motor equipment</p>	<p><b>2. Personal Care Routines</b></p> <p>Greetings &amp; departure            Meals &amp; snacks            Nap/rest            Toileting &amp; diapering            Health practices            Safety practices</p>	<p><b>3. Language-Reasoning</b></p> <p>Books &amp; pictures            Encouraging children to communicate            Use language to develop reasoning skills            Informal use of language</p>
<p><b>4. Interaction</b></p> <p>Supervision of gross motor activities</p> <p>General supervision of children (other than gross motor)            Discipline            Staff-child interactions            Interactions among children</p>	<p><b>5. Activities</b></p> <p>Fine motor            Art/Music &amp; Movement            Blocks/Dramatic Play            Sand/water            Nature/science            Math/number            Use of TV/video/computers            Promoting acceptance of diversity</p>	<p><b>6. Program Structure</b></p> <p>Schedule            Free play            Group time            Provisions for children with disabilities</p>

*Cost Instrument*

FPG created the cost instrument used to collect financial data for each program. It has been used in previous studies and was based on the questionnaire used in the Cost, Quality, and Child Outcomes in Child Care Centers study (Helburn, 1995). The original instrument was modified for use in various studies, each time adding questions to tailor its focus to the interests of the new project. The version of the instrument created for this study was field tested during February 2001. Program financial data were collected along three broad categories of cost, including labor costs, facility costs, and program costs. Information about revenue and in-kind contributions was also collected. This information

was gathered in a two- hour interview with the program director or financial officer. A copy of the instrument is included in the Appendices. Table 3.3 details the information collected about program revenue.

Table 3.3 Financial Data: Program Revenue

Financial Data: Program Revenue		
Revenues Include:	Fees Paid by Parents State/City Reimbursements Fees USDA Food Federal Payments Investment Income	Public Contributions Grants Private Contributions Fund Raising Efforts Other

The instrument was created to act as a detailed cost analysis tool. A careful analysis of costs must also be incorporated to generate a complete picture of the potential relationship between expenditures, revenue, and quality in a child care program. According to Barnett and Escobar (1987) the goal of cost analysis is to ensure that all resources are considered when estimating the monetary cost of a program. Researchers believe the best way to do this is through the use of a standard economic approach to cost analysis referred to as the Ingredients Model (Barnett & Escobar, 1987; Barnett, Frede, Cox, & Black, 1994). The Ingredients Model is used to develop a clearer picture of program costs in order to describe the various components involved in program costs (Barnett, Frede, Cox, & Black, 1994). This particular model is useful in assessing *all* costs as it takes into account the variation of programs and their provision of services. Models of this type are being used more often in early childhood programs as the

importance of finance issues has garnered increasing attention in the last twenty years (Barnett and Escobar, 1990).

Though it is important to know how much it costs to provide quality child care, this study has focused on program revenue and how it may differ across accredited and self-study programs. Therefore, only a portion of the Ingredients Model was utilized. Accredited and self-study programs were examined in order to analyze how revenue may relate to quality. In promoting the quality of child care programs, it must not only be recognized that financial support is necessary, but also that a better framework is needed to organize financial resources appropriately in order to support quality (Mitchell, Stoney, & Dichter, 2000). More recently, cost analysis has become especially important for researchers, due to the growing sense that economic considerations will represent a crucial dimension of future studies of early childhood programs (Phillips, et al., 2000).

### Validity

Goodwin and Goodwin (1996) state that validity is “the extent of the accuracy of findings” (p.140). The 1985 Standards for Educational and Psychological testing define validity as the “appropriateness, meaningfulness, and usefulness of the specific inferences made from test scores” (p.9). Validity can be divided into two types: internal and external.

#### *Internal Validity*

According to Goodwin and Goodwin (1996), internal validity is “the degree to which the experimenter results in ‘truth’ in terms of the trustworthiness of the knowledge generated” (p.52). Essentially, internal validity ensures that researchers are measuring what they have set out to measure, according to proposed research questions. It works to

match the researcher's understanding with participant explanations in order to strengthen the credibility of study findings.

There are possible threats to internal validity as related to this study: selection, regression, mortality, and spurious conclusions (Creswell, 1994). As the data were collected within a short period of time, history and maturation were not deemed as possible threats to this study's validity. In this study, selection is a potential problem in that the sampling methods used were limited; findings of this study will not be generalizable overall, but will provide meaningful information about accredited and self-study programs serving children of low-income families. In order to enhance the generalizability of the findings, a thorough description of the sample was provided. This study addressed the improbability of drawing "spurious conclusions" by approaching the data from multiple perspectives and by being careful not to reject alternative explanations. Specifically, multiple readers were used to review the validity of conclusions made concerning accredited and self-study programs. In conclusion, internal validity will be supported through the use of various data collection methods, multiple sources of data, and multiple observers.

#### *External Validity*

External validity focuses on the "extent to which findings can be generalized" (Goodwin & Goodwin, 1996, p. 142). There are two threats to external validity that may apply to this study. The first involves the representativeness of the sample. Readers should be aware that the sample should not be considered to be representative of all early childhood programs serving preschoolers from low-income families. This is especially true as the sample is not truly random and generally of a higher quality, since all

programs in the sample have been identified as accredited or seeking accreditation status. In that accreditation and self-study are voluntary, a possible selection effect must be taken into account. In this, we may see high quality as it relates to those types of programs choosing to work towards accreditation status. Secondly, the Hawthorne Effect must be mentioned, as classrooms are observed for a three-hour period in order to assess quality; however, it has not been found to be a substantial threat (ECERS-R, 1998). Though the Hawthorne Effect is a threat when subjects may change their performance based on participation in a study, it is very unlikely to occur unless there is a reward given or feedback on performance (Draper, 2005). In this study, the programs were actually the subjects, though teachers may have felt they personally were being observed. However, their classrooms were observed for three-hour sessions and the assessors do not interact with either the teacher or children.

High validity has been reported for the ECERS-R, and a combined total score (an average of the child related items) provides a reliable and valid index (Ridley, McWilliam, & Oates, 2000). Researchers have found a correlation between higher ECERS scores and “successful child development” in a number of areas; thus, the ECERS-R has strong predictive validity (Cryer & Phillipsen, 1997). Also, a secondary analysis of data from the CQO study (1995) illustrated high levels of validity for White, Black, & Latino children which indicates that a global definition of quality is found in programs serving children from various cultural groups (In Burchinal & Cryer, 2003). Additionally, another study found a relationship between child care quality and cognitive and social development longitudinally (Peisner-Feinberg, Burchinal, Clifford, Culkin, Howes, Kagan, & Yazejian, 2001). In this study, Pearson product moment correlations

were computed between child care quality and development in elementary school, so as to examine a possible relationship between the early environment and later development. A total of 733 children were followed and effects of quality, as measured by the ECERS-R, were found to be related to various developmental aspects, especially for children from at-risk families. When children experienced more than good quality care, a significant relationship, where the p-value is less than .001., was found between quality and development in kindergarten for the areas of language (.23), math (.17), and cognition (.46)

### *Reliability*

Reliability traditionally refers “to the extent to which studies can be replicated” (LeCompte & Preissle, 1993, p.332). Internal reliability works “to raise the question of whether, within a single study, multiple observers would agree” (LeCompte &Preissle, 1993, p. 337). This is addressed easily in that the ECERS is a standardized instrument and 90% reliability was established between data collectors and researchers. In order to address external reliability, the services of multiple data collectors were used. Each collector made comments on interviews and both formally and informally checked comments with research participants. Those participants reviewed interview notes in order to address any discrepancies that may have occurred.

High reliability has also been reported for the ECERS-R, and a combined total score (an average of the child related items) provides a reliable and valid index (Ridley, McWilliam, & Oates, 2000). The percentage of agreement scores is 86.1% across the full 470 indicators in the revised scale, with no item having an indicator agreement level below 70%. With respect to inter-rater reliability, correlations between two observers

were .921 product-moment correlation (Pearson) and .865 rank order (Spearman), with an interclass correlation of .915 (Harms, Clifford, & Cryer, 1998; p.2).

### *Data Collection Process*

Data collection took place over a six-month period, beginning in February of 2001. The process began with ECERS observations and then cost data was collected for each center. The data collection process involved extensive training of early childhood data collectors, the actual collection of data, and on-going procedures to assess the accuracy of data collected and recorded. Each of those procedures is described in detail below.

### *Data Collector Training*

In order to collect data systematically, six consultants were trained to use each assessment instrument involved in measuring cost and quality. Training for the ECERS-R is similar to cost training, in that both are extensive so that reliability can be strengthened. Consultants were trained for each instrument on separate occasions. Training for the ECERS-R took place over a three-day period. On the first day, collectors were introduced to the ECERS-R and given a thorough explanation of items on the ECERS-R and scoring procedures. On the second and third days, collectors practiced using the ECERS under the direction of project managers. Following the ECERS-R training, collectors conducted four to five observations in teams of two. Each data collector was required to establish inter-rater reliability at an 80% level of agreement. Data were collected using the ECERS-R in two classrooms per center. The research team contacted participating programs and scheduled data collectors to spend three to four hours in a morning observation session in which they administered the ECERS-R. The observers recorded

notes and scored items on the ECERS-R as events occurred; all data was recorded using standardized scoring forms. Program quality data were collected during a three to four hour observation in each classroom included in the study. Completed data collection instruments were sent to FPG for final cleaning and analysis.

### Data Analysis

This section defines the independent and dependent variables and explains the process of how data were analyzed. An alpha level of .05 was used for all significance tests, so as to minimize Type I errors. In order to answer the three sub-questions, analyses were conducted using SPSS, statistical analysis software packages. Data were studied descriptively to estimate overall means and standard errors.

#### *Operationalization of Variables*

The independent and dependent variables are defined as follows for all research sub-questions.

##### Independent Variable

- Program Status: Accredited/ Self-study

##### Dependent Variables

- Quality: thirty-seven items assessing the global classroom environment, scored on a 7-point scale in which descriptors of quality amplify four points: *one* (adequate), *three* (minimal), *five* (good), and *seven* (excellent)
- Revenue: Program moneys including parent fees, government subsidy, and total revenue

#### *Summary of Analytic Techniques*

The analytic procedures for this study were comprised of inferential statistics. Inferential statistics were used to measure or determine a possible relationship between program status and the dependent variables, including quality rating and received revenue. Differences in quality and cost aspects of accredited and self-study programs

were examined by performing two independent-sample t-tests. Descriptive statistics in the form of means and standard deviations were also reported for accredited and self-study programs.

### *Descriptive Analysis*

Descriptive statistics are discussed as few statistically significant relationships were found between the primary independent variables, accredited and self-study programs and dependent variables, quality and revenue. Sample means were collected for the total group, accredited group, and self-study groups; comparisons are discussed, though there were few significant differences between groups.

In order to determine the appropriateness of using inferential statistics, the shape of the data distribution was explored in several ways. First, box plots and normal probability plots were examined. Second, testing for normality included the Shapiro-Wilk and Anderson-Darling procedures. These tests suggest that the data distribution is normal; outliers fell within three standard deviations of the mean. Therefore, parametric statistical analyses assuming normality were used with confidence. Third, calculating measures of central tendency and variability offered a representation of the data's normality.

### *Independent Two-Sample T-Tests*

Two sample independent t-tests were performed to measure global quality of accredited and self-study programs. Differences in revenue of accredited and self-study programs were also examined by performing two independent-sample t-tests to compare statistically significant differences where the p-value is less than the reference probability of .05. Means and standards deviations were reported for global quality, as well as

specific aspects of quality: space and furnishings, interactions, activities, and program structure. As significant differences were not found between accredited and self-study programs, further analysis in this area was not necessary. Descriptive statistics were also used to examine areas of revenue: parent fees, government subsidy, and total revenue. Total revenue was examined in order to understand if this financial area related to program status.

### Limitations

This study contains several limitations that should be considered when interpreting the findings. First, this research study does not intend to establish cause-and-effect relationships between variables. As a correlational research study, this study is primarily exploratory. In addition, although aspects of quality will be discussed and reviewed for this study and related studies, not every aspect of program quality will be statistically analyzed. Rather, this study focuses on specific areas of quality that have been noted in the literature as being significant for positive outcomes for young children in early childhood programs.

Second, although this research study includes a sample of fifty-two early childhood accredited and self-study programs, neither group had a number of thirty, an accepted sample size for generalizability. However, we did have twenty-nine accredited programs. Also, despite the fact that accredited programs were chosen from a random sample, self-study programs were self-selected because of their participation in the Chicago Accreditation Project (CAP).

Related to this, the sample is not representative of the larger population on a national scale, but would be geographically representative in Chicago and possibly for other large cities that have been targeted with quality initiatives.

### Summary

This chapter described the methodology used to examine the possible factors that affect the quality of accredited and self-study programs. The research design for this study used multiple data collection methods to examine the research questions of the study. The processes performed for collecting the data were described, and the analysis of the data was outlined. The next chapter describes the study findings by examining quality aspects of accredited and self-study programs, as well as programs serving primarily low-income children in this and other studies.

## CHAPTER FOUR: FINDINGS

### Introduction

This study examines the quality of accredited and self-study early childhood programs serving children from low-income families. In order to assess quality, the Early Childhood Environmental Rating Scale-Revised (ECERS-R) was used to collect data in classrooms of accredited and self-study programs. In order to examine program revenue, a cost instrument was used in interviews to collect data, including parent fees, government subsidy, and total revenue. These instruments were described and detailed in Chapters 2 and 3. This chapter reports the results of the data analysis conducted in order to answer the study's primary research question and sub-questions.

The findings of the research are presented in two groupings, according to the two primary research questions and their subsequent sub-questions. The first part of the chapter provides an overview of the data collection and analysis, and the background information. The second part of the chapter is divided into two sections. The first section centers around the first primary research question and presents findings related to global quality, as well as process quality, each collected with the ECERS. The second section encompasses the second research question and presents findings related to revenue, including government subsidy and parent fees.

### Results

There are two main research questions for this study. The first question related to quality: How do accredited and self-study early childhood programs predominantly serving children from low-income families compare in terms of quality, as defined by the ECERS-R?

In order to answer the first research question, two sub-questions were developed in the areas of quality: global quality and program process quality. The second research question, related to program finance, was developed to investigate how revenue relates to program accreditation status and population of low-income children served.

### *Quality Components*

Program process quality was measured using the ECERS-R during separate three-hour observations in two classrooms per program. Program level quality scores were calculated for each program by combining the two classrooms total score means. Mean scores were calculated for total performance on the ECERS-R, as well as for the individual subscales.

### ***Sub-Question 1A: How do accredited programs and self-study programs compare in terms of global quality, as measured by the ECERS-R?***

The first sub-question was concerned with determining whether accredited and self-study programs compared in terms of global quality. According to the ECERS-R, a quality rating of 1 is considered to be poor, a 3 is minimal, a 5 is good, and a 7 is excellent. Differences in global quality of accredited and self-study programs were examined by performing two independent-sample t-tests to compare statistically significant differences where the p-value is less than the reference probability of .05. The results are presented in Table 4.1.

Table 4.1 Mean Global Quality Scores of Accredited and Self-Study Programs

<b>NAEYC Sample</b>		<b>Self-Study Sample</b>		<b>Total Sample</b>			
<u>Mean</u>	<u>SD</u>	<u>Mean</u>	<u>SD</u>	<u>Mean</u>	<u>SD</u>	<u>t</u>	<u>p</u>
4.64	.94	4.58	.70	4.61	.83	-.089	.90

These results indicate that there is no statistically significant difference ( $p=.90$ ) between accredited and self-study programs. In other words, global quality is not statistically different for accredited or self-study programs. The ECERS-R had a total mean score of 4.61 for accredited and self-study programs. Global quality of accredited programs ( $m=4.64$ ) and self-study programs ( $m=4.58$ ) was almost equal in terms of the average quality score (see Table 4.1).

Overall, global quality in accredited and self-study programs ( $m=4.61$ ) was below the instrument standard of 5, indicative of good quality care. Sixty percent of all programs observed met only minimal standards of quality with a total mean score below five (minimal standard of good). Therefore, accredited and self-study programs did not offer a predictable structured day for children, and were shown to offer little variety in terms of activities and materials. As a whole, accredited and self-study programs were less likely to use everyday events for learning experiences, and were lacking in terms of books and other type of language materials. This study found that ECERS scores ranged from 2.64 to 6.17; it is interesting to note that accredited programs received the lowest two scores (2.64 and 3.05) while a self-study program received the highest score of 6.17.

Note that even the highest score is just over a rating of good and far from an excellent score of seven. While total score means provide information about the overall quality of the programs observed, subscale scores better explain strengths and weaknesses of programs, as described in sub-question two.

***Sub-Question 1B: How do accredited programs and self-study program compare according to process quality indicators: space and furnishings, personal care routines, language-reasoning, activities, interactions, and program structure as measured by the ECERS-R?***

Part B of the first sub-question was concerned with determining whether accredited and self-study programs compared in terms of process quality, as noted in ECERS-R subscale scores. According to the ECERS-R, a quality rating of 1 is considered to be poor, a 3 is minimal, a 5 is good, and a 7 is excellent. Differences in process quality categories of accredited and self-study programs were examined by performing two independent-sample t-tests to compare statistically significant differences where the p-value is less than the reference probability of .05. The results are presented in Table 4.2.

Table 4.2 Means of Process Quality Scores of Accredited and Self-Study Programs

<b>Variable</b>	<b>NAEYC</b>		<b>Self-Study</b>		<b>Total Sample</b>			
	<u>Mean</u>	<u>SD</u>	<u>Mean</u>	<u>SD</u>	<u>Mean</u>	<u>SD</u>	<u>t</u>	<u>p</u>
<b>Space and Furnishings</b>	4.93	.91	4.83	.99	4.85	.94	.164	.871
<b>Personal Care Routines</b>	4.56	1.25	4.58	1.10	4.56	1.19	.006	.995
<b>Language-Reasoning</b>	4.42	1.50	4.16	.71	4.25	1.21	.881	.384
<b>Activities</b>	4.23	.81	4.20	.79	4.20	.79	.176	.861
<b>Interactions</b>	4.75	1.44	4.94	1.12	4.81	1.30	-.934	.356
<b>Program Structure</b>	5.07	1.24	5.15	0.96	5.09	1.10	-.095	.924

These results indicate that there is no statistically significant relationship between the type of program and process quality category. As shown in Table 4.2, there is no statistically significant difference ( $p = .871$ ) in space and furnishings in accredited and self-study programs. In terms of space and furnishings, mean scores for accredited programs ( $m=4.93$ ) and self-study programs ( $m=4.83$ ) were less than the standard for good, but both programs were close with an average mean of 4.85. This indicates that accredited and self-study programs did not offer child-appropriate furnishings in a large

enough space and that space was not readily available for children with appropriate equipment outside.

The effect of personal care routines was not statistically significant ( $p = .995$ ), between accredited and self-study programs. In looking at personal care routines, the overall mean ( $m=4.56$ ) did not meet the standard of good. Though staff may not have been consistent about regular hand washing and other toileting skills, the score also indicates that there was some standard of hygiene and children were encouraged to take care of themselves independently. Accredited and self-study programs were almost identical in their levels of personal care routines.

Although the language-reasoning score was higher for accredited programs ( $m=4.42$ ) than self-study programs ( $m=4.16$ ), the  $p$  value was  $.384$ , greater than the generally acceptable  $p$ -value of  $.05$ . Though not statistically different from one another, both were well below a five, the standard of good. These programs were likely to offer a minimal selection of books and other language materials, and teachers were not likely to encourage conversation in children or among one another. Teachers generally spoke in a positive way, although conversations dealt more with supervision and rules for the children.

Accredited programs scored only slightly higher ( $m=4.23$ ) than self-study programs ( $m=4.20$ ) in the category of program activities and both were below the standard of good, although not reaching poor status. In Table 4.2, statistical results indicate that there is no statistically significant difference ( $p = .861$ ). Although children had some time indoors and out during their day, scores indicate there were not likely to

be a variety of developmentally appropriate activities or a variety of materials available for free play, music or art.

Although activity scores were lower than good, overall program interaction ( $m=4.81$ ) was close to the level of good (5). Though self-study programs had a mean score of 4.94 and accredited programs had a mean score of 4.75, this difference was not significant ( $p = .356$ ). Generally, these programs were providing adequate supervision for the whole group, although interactions were less likely to occur between teachers and individual children. Children were appropriately disciplined, although staff were less likely to elaborate on children's play and to let them explore independently.

Overall in accredited and self-study programs, program structure ( $m=5.09$ ) was the only subscale that received a good rating. Though they were not statistically significantly different ( $p = .924$ ), accredited and self-study programs both provided good supervision of children during free play, which was likely to occur for a large portion of the day. The average day was likely to offer substantial time for play, a flexible schedule, and good transitions between activities. Teachers also ensured for enjoyable whole and small group play times, during which children were encouraged to share personal experiences.

### *Financial Components*

The cost interview instrument was used in director interviews to collect financial data, including program revenue, as related to populations served. The second research question for this study is: How do accredited and self-study early childhood programs compare in the areas of revenue and population served? The second sub-question

examines the relationship of programs status and program revenue, specifically parent fees and government subsidy.

***Sub-Question 2: Do revenues for accredited programs differ significantly from revenues for self-study programs in the areas of parent fees, government subsidy, and total revenue?***

This sub-question was developed to examine any significant differences in revenue for self-study and accredited programs. Revenue data include income received from parent fees, government subsidies (fees paid by child care assistance agencies), and total revenue. Group comparisons of accredited and self-study programs, in the above areas of revenue, were examined by performing parametric two sample t-tests to compare statistically significant differences where the p-value is less than reference probability of .05. As shown in Table 4.3, a significant difference was found in the area of parent fees.

Table 4.3 Mean Numbers of Monthly Revenue Dollars per FTE Child

<b>Variable</b>	<b>NAEYC</b>		<b>Self-Study</b>		<b>Total Sample</b>		<b>t</b>	<b>p</b>
	<u>Mean</u>	<u>SD</u>	<u>Mean</u>	<u>SD</u>	<u>Mean</u>	<u>SD</u>		
<b>Parent Fees</b>	184.50	191.71	52.54	78.75	126.13	141.75	2.95	.006
<b>Government Subsidy</b>	400.30	343.86	545.69	235.98	464.61	296.14	-1.62	.11
<b>Total</b>	584.80	298.68	598.23	139.20	590.74	258.21	-1.24	.22

Parent fees include all fees paid by parents per child on a monthly basis. As noted in Table 4.3, parent fees (monthly per FTE child) for accredited and self-study programs were an average of \$126.13 per month. However, accredited programs received \$132 more per month (per FTE child) than did self-study programs. As shown in Table 4.3, the results indicate that there is a statistically significant difference in parent fees received by accredited and self-study programs ( $t = 2.905$ ,  $p = .006$ ). Therefore, parent fees were significantly higher for accredited programs (184.50 compared to 52.54).

Government subsidy includes Child Care funds (which include CDHS, IDHS, and other state funds), State Pre-Kindergarten funds, CPS funds, and Head Start funds. In looking at the full sample of accredited and self-study programs, government subsidy was estimated to be \$465.00 (monthly per FTE child). Group comparisons between accredited and self-study programs revealed a difference of about \$145.00 in government subsidy. Although accredited programs received more ( $m = \$400.30$ ) than self-study programs ( $m = \$545.69$ ) in government subsidy, the difference between the means was not statistically significant ( $p = .11$ ). Across the full sample, government subsidies represented the largest revenue sources followed by parent fees.

Total revenue, as defined in this study, includes government subsidy and parent fees. Overall, total program revenue was \$590.74 per month per FTE child (see Table 4.3). Group comparisons between accredited and self-study programs revealed a small difference of about \$13.00 in total program revenue. The effect of total revenue was not statistically significant,  $p = .22$ , between accredited and self-study programs.

## Summary of Findings

The first research question of this study asked how accredited and self-study early childhood programs predominantly serving children from low-income families compared in terms of quality. In terms of global quality, programs did not differ significantly and both groups were found to be below the standard of good, as measured by the ECERS-R. Programs also did not differ significantly in terms of process quality; rather, they looked similar in all areas and both exceeded the standard of good for the area of program structure. The second question of this study asked if revenues for accredited programs differed significantly from revenues in self-study programs in the areas of parent fees, government subsidy, and total revenue. Accredited programs were found to receive a statistically higher amount of program fees per child (184.50) than did self-study programs (52.54). In terms of government subsidy, accredited and self-study programs did not differ significantly. Also for total revenue, the difference was not significant for accredited and self-study programs. Rather, they received almost identical amounts per child. Accredited programs received about \$585 and self-study programs received \$598. This chapter has presented the findings on quality as related to the programs examined in this study. Chapter 5 discusses and interprets these findings, discusses theoretical implications and policy implications, and makes recommendations for further areas of research.

## CHAPTER FIVE: DISCUSSION

### Overview of the Chapter

The interpretation of these findings as they relate to the general purpose of the study will be presented in this final chapter. Results of this study will first be discussed with respect to quality aspects of accredited and self-study programs. Findings will be discussed for program status and its relation to program revenue. In Chapter Five, theoretical implications are presented related to Ecological Systems Theory, as well as implications for policy. The chapter will conclude with a discussion of potential areas of future research.

### Introduction

The purpose of this dissertation was to learn more about the dynamics surrounding quality and revenue in accredited and self-study early childhood programs serving low-income families. Investigations of programs that serve young children from low-income families in accredited and self-study program settings provided meaningful findings on how global and process quality related to program status (accredited or self-study) and program income.

In Chapter One, a rationale was provided on the importance of studying child care quality, particularly for children of low-income families. It described the sample of fifty-two programs that participated in the study; they were evaluated on global and process quality using the Early Childhood Environmental Rating Scale- Revised. Also discussed was the importance of studying financial aspects of programs; they were assessed using a cost instrument developed by Frank Porter Graham Child Development Institute. Chapter Two encompassed a review of the literature that supported the need for high quality in

programs serving young children. This was relevant in light of developmental benefits that have been reported for children from low-income families. This research gives credence to policy makers and early childhood initiatives. Chapter Three presented research questions and appropriate analytic techniques. The findings from the study and the data analysis for each research question posed for the investigation were presented in Chapter Four.

### Summary of Findings

The basic procedure for this study entailed collecting quality and financial data in early childhood programs. Information on global and process quality, as well as program expenditures and revenue, was collected in both accredited and self-study child care programs as part of an evaluation for the McCormick Tribune Foundation.

#### *Global Quality*

Global quality refers to the overall mean quality score of the classroom, including process variables, for both accredited and self-study programs. It encompasses what actually takes place in the early childhood classroom, such as the daily schedule, planned activities, available space and materials, and interactions with teachers. To measure global quality, a mean score was calculated for up to two classrooms per program, using the ECERS-R (1998).

Overall, global quality in accredited and self-study programs was found to be below the standard of good quality care based upon an overall mean score of quality (4.57) calculated for the whole group. Only 40% of accredited and self-study programs met good quality standards. This indicates that programs offered less than a predictable and structured day for children and did not provide a variety of books and materials. In

finding self-study programs to be just below good quality, there was one explanation noted in the research. Self-study programs are more likely to be of higher quality than non-accredited programs once they have completed the self-study process; the programs in this study were in the midst of the accreditation self-study process.

Surprisingly, accredited programs were also found to fall below the rating of good quality, almost equal to self-study programs. Although “achieving accreditation produces observable improvements in the quality of care offered to children, and indicates high quality care more often than not,” this finding was not observed in this study focusing on programs serving low-income children (Whitebook, Sakai, & Howes, 1997, p.20). Recent studies have found accreditation to be significantly correlated with quality (Peisner-Feinberg, et al., 1999). In fact, accredited programs have been found to be six times more likely to be of high quality (Bredenkamp, 1999), as compared to non-accredited programs. Indeed, this study also found what has been seen in national studies: “NAEYC accreditation does help centers to improve their services, with a majority of accredited centers reaching a high level of quality, yet falls short as a strategy for guaranteeing high-quality care” (Whitebook, Sakai, & Howes, 1997, p.65). However, less than good quality may be explained in one study’s finding on accreditation, which revealed 40% of accredited programs “continue to be rated as mediocre in quality, despite the improvements they have made” (Whitebook, Sakai, & Howes, 1997). This finding should not be related to the ECERS-R, as documented with reliability and validity in chapter three. Klein (2001) has reported that overall child care quality in preschools has traditionally been measured using observation rating scales such as the ECERS (p.213).

The finding that quality was lower than expected, particularly in accredited programs may be explained by the emphasis of family income status in the study. Although past studies have illustrated that the majority of children from low-income families in the United States do not receive high quality child care, more recent studies are giving this issue overdue attention (Clifford, et al., 2005). The National Center for Early Development and Learning (NCEDL) conducted the Multi-State Study of Pre-Kindergarten programs and Study of State-Wide Early Education Programs (SWEEP). The sample for this combined study consisted of a population of 55% of the children being from low-income families. In that study, the ECERS-R mean score was a 3.80 and so, programs serving low-income children are lower than the accepted rate of “good” quality (Clifford, et al., 2005).

### *Process Quality*

Process quality includes social, emotional, physical, and instructional elements of interactions with young children (Pianta, et al., 2005, p.145). The ECERS-R measures process quality by assessing the following areas: space and furnishings, personal care routines, language- reasoning, activities, interactions, and program structure. In order to measure process quality, a mean score was calculated for up to two classrooms per program, using the ECERS-R.

As expected, because of near equal global quality scores, both accredited and self-study programs looked similar in terms of process quality variables. In looking at the total sample of accredited and self-study programs, program structure was the only subscale on which they both received a good score. Both accredited and self-study programs were assessed as providing not only good adult supervision, but also a flexible

schedule, including good transitions between large amounts of free playtime. Teachers ensured enjoyable whole and small group play times, during which children were encouraged to share personal experiences.

For the total sample, scores for interactions and space and furnishings were slightly higher but did not reach a rating of good as measured by the ECERS-R. Both accredited and self-study programs offered child-appropriate furnishings in a large enough space and space that was readily available to children with appropriate equipment outside. Generally, accredited and self-study programs provided adequate supervision for the whole group, although interactions were less likely to occur between teachers and individual children in both programs. Children were appropriately disciplined, although teachers were less likely to elaborate on children's play and to let them explore independently. This finding corresponds with research that has found that "the quality of early childhood classrooms is, to a large extent, determined by those interactions that take place between teachers and the children in those classrooms" (De Kruiff, et al., 2000, p.247).

It was interesting to find that accredited and self-study programs were not rated as being of good quality on interactions, as measured by the ECERS-R, yet teachers were found to be competent and good in structuring the day appropriately for preschool children. High quality interactions occur more frequently in classrooms with low child-staff ratios and more trained and educated teachers (Phillips et al., 2000). Teachers generally spoke in a positive way, although conversations dealt more with supervision and rules for the children.

It is interesting to note that process quality was also low in programs that participated in a multi-state pre-kindergarten study where the population of low-income children was similar to this study. Though the pre-k study had a similar population to this study (55% of children were from low-income families), process quality was actually lower (Early, Barbarin, Bryant, Burchinal, Chang, Clifford, Crawford, Weaver, Howes, Ritchie, Kraft-Sayre, Pianta, & Barnett, 2005). In that study, the quality of interactions and activities provided for children was lower than expected with a mean score of 4.67. The fact that this study did better in process quality may be explained because selection effects of who decides to go for accreditation are overpowering findings of differences in quality. In making the commitment to the self-study process that leads to accreditation, self-study programs that choose to become accredited may already be of higher quality. Additional explanations were explored in examining the other variables such as personal care routines, language- reasoning, and activities.

In looking at personal care routines, the overall mean for the accredited as well as the self-study programs was not near the standard of good, compared to space and furnishings and interactions. This indicates that staff members were not consistent about regular hand -washing and other toileting skills. However, the score also reflects that there was some standard of hygiene and children were encouraged to take care of their own needs independently.

Overall, activities in programs were rated well below good, but not reaching poor status. Although children had time indoors and outdoors during their day, the mean scores for activities in accredited and self-study programs suggest there were not many developmentally appropriate activities, nor a variety of materials available for free play,

music or art. This is comparative to programs in terms of language- reasoning, as mean scores for accredited and self-study fell far below a five, the standard of good. Therefore, both accredited and self-study programs were likely to offer a minimal selection of books and other language materials, and teachers were not likely to encourage conversation in children or among one another. A low score in language reasoning is significant for the children in both accredited and self-study programs. This is reason for concern as research has found that children must actively engage with others to develop language and motor skills (Rushton and Larkin, 2001).

In conclusion, quality of accredited and self-study programs was not only similar, but below a level of good, as judged by the ECERS-R. Researchers have found that programs which score higher on the ECERS are more likely to support a child's development (Cryer & Phillipsen, 1997). This study indicates that children from low-income families are receiving less than good care, even in programs that research has illustrated to be of higher quality. The second section relates findings and how they correspond to program revenue, including government subsidy, parent fees, and total subsidy.

### *Program Revenue*

Financial aspects related to revenue were gathered in accredited and self-study programs using a cost instrument. Specifically, this study focused on program revenue including parent fees, government subsidies, and total revenue. Government subsidies include Child Care funds (which include CDHS, IDHS, and other state funds), State Pre-Kindergarten funds, CPS funds, and Head Start funds.

Another finding of this research was that self-study programs received significantly less income from parent fees than accredited programs. Accredited programs were twice as likely to serve fee-paying children, than self-study programs. Group comparisons between accredited and self-study programs also revealed a significant difference in fees paid by parents. Accredited programs received about three times more in parent fees monthly per child than did self-study programs. Accredited programs received parent fees totaling about \$185 monthly per child, as compared to \$53 monthly per child in self-study programs.

Although a positive correlation has been found between high parent fees and high quality (Huffman & Speer, 2000; Peyton, et al, 2001; Phillips, et al., 2000; Wiltz & Klein, 2001), this study found only that higher parent fees were associated with accreditation status. Though parent fees are typically higher in accredited programs, they have also been found to be associated with high quality (Wiltz & Klein, 2001). In this study, though we found significantly higher parent fees in accredited programs, we did not find higher quality. This is most likely explained by the high percentage (65%) of children of low-income families served in accredited programs. It is interesting to note that although accredited programs received significantly more in parent fees, it did not significantly affect quality in this study. This may be explained in several ways. First, merely increasing the budget of a program does not guarantee higher quality (Phillipsen, et al., 1997). Second, “accredited child care programs operate in a severely under-funded industry” according to Barbara Willer of NAEYC quoted in Marcano (1997, p.1). And three, accreditation status does not guarantee high quality (Whitebook, Sakai, Howes, 1997).

Finally, this study also found that government subsidies represented the largest proportion of total income for both accredited and self-study programs. This is most likely due to the fact that both programs served predominantly children of low-income families, though group comparisons between accredited and self-study programs did not reveal a significant difference in government subsidy or total revenue. Public subsidies total about ten billion a year if all subsidies and expenditures on direct provision are included (Barnett, 1996), although research indicates that many low-income families are often unable to obtain subsidies for their children (Peyton, et al., 2001). In fact, though there are more state and federal moneys today than ever for child care assistance, less than 25% of eligible low-income families utilize them (Fuller, et al., 2001).

### *Theoretical Considerations*

The findings of this study indicate that preschool children from low-income families are not receiving the quality of care necessary to support their development, even though they are enrolled in accredited and self-study programs. Past research has found those programs more likely to be of higher quality, though it was not the case in this study. Ecological Systems Theory illustrates not only the importance of child care as it represents a primary system for the young child, but also the link between home and child care center. Responsive and stimulating care is linked theoretically and empirically to better social and cognitive outcomes for young children (Burchinal & Cryer, 2003, p.422). In this study's examination of accredited and self-study programs, quality was found to be of minimal status for the majority of both accredited and self-study programs. Cryer and Phillipsen (1997) report that "requirements for developmentally appropriate care are considered to be met when a program receives a score of five or higher" (p.52).

In this study, children had access to fewer learning materials and adults with whom positive interactions could take place. Literature has documented programs that complete the self-study process successfully (achieving accreditation) are of higher quality than those that have tried but did not achieve accreditation (Whitebook, Sakai, & Howes, 1997).

Research indicates that children from low-income families are more sensitive to the negative effects of low quality child care (NCEDL, 1999). This is especially serious for children of low-income families, who greatly benefit from high quality care and are more likely to live in less engaging home environments. The reciprocity that occurs between home and child care has emerged as the “primary nexus” of early child development, in that each may influence the other in providing good or poor experiences influencing the development of children (Shpancer, 2002). Though there are many variables that impact the young child’s development (neighborhood, family, siblings, and genetics), early childhood programs must accept that they are also responsible for influences that impact key areas of cognitive and social development (Gallagher & Clifford, 2000).

In light of these effects, it is of interest that this study, along with national research studies, has found that programs serving children of low-income families are more likely to be of minimal quality compared to programs serving children of middle-income families. As we consider this negative relationship between income status and children’s outcomes in the context of the early childhood center, we must take more seriously the environmental context of the early childhood setting. Therefore, as policy considers appropriate interventions, attention should be placed on the low-income

family's mesosystem. Educational and vocational programs that work to impact the low-income family's economic status may inadvertently be a better way to improve child care quality, rather than focusing solely on improving child care center quality without considering the context of the family (Clements, Reynolds, & Hickey, 2004).

### Policy Implications

There is potential significance for both policy and practice in this study.

Accredited and self-study programs, serving children of low-income families, have been found to be of less than good quality. Parent fee income for accredited programs differed significantly from self-study programs, perhaps best explained by the higher population of low-income children served in self-study programs. The need for increased quality in programs serving children from low-income families will be addressed, as well as a heightened awareness for a child's environmental context and its relationship to program quality. This next section provides a set of policy recommendations that address these issues.

Strategy One: Increase the quality of programs serving a majority of low-income children and implement a support system for quality in accredited programs.

Although national research studies have found that centers serving a majority of children from low-income families are of minimal quality, this study took the finding one step further. Accredited programs and self-study programs both lacked good quality when serving a high percentage (at least 65%) of low-income children. Therefore, more must be done than just focus on the child care program as a lone entity. It is surprising that 60% of the centers in this study, half of which were accredited, were rated as mediocre in quality on the Early Childhood Environmental Rating Scale (ECERS), a "widely used

and respected measure that is linked to child outcomes and is closely related to the NAEYC accreditation criteria” (Whitebook, Sakai, & Howes, 1997, p.66).

It has been illustrated that early childhood services provide critical benefits to children from low-income families if the level of quality is high. It is evident that policy cannot rely on market forces and real world situations to provide the level of quality that has been shown to produce major benefits for children and return economic benefits to families (Clifford, 2005). As over half the number of children under age five are now in child care and a large number of those children are from low-income families, there is an impetus for policymakers at the state and national level to focus on the level of quality of care (Ceglowski, 2004).

One option is to support federal and state policy solutions that recognize the negative relationship between family income status and child care center quality. How best to channel this focus is of increasing importance as we see the link between family economic status and child care quality status. As illustrated by national research studies described in Chapter Two, there is strong evidence that programs serving low-income children are of low quality. Similarly, this study found that even accredited and self-study programs serving children of low-income families were also of minimal quality. As described in the previous section on theoretical considerations, it may be best to focus directly on supporting families through educational and vocational programs that positively impact their economic status. Also, programs need more than just support obtaining accreditation; it takes sustained support and effort to achieve and maintain high quality care.

Another option, related to this finding, is to consider whether policy, as well as federal and state moneys, should support the providing and funding of homogenous classes made up of low-income children (Bryant, Maxwell, & Burchinal, 1999). This study found that lower quality programs rely heavily on government subsidies, yet the children most in need of high quality care, did not receive it. The fact that the “saturation of poverty in the classroom is related to lower quality suggests that the available resources in these classrooms for counteracting the effects of poverty may not be sufficient” (Pianta, et al., 2005, p. 156). Because teacher wages often contribute significantly to the quality of the preschool classroom, it is necessary to examine this issue for programs serving low-income children (Phillips, et al., 2000). As the benefits of high quality care emerge through large scale research studies and literature on early brain development and its later effects on the young child, especially for the child from a low-income family, there is a sense of urgency to ensure this is occurring in programs subsidized by state and federal moneys (Gallagher, Clifford, & Maxwell, 2004).

Strategy Two: Consider the impact of financial support for programs serving low-income families in order to pay for high quality care.

In terms of policy, this study is unique in that it is focusing on child care programs that serve children of low-income families. Schulman and Adams (1998) state that these are the children who receive the poorest care as their parents are limited to less expensive programs, which in turn, are of lower quality. As shown in this study of programs serving 65% or more low-income children, programs were generally mediocre and 60% of programs met only minimal standards of care. Also, though self-study programs served a significantly higher number of low-income children, they did not

receive a significantly higher amount of public subsidy. And so, it seems that “the education of young children in high-poverty areas is at a crossroads” (Chambers, Chamberlain, & Hurley 2001, p.3). Although research may suggest a large-scale approach to implementing high quality child care for all children, which includes setting high program standards and economic contributions, this may be a point of contention for programs serving low-income children. One study specifically calls for policy that does not “separate the needs of the *poor* or the *disabled* or the *different* from those children presumed *advantaged* or *normal*” (Jalongo, Fennimore, Pattnaik, Laverick, Brewster, & Mutuku, 2004, p.143). Though this may sound idealistic, it underestimates the effect that low-income status of families has on the quality of classrooms serving young children. In effect, that low-income factor may be primarily responsible for preventing high quality interactions that support positive cognitive and social development. It is disappointing that although federal and state funding increased from \$2.8 billion in 1995 to \$8.0 billion in 2000, classroom quality is not improving (Fuller, et al., 2001).

Improving early childhood programs is a major undertaking and critical to the development of young children from low-income families. Low-income families incur the largest expense for child care programs and may spend 20% to 50% of their salaries on child care programs that are not of high quality (US Census Bureau, 2000). In the Chicago study of programs, even low-income families paying large fees for accredited programs were still not receiving good quality care for their children. More work needs to go into giving all programs access to a variety of funding options, including grants and in-kind donations. This would be especially beneficial to self-study programs, as accredited programs were found to receive more money from parent fees and less from

government sources. As research indicates the benefits of high quality for those children, parents must be given a chance for high quality care (Schweinhart, 1994). Based on this study's findings, providing moderate subsidy amounts and setting high program standards is not sufficient enough to boost the quality to an acceptable level for children of low-income families (Clifford, 2005). In North Carolina, college tuition at state schools is "less than half the average cost of child care for a three year old in rural parts of the state and less than one-third the cost in urban areas" (Traill & Wohl, 2004, p.10). The Cost, Quality, and Outcomes Study outlined three key fiscal strategies for improving the quality of early childhood programs (1999, p.13). They are as follows:

- 1- Investment should be increased in child care from both public and private sectors. In order to even the playing field for programs serving low-income families, differential funding must be considered as a possibility. Similar to what has been done in funding Head Start, those programs with higher numbers of low-income families would receive additional moneys from private and/or public sources.
- 2- Federal and state funds should be expanded and available for quality improvements. For example, offering tax incentives that match the real cost of services that the state is incurring significant costs in providing early childhood services, but in terms of quality, this may be to no avail for low-income families. As intervention studies illustrated in Chapter Two, spending must be higher to achieve the positive outcomes of high quality care programs. It may be useful to look at when money spent has the greatest effect; currently the \$7 billion being spent by state and federal governments

on children under the age of five is roughly one-quarter the amount spent on children ages 6 to 17. In addition, for every dollar spent on the young child, six or seven dollars are spent on those of retirement age (Gallagher & Clifford, 2000).

- 3- Child care subsidies should be redesigned to offer incentives for providing higher quality care to low-income families and their children. Programs currently receive little or no benefit in providing high quality care. They receive subsidies on a per-child basis regardless of quality. It may be worth exploring subsidy reimbursement based on accreditation status and population served.

Strategy Three: Examine the role of public subsidies and parent fees as related to providing high quality care.

As “child care is evolving as both market driven and publicly supported,” it is important to review the various methods that support child care programs financially (Mitchell, Stoney, & Dichter, 2000, p. 91). Phillips and fellow authors also agree that it is important to incorporate economic considerations into future studies of child care quality (2000, p.475). In order to incorporate economic considerations, it is necessary to expand research on the many factors that may influence the quality of care, such as foundations or private businesses that offer moneys to childcare and child specialists who work with programs in increasing quality.

In promoting the quality of child care programs, it must not only be recognized that financial support is necessary, but also that a better framework is needed to organize financial resources appropriately in order to support quality (Mitchell, Stoney, & Dichter,

2000). More recently, cost analysis has become especially important for researchers, due to the growing sense that economic considerations will represent a crucial dimension of future studies of early childhood programs (Phillips, et al., 2000).

In fact, the larger issue is the financing of a high quality early care and education system; perhaps funding needs to be thought of as a system instead of geared towards individual programs per the number of children served. For example, the funding of state pre-kindergarten programs is heading in this direction; not only has funding been increased, but it is also being more seamlessly connected. In Ohio, state pre-kindergarten funds are combined with Head Start federal moneys to support the Head Start statewide pre-k program. In doing this, it lessens the costs of running to programs that support the same group of children and so Head Start programs are financed almost evenly with state and federal moneys (Bryant, et al., 2002).

As for its practical implications, this study has illustrated that as accredited programs were less likely to serve low-income children, they were also less likely to receive greater amounts of public subsidies. This is an important finding other large research studies have suggested that research should focus on subsidies and parent fees (Peyton, et al., 2001). One part of the study's purpose should be to "heighten attention to the role of public and private subsidies in promoting equity of access to quality child care for all children" (Phillips, et al., 2000, p.494). In this study, accredited programs have been shown to offer similar types of care as self-study programs, but cost significantly more for parents. Those parents of children in accredited programs spent roughly three times more than parents in self-study programs. Although accredited programs served a much lower number (65%) of low-income children compared to self-study programs

(92%), this number was still high compared with other research studies that have included programs serving about 50% low-income. Self-study programs maximize the number of low-income children served and therefore, receive large amounts of public subsidy monthly per FTE child enrolled, though not significantly more than accredited programs. In fact, government subsidies represent the same proportion of parent fees in accredited programs; self-study programs received close to \$150 more monthly in government subsidy per child, than did accredited programs.

Furthermore, providers of high quality care programs earn little more than those providers who operate low quality centers so there is little or no incentive to increase quality (Helburn, Morris, & Modigliani, 2002). It is essential that costs to parents be lowered in that paying for the full cost of high quality care is not possible with the other expenses low-income families incur. As parents primarily finance child care for their children before kindergarten, many are forced to make a low quality choice due to financial restraints. And so, high quality programs are most expensive, yet inaccessible to the children who benefit most from those services (Clifford, as cited in Education In Early Years Conference Report, 1998).

#### Recommendations for Further Research

Studies have concluded that non-parental child care is not harmful in itself, and so researchers are no longer wondering if child care is harming our children. Instead, studies work to define which components of quality are important in providing a good child care experience (Arnett, 1989). The research in this area is extensive, yet limited in that results have been generalized for all children, all child care programs, and all geographic areas. There is little research that has looked at high quality child care for low-income children,

especially accredited child care, as only about 5% of programs nationwide are accredited by the early care and education profession (Schulman & Adams, 1998).

Smith (1998) asserts there needs to be more research that directly assesses the influence of both high and low quality care on children who are at-risk of poor developmental and school outcomes. This study is not the first to illustrate the need for studies with larger samples of children from low-income families. Research calls for not only additional and better designed studies with larger samples, but also an identification of which characteristics of programs are supporting the development of low-income children (Chambers, Chamberlain, & Hurley, 2001). More in-depth studies are necessary as children from low-income families benefit from high quality care settings. In conclusion, “child care must therefore be viewed as a vital part of the complex, multi-faceted environment in which children live, and it must be studied from the vantage point of each participant” (Wiltz & Klein, 2001, p.210).

In order to develop a more comprehensive understanding of how subsidy and quality are related among early childhood programs, additional research should be undertaken. While accreditation for early childhood programs has been recognized as a significant contributor of high quality, it has also been shown not to guarantee high quality. Accreditation standards must be only one piece of the puzzle considered as programs work towards higher quality status. There appears to be limited research considering low-income populations in determining the effectiveness of accreditation. The present research has been concerned with how finances may be related to quality, but typically in high quality programs with an under-represented sample of low-income children. New emphasis needs to be directed to developing a model and applying

financing for early childhood program improvement in general and to programs serving low-income children in particular. Future studies of policy costs should incorporate alternatives for paying for child care quality through policy directives or other methods such as better tax incentives or revised qualifications for child care subsidies.

There is potential significance for both policy and practice in this study. The study of Chicago programs has shown one similarity with findings of recent national research studies; children from low-income families were found to experience lower than good quality care. However, in that this study utilized accredited and self-study programs, these results were surprising. Though research suggests that accredited programs tend to offer higher quality care, this is not a guarantee. Further research should be conducted to determine whether accreditation alone supports high quality in programs serving low-income children. Research has shown overwhelmingly that these children benefit from high quality care programs, yet this study illustrates high quality does not occur by chance and when left to the market, the children from low-income families suffer the consequences.

### Summary

The literature on early childhood program quality indicates that high quality care is essential to the healthy development of young children, particularly children from low-income families. This study examined several issues related to this area. First, what quality of care do low-income children receive when served in accredited and self-study programs? Not only was the quality of care below the standard of good in both accredited and self-study programs, both programs were almost equal in terms of their quality rating. This was surprising and self-study programs may have been closer to a good

rating than typical programs not included in the study, due to the selection effect of who decides to go for accreditation. In that assumption, one can assume centers willing to work towards accreditation are already sensitive to and working for higher quality in child care, at least as much as already accredited centers. In other studies, findings revealed that classes with high numbers of low-income children were more likely to have lower ECERS-R scores than other programs, other factors being equal (Clifford, et al., 2005). Therefore, accreditation or self-study status did not contribute to higher quality when the majority of children in the classroom were from low-income families.

Second, why does the Ecological Systems Theory have particular relevance for low-income children and their families? As more mothers are working today outside the home, and many of those mothers joining the workforce are from welfare status, there is an increased emphasis on the link between child care and home. According to this study's findings, this dual ecology may have more power than has been described in previous research studies. Previously, home characteristics have been linked to general process (child-adult interactions) and structural (physical environment and child-adult ratio) dimensions of quality. In addition, research has noted that children from low-income homes have higher reading and vocabulary scores when they enter quality care programs prior to age one (Shpancer, 2002).

Third, who is serving our children from low-income families? This study takes the most recent research one step further. The latest research demonstrates that child care programs that serve at least 50% or more children from low-income families tend to be of lower quality, when other factors are equal. This finding indicates that the *mesosystem*, the systemic structure that integrates a child's experiences and interactions in various

systems, may be particularly relevant for children from low-income families (Bronfenbrenner, 1989). In the context of this study, the mesosystem was used to describe the relationship of the child care environment with the home environment. In that accredited programs should support the various social, cultural, and individual needs of families and their developing children, we must better meet the needs of low-income families (Bredekamp, 1999)

Therefore, how should this study's findings and other similar findings be used to impact future policy and funding changes for the early childhood system? The National Association for the Education of Young Children (NAEYC) created a national accreditation system to support high quality in early childhood programs. The accreditation system was intended to provide not only a level of excellence in child care program standards, but also to guide parents in choosing child care of the highest quality. However, this policy does not seem as effective when applied to programs with large numbers of children from low-income families.

Therefore, those programs may need higher amounts of funding as part of an organized system, to support key variables that are related to quality in programs, such as staff salaries and more public subsidy. In providing differential funding, a solution based on this and other study's findings, programs will better achieve a higher quality status, regardless of whom they serve. A fundamental change needs to occur on behalf of parents, policymakers, and the government agencies. We must believe that child care matters and makes a crucial difference in the lives of our children. It is a social responsibility to make high quality child care available to all children, especially those who will benefit the most, children from low-income families.

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## APPENDICES

## Figure 1-3 Overview of the NAEYC Accreditation Process

Accreditation granted for 3 years.

### **VALIDATION COMMISSION DECISION**

- Commission reviews validated Program Description.
- Commission grants or defers accreditation. Program makes needed improvements and requests second validation visit.

Accreditation deferred.

### **SELF-STUDY**

Using self-study materials—

- Program determines needed improvements
- strengthens program, and
- submits written Program Description.

Upon receipt of completed Program Description—

- Academy staff arrange on-site visit,
- Validators implement validation procedures, and
- Program certifies validation procedures correctly implemented.

Program appeals decision; Program Description reviewed by second Commission.

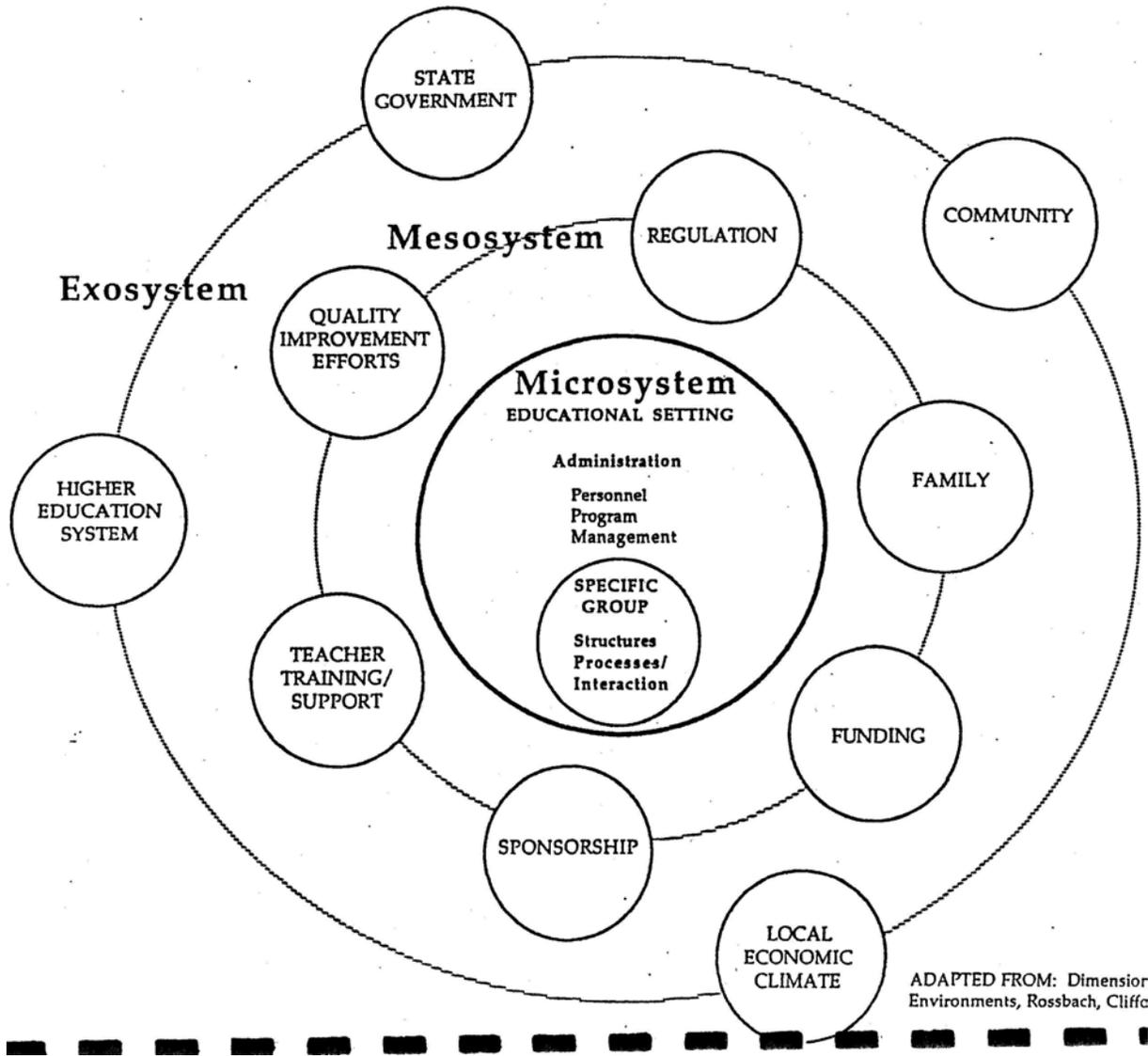
An Assessment by the National Center *for* the Early Childhood Work Force.

Source: NAEYC (1991). *Accreditation Criteria Procedures of the National Academy of Early Childhood Programs*.

**FIGURE 1:**

**Theoretical Framework for Assessment of Early Childhood Settings**

ADAPTED FROM: Dimensions of Learning Environments, Rossbach, Clifford & Harms (1991)



ADAPTED FROM: Dimension Environments, Rossbach, Cliffo

## Reliability and Validity of the ECERS-R

The ECERS-R is a revision of the well-known and established original scale. It maintains the same conceptual framework as well as the same basic scoring approach and administration. The original version has a long history of research demonstrating that quality as measured by the ECERS has good predictive validity (ie., Peisner-Feinberg & Burchinal, 1997; Whitebook, Howes, & Phillips, 1990), the revised version would be expected to maintain that form of validity. The major question to be answered is whether the changes to the scale have affected interrater reliability.

An extensive set of field tests of the ECERS-R was conducted in the spring and summer of 1997 in 45 classrooms. The authors were not satisfied with the interrater reliabilities obtained and decided that further revision was needed. Data from this first study were used to determine changes needed to obtain a fully reliable instrument. Substantial revisions were made to the first field-test draft of the scale, using the indicator-level reliabilities as a guide to focus the revision process. After the revisions were made, a second test, focusing on interrater reliability, was conducted in a sample of 21 classrooms, equally distributed among high-, medium-, and low-scoring rooms in the initial test. Even though this test was conservative, with minimal chances to develop reliability through the discussions that customarily take place following a practice observation, the results of the second test were quite satisfactory.

Overall, the ECERS-R is reliable at the indicator and item level, and at the level of total score. The percentage of agreement across the full 470 indicators in the scale is 86.1%, with no item having an indicator level below 70%. At the item level, the proportion of agreement was 48% for exact agreement and 71% for agreement within one point.

For the entire scale, the correlations between the two observers were .921 product moment correlation (Pearson) and .865 rank order (Spearman). The interclass correlation was .915. These figures are all within the generally accepted range with the total levels of agreement being quite high. These overall figures are comparable with the levels of agreement in the original ECERS. Also examined were the internal consistency of the scale at the subscale and total score levels. Subscale internal consistencies range from .71 to .88 with a total scale internal consistency of .92. Table 1 presents the internal consistencies for the seven subscales.

In summary, the field tests revealed quite acceptable levels of interrater agreement at the three levels of scoring—indicators, items, and total score. In addition, there is support for using the scores of the subscales and the total score to represent meaningful aspects of the environment.

Source: Harms, Clifford, & Cryer (1998). *Early Childhood Environment Rating Scale- Revised Edition*.

## SPACE AND FURNISHINGS

- 1.1 Insufficient space for children, adults, and furnishings.
- 1.2 Space lacks adequate lighting, ventilation, temperature control, or sound-absorbing materials.
- 1.3 Space in poor repair (Ex. peeling paint on walls and ceiling; rough, damaged floors).
- 1.4 Space poorly maintained (Ex. floors left sticky or dirty; trash cans overflowing).
  
- 3.1 Sufficient indoor space for children, adults, and furnishings.
- 3.2 Adequate lighting, ventilation, temperature control, and sound-absorbing materials.
- 3.3 Space in good repair.
- 3.4 Space reasonably clean and well maintained.
- 3.5 Space is accessible to all children and adults currently using the classroom (Ex. ramps and handrails for people with disabilities, access for wheelchairs and walkers).  
*NA permitted.*
  
- 5.1 Ample indoor space that allows children and adults to move around freely (.Ex. furnishings do not limit children’s movement; sufficient space for equipment needed by children with disabilities).
- 5.2 Good ventilation, some natural lighting through windows or skylight.
- 5.3 Space is accessible to children and adults with disabilities.
  
- 7.1 Natural light can be controlled (Ex. adjustable blinds or curtains).
- 7.2 Ventilation can be controlled\*\* (Ex. windows can open; ventilating fan used by staff).

### *Notes for Clarification*

\*Base space needs on largest, number of children attending at one time.

It is expected that there will be some messiness from the regular activities of the day. “Reasonably clean” means that there is evidence of daily maintenance, such as floors being swept and mopped, and that big messes, such as a juice spill, are cleaned up promptly.

In order for the indoor space to be considered minimally acceptable, it must be accessible to children and adults with disabilities who are currently a part of the program. If no children or adults with disabilities are currently part of the program, score NA for indicator 3.5. For a score of 5, accessibility is required regardless of whether or not individuals with disabilities are involved in the program. Therefore only a score of N or Y is allowed for 5.3.

\*\* Doors to outside count as ventilation control only if they can be left open without posing a safety threat (for example, if they have a locking screen door or safety gate to keep children from leaving the room unattended).

## SECTION D: FUNDING SOURCES, FEES, AND REIMBURSEMENTS RECEIVED

This section asks questions about the program’s sources of funding, enrollment, and income received.

1. I would like to know the FTE child enrollment for the sources of funding listed in the table below.  
***The total FTE children reported on this table should equal that reported on page 3, Question 8, Line F. If a particular funding source was not present at the program leave the row blank.***

2. Please give me the full fee paid by private paying parents—parents who do not receive any public subsidy—for each age group of children the program served during the fiscal year reported. This should be the highest monthly fee paid, not including discounts or special fees. If you usually did not charge monthly fees, I can calculate a monthly equivalent.  
***If the most commonly charged fee was monthly, then record the monthly fee for each age group of children the program served. If the most commonly charged fee was not the monthly fee, then record the fee structure on the Fee Table. Use these data to convert the fees to the monthly equivalent. If an age group is not present at the program leave the row blank.***

**FULL TIME FEE TABLE FOR PRIVATE PAYING PARENTS** McCormick Tribune Child Care Cost Study

FUNDING SOURCE	FTE CHILDREN
Single Source	
a. CPS or State Pre-K	
b. Head_Start_only	
c. Child_Care_only	
d. Private_Pay_only	
<b>Blended Sources</b>	
<b>e. CPS_or_State_Pre-K/Head_Start</b>	
f. CPS_or_State_Pre-K/Child_Care	
g. CPS or State Pre-K/Private Pay	
h. Head_Start/Child_Care	
i. Head_Start/Private_Pay	
j. Child_Care/Private_Pay	