QUALITY EARLY CHILDHOOD EDUCATION:
A COST-EFFECTIVE INTERVENTION
TO STUDENT ACHIEVEMENT

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This research study focused on early childhood education programs that were implemented by public school districts in Indiana. The research questions addressed in this study were as follows:

1. What benefits related to student achievement does an investment of financial and human resources in preschool and/or full-day kindergarten programs show for students and for a school district?

2. What means of funding do school districts utilize to implement an early childhood education program?

3. What characteristics do successful early childhood programs possess, as determined by school district administrators?

The online survey, which was utilized to collect this data, was developed by the researcher. This survey was distributed to public school superintendents of 164 small and mid-sized school corporations in Indiana, of which 43 were small school corporations (0 to 1,000 students) and 121 were mid-sized school corporations (1,001 to 5,000 students).
Of the total sample of 164 school districts, 48 surveys were returned, which resulted in a 29.3% response rate.

The data collected in this study showed the following results:

1. Students in the preschool programs showed increased acquisition of socialization skills and improved motivation in school.

2. School districts utilized a combination of federal funds, state funds, and federal grants to support their preschool programs.

3. The preschool programs were designed to incorporate the best practice characteristics of a curriculum based on the state early learning standards. The programs also were staffed with teachers who have four-year college degrees and have small class sizes of 20 students, with a staff-to-child ratio of ten students per adult (10:1).

These school districts could serve as a model for other school districts that are planning to implement a preschool program through a review of their experiences in designing the program, staffing the program, funding the program, and supporting the academics in the program.
Approval Page
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Table of Contents

TITLE PAGE ................................................................. 1
ABSTRACT ..................................................................... 2
APPROVAL PAGE .......................................................... 4
ACKNOWLEDGMENTS ..................................................... 5
TABLE OF CONTENTS ................................................... 6
LIST OF FIGURES AND CHARTS ....................................... 8
CHAPTER 1: INTRODUCTION ........................................... 9
  Statement of the Problem .............................................. 11
  Purpose of the Study .................................................. 11
  Research Questions ................................................... 12
  Delimitations ............................................................ 12
  Definitions ............................................................... 12
  Summary ................................................................. 14
CHAPTER 2: REVIEW OF THE LITERATURE ....................... 15
  Background ............................................................. 15
  Early Research ........................................................ 17
  Benefits of Quality Programs ...................................... 20
  Funding of Preschool Programs ................................... 27
  Characteristics of Quality Programs ............................. 30
  Successes of Preschool Programs ................................ 36
  Universal Preschool .................................................. 39
  Closing the Achievement Gap ..................................... 46
  Quality in Kindergarten ............................................. 50
  Summary ................................................................. 52
CHAPTER 3: METHODOLOGY ........................................... 54
  Introduction ............................................................ 54
  Description of the Sample .......................................... 54
  The Instrument ......................................................... 56
  Research Design ....................................................... 59
  Data Collection ......................................................... 61
  Data Analysis ........................................................ 61
  Summary ................................................................. 62
CHAPTER 4: RESULTS ..................................................... 64
  Introduction ............................................................ 64
  Demographics ........................................................ 66
  Curriculum Standards .............................................. 69
  Degree and Training Requirements ............................. 71
  Class Size and Staff-to-Child Ratio ............................... 72
  Funding Sources ....................................................... 74
  Benefits and Long-lasting Benefits ............................. 75
  Full-Day Kindergarten and/or Preschool Programs ........ 76
  Conclusion ............................................................. 79


<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHAPTER 5: RECOMMENDATIONS AND CONCLUSIONS</td>
<td>80</td>
</tr>
<tr>
<td>Summary of Study</td>
<td>80</td>
</tr>
<tr>
<td>Discussion</td>
<td>83</td>
</tr>
<tr>
<td>Full Day Kindergarten and/or Preschool Programs</td>
<td>93</td>
</tr>
<tr>
<td>Implications of the Results for Practice</td>
<td>94</td>
</tr>
<tr>
<td>Recommendations for Further Research</td>
<td>96</td>
</tr>
<tr>
<td>Conclusion</td>
<td>97</td>
</tr>
<tr>
<td>REFERENCES</td>
<td>100</td>
</tr>
<tr>
<td>APPENDIX A</td>
<td>106</td>
</tr>
<tr>
<td>APPENDIX B</td>
<td>109</td>
</tr>
<tr>
<td>APPENDIX C</td>
<td>111</td>
</tr>
<tr>
<td>APPENDIX D</td>
<td>112</td>
</tr>
</tbody>
</table>
**List of Figures and Charts**

<table>
<thead>
<tr>
<th>Chart</th>
<th>Title</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>CORPORATION ENROLLMENT</td>
<td>67, 112</td>
</tr>
<tr>
<td>3</td>
<td>CORPORATION AREA</td>
<td>67, 113</td>
</tr>
<tr>
<td>4</td>
<td>CORPORATION PRESCHOOL PROGRAM IN PLACE</td>
<td>68, 114</td>
</tr>
<tr>
<td>5</td>
<td>NUMBER OF PRESCHOOL CLASSES IN CORPORATION</td>
<td>68, 73, 115</td>
</tr>
<tr>
<td>6</td>
<td>operating schedule of preschool classes</td>
<td>69, 116</td>
</tr>
<tr>
<td>7</td>
<td>TOTAL ENROLLMENT OF PRESCHOOL CLASSES</td>
<td>73, 117</td>
</tr>
<tr>
<td>8</td>
<td>CERTIFICATION OF TEACHERS</td>
<td>71, 118</td>
</tr>
<tr>
<td>9</td>
<td>CERTIFICATION/TRAINING OF TEACHING ASSISTANTS</td>
<td>72, 119</td>
</tr>
<tr>
<td>10</td>
<td>FUNDING OF PRESCHOOL CLASSES</td>
<td>74, 120</td>
</tr>
<tr>
<td>11</td>
<td>CURRICULUM AND INSTRUCTION PROGRAMS</td>
<td>70, 121</td>
</tr>
<tr>
<td>12</td>
<td>REPORTED BENEFITS OF PRESCHOOL PROGRAMS</td>
<td>75, 122</td>
</tr>
<tr>
<td>13</td>
<td>REPORTED ACADEMIC BENEFITS FOR CHILDREN</td>
<td>76, 123</td>
</tr>
<tr>
<td>14</td>
<td>REASONS CORPORATIONS DO NOT IMPLEMENT PRESCHOOL</td>
<td>77, 124</td>
</tr>
<tr>
<td>15</td>
<td>CORPORATIONS WITH FULL-DAY KINDERGARTEN PROGRAM</td>
<td>78, 125</td>
</tr>
<tr>
<td>16</td>
<td>WITH ADEQUATE FUNDING WOULD HAVE BOTH PRESCHOOL AND FULL-DAY KINDERGARTEN PROGRAMS</td>
<td>78, 126</td>
</tr>
</tbody>
</table>
Chapter 1 -- Introduction

Early childhood education programs have been researched many times over to determine the benefits to children and the investment return to school districts. “A report by WestEd estimates that a national commitment to investing in high-quality early childhood programs would initially cost about $19 billion a year, but that in less than 20 years all levels of government would see the financial benefits” (National Association of Elementary School Principals/NAESP, 2005, p. 2). The report further projects that “within 30 years, the benefits would be more than double the costs of investing in programs” (NAESP, 2005, p. 2).

Many studies have been done to show that investments in full-funding of preschool programs bring returns of long-term benefits to students along with reduced costs in remediation and special education. Students who attended high-quality early childhood programs needed less intervention and showed benefits of higher achievement. The long-term benefits to students who attended quality preschool programs include increased potential for earning higher salaries and greater ability for purchasing goods and services (Reynolds, et al., 2001 and Schweinhart, 2003).

Education and its successes and failures have been the topic of discussion among many stakeholders. Over time, education critics have scrutinized the decline in ranking of the United States education system in comparison with the rest of the world. Attempts
by educators and legislators to rectify the situation have not seen the improved ranking
globally and the results desired. As a result, the legislation of No Child Left Behind was
enforced and passed on to U. S. schools with the hope that student achievement would
improve and increase the status of U. S. education worldwide.

With the emphasis on No Child Left Behind and increased student achievement,
schools usually examine remediation programs as interventions to focus on teaching
children what they do not know. In this reactive focus, remediation of students’ skill
gaps and learning gaps has taken on many forms. Typically, students have been
administered assessments to determine skill mastery or skill gaps. This assessment
process is used to identify those students in need of remediation. Often then in
remediation, the students are given more of the same curriculum and the same or slightly
revised instruction focused on their skill gaps. Even though they have been given more
of the same, they are expected to show different results and improve their skill mastery.

Rarely have discussions about student achievement resulted in a proactive focus
on possible intervention programs in early childhood to prevent skill and learning gaps
from occurring. Providing quality early childhood education, utilizing high-quality
curriculum, and delivering the curriculum with high-quality instruction utilizing best
practices, public schools would make better use of time and effort in attempting to impact
student achievement. Public schools could focus on taking young learners, exposing
them to developmental concepts and skills, utilizing progress monitoring assessments to
check their mastery, and re-teaching through varied strategies to ensure that students’
skill gaps are resolved early in their school career instead of waiting for them to fail and
fall further behind their grade level peers. Freeley (2006) asserted that with current brain
research we know more about “how the brain works and have a solid research foundation on which to base education decisions, create practical classroom applications, and develop brain-compatible teaching strategies” (p.4).

**Statement of the Problem**

Quality early childhood education programs, including both preschool and full-day kindergarten, have not been effectively utilized as a proactive means for increasing student achievement. This study has considered whether small and mid-sized school districts have made an investment in early childhood education programs and the characteristics of those programs, i.e., staffing, teacher quality, curriculum, and class size. The benefits of early childhood programs have been documented many times and continue to be discussed by various stakeholders. The benefits to students who have participated in early childhood programs have not generated consistent discussions about focusing on early childhood education programs as a means of increasing student achievement.

**Purpose of the Study**

The purpose of the study was to show the benefits to student participants of early childhood education programs and the potential economic savings to school districts, which have made investments in early childhood education programs. In addition the purpose was to confirm the best practice characteristics that have been implemented and to determine the possible funding sources for existing early childhood programs, which could serve as a model for replication in other programs.
Research Questions

The research questions addressed in this study were as follows:

1. What benefits related to student achievement does an investment of financial and human resources in preschool and/or full-day kindergarten programs show for students and for a school district?

2. What means of funding do school districts utilize to implement an early childhood education program?

3. What characteristics do successful early childhood programs possess, as determined by school district administrators?

Delimitations

The delimitations on this study were as follows:

1. The survey utilized was sent to only school districts in Indiana.

2. The early childhood programs were limited to programs of public schools in Indiana.

3. The school districts in Indiana were limited to small and mid-sized school districts with enrollment up to 5,000 students.

4. The early childhood programs studied were public school programs excluding Head Start.

Definitions

Cost-effective intervention:

An effort made to utilize a program to address an educational issue, in which the benefits from the programs are worth the costs incurred. (Bracey & Stellar, 2003)
**Early childhood education:**

An educational program that meets the basic needs of young children, ages 4-6, to nurture their cognitive, social, emotional, and physical growth and development.

(Freeley, 2006)

**Full-day kindergarten:**

An educational program provided in the public schools designed to be developmentally appropriate in meeting the academic needs of children, ages 5-6.

(National Center for Education Statistics, 2003)

**Funding sources:**

The combination of monies utilized to implement a program from sources, i.e., state funding, state or federal grants, private grants, etc. (Ackerman et al., 2009)

**Intervention:**

An educational program designed to teach and re-teach knowledge and skills to bring a student up to mastery level. (Gayl et al., 2007)

**Preschool:**

An educational program that meets the basic needs of young children, ages 4-5, to nurture their cognitive, social, emotional, and physical growth and development.

(Daniel, 1995 and Davies & Brember, 1997)

**Quality early childhood education:**

A determination of the characteristics of an early childhood education program that is consistent with quality benchmarks for preschool programs that promote benefits to young learners. (Barnett, 2005)
**Student achievement:**

The determination made of success in learning for a student, as measured by formal and informal assessments that measure both ability and knowledge. (Barnett, 1995)

**Summary**

Early childhood programs have been studied and found to provide long-term benefits to students and returns on investments to school districts, organizations, and/or states that have fully-funded them. This study has focused on the efforts made by small and mid-sized school districts to implement early childhood education programs, the benefits to students, the potential economic benefits to school districts, the common trends in funding sources, and the common characteristics of those programs, as compared to high-quality early childhood education programs.

A review of the literature has identified some benchmarks of high-quality preschool programs that can be used to compare characteristics of early childhood education programs. A further investigation of the research has identified some common trends among the programs. Findings of the research have determined some of the long-term benefits for children and for society.
CHAPTER 2 --- REVIEW OF LITERATURE

Background

Quality early childhood education, for the purposes of this dissertation, would be defined as a determination of the characteristics of an early childhood education program that is consistent with the quality benchmarks for preschool programs that promote benefits to young learners (Barnett, 2005). Barnett (2005) identified the Ten Benchmarks for High-Quality Preschool Education established by The National Institute for Early Education Research (NIEER) as the following:

1. Curriculum standards
2. Teacher degree requirement
3. Teacher specialized training requirement
4. Assistant teacher degree requirement
5. Teacher in-service requirement
6. Maximum class size
7. Staff-child ratio
8. Screening / referral requirements
9. Required support services
10. Meal requirements (p. 16)
Early childhood education programs, specifically state-funded pre-K programs, are monitored by the NIEER and assessed according to how well they meet the ten quality benchmarks. States have made great progress in expanding pre-K programs over the past decade, but the current data show that many states’ commitments to their youngest citizens are now slipping due to budget cuts (NIEER, 2011). Research has shown that high-quality pre-K programs significantly help prepare children for school, which “leads to a more educated population with higher-paying jobs, fewer social problems like crime and delinquency, and a strong economic return on the dollars invested in pre-K” (NIEER, 2011, p. 4).

Despite research showing its benefits, quality early childhood education has not appeared to be a top priority in many school districts for a variety of reasons. Since early childhood education, even kindergarten, has not been considered mandatory in several states, there has seemed to be little to no commitment to providing preschool classes for children. Many other budget priorities and legal mandates, such as No Child Left Behind, accountability measures, state academic standards, etc., have been imposed on school districts without equivalent and appropriate funding (The Center for Public Education, 2008). Since school districts are being asked to do more with less money, they are not willing to take money away from the K-12 program to devote to a preschool program.

Being able to prove the value of preschool programs has also been difficult due to the lack of data on student learning from the evaluation of quality preschool programs. There have been limited assessments available that are designed to evaluate preschool learning that translate into K-12 curriculum and instruction. Many developmental
assessments, appropriate for measuring preschool learning, have carried little weight and are less meaningful in translation to K-12 educators. Many educational authorities have believed that preschool students should not be subjected to an accountability assessment and promote that philosophy freely (Kagan & Scott-Little, 2004).

Many studies have done short-term evaluation of the effectiveness of the preschool programs for both economically disadvantaged children and children from all backgrounds (Barnett, 1995). Furthermore, some studies are available that have considered the cost-effectiveness, or cost-benefit analysis, and fewer still have been able to pursue a long-term evaluation of the preschool program. Another topic of research on preschool programs has been that many studies focus on readiness for kindergarten and/or developmental skills.

**Early Research**

Some of the earliest research related to preschool and student achievement was conducted in the mid-1990s and the early 2000s. Daniels’ (1995) study focused on whether the “exposure to pre-school experience has a significantly positive effect on the outcomes of the first two runs of the National Curriculum assessment results for seven-year-olds” in Great Britain (p. 1). The results of this study found that the children who attended nursery school scored at a significantly higher mean than the non-attendees in reading, writing, mathematics, and science. Positive education benefits were shown for those children with a nursery school (preschool) experience over the non-attendees in all areas and over the children in the playgroup in most areas. The nursery school group was of a lower socioeconomic profile than the non-attendees and could have been expected to attain much lower scores than the non-attending children (Daniels, 1995).
Another early study related to preschool and student achievement was conducted by Davies & Bremer (1997) and examined “the reading attainments of a sample of Year 2 children who had one of three types of pre-school experience” (p. 1). The study was structured as a cross-sectional study over four years and, in each of the four years, teachers gave the Primary Reading Test as an assessment of their ability to apply reading skills for the understanding of words and simple sentences. The group that attended no preschool scored significantly lower and showed the least improvement between testing occasions. The nursery school or preschool group scored highest on every testing occasion. The children in second grade were tested two and a half years after their preschool experience, but its effect was still strong on their reading attainment and comprehension scores (Davies & Bremer, 1997).

Cost-Effectiveness Studies

Preschool programs cost money. To determine cost-effectiveness, research studies have focused on the question “as to whether the benefits from the programs are worth these costs” (Bracey & Stellar, 2003, p. 782). Cost-benefit analysts have found that high-quality preschool programs can be expensive.

They (analysts) worry that governments might experience “sticker shock” if they try to replicate these projects on a large-scale basis, but they caution that costs alone offer little guidance. The costs of a program must be compared against the benefits that the program generates. (Bracey & Stellar, 2003, p. 783)

Two of the long-term research studies related to preschool programs and their cost-effectiveness with some of the most significant results include studies of the cost-benefit analysis of the federally financed Title I Chicago Child-Parent Center (CPC)
Program and the High/Scope Perry Preschool Program. The Chicago CPC Program began in 1967 and the “philosophy of the program is to help children develop skills in reading, math, and communication through a broad spectrum of classroom and parent activities, and field trips” (Reynolds, Temple, Robertson, & Mann, 2001, p. 1). As the first cost-benefit analysis of a federally funded, comprehensive early childhood program, this study concluded that participation in the CPC program was associated with economic benefits that exceeded costs. The results of the data collection were grouped into five categories of benefits and costs: 1) reductions in expenditures (remedial, grade retention, and special education services), 2) reductions in the criminal justice system (expenses of juvenile and adult arrest and treatment), 3) reductions in the child welfare system (expenses of child abuse and neglect), 4) averted tangible costs to crime victims, and 5) increases in adult earnings and tax revenues (related to higher educational attainment) (Reynolds et al., 2001). “The greatest benefits were savings on school remedial services, increased tax revenues, and averted crime victim costs” (Reynolds et al., 2001, p. 2). Results of the cost-benefit analysis concluded that “overall, $7.10 was returned to society at large for every dollar invested in preschool” (Reynolds et al., 2001, p. 2).

The High/Scope Perry Preschool Study researched the effects of a high-quality preschool program for children in poverty to examine “children’s readiness for school and their subsequent educational success, economic success in early adulthood, and reduced number of criminal arrests throughout their lives” (Schweinhart, 2003, p. 1). The longitudinal study showed how the program produced lasting effects for participants in educational achievement, economic success, and avoidance of criminal activity. Results of the study showed improvements in educational achievement in that 17-49%
improved their high school graduation rate and fewer than half showed a need for remedial services (special education, etc.). Improvements in economic success showed that 25-36% more participants were employed and secured better-paying jobs and improvements in avoidance of crime found that 28-37% more were successful in their efforts to avoid criminal activity (Schweinhart, 2003). The benefit-cost analysis showed costs of the preschool program at $14,716 per participant and returns to society of $105,324 per participant with a resulting cost-benefit ratio of 7.16 to 1 (Schweinhart, 2003). As evidenced by the results of these studies, the positive benefits of preschool programs more than justify the costs.

Benefits of Quality Programs

Benefits to Students

Academic successes. A comparison of the research studies related to a quality early childhood education program has found several variations that exist among the studies. Each of the studies examined the positive educational benefits for the students and how those relate to their achievement in school. The primary educational benefit that each researcher set out to discover was that higher intellectual student performance continues as a result of the student having had the experience of a preschool education (Schweinhart, 1994). The studies that evaluated the students’ primary school achievement over two-and-a-half to four years, Daniels (1995), Davies and Brember (1997), Reynolds et al. (2001), and Schweinhart (2003) found significant improvements in student achievement and reductions in need for remediation and special education services, by using a longitudinal study.
Some research studies found long-lasting benefits that result from the student having participated in a preschool program, which includes improved reading ability, high school graduation, pursuit of higher education, increased earnings, less chance of criminal behavior, and closing of the achievement gap. Daniels (1995) and Davies and Bremer (1997) both supported the long-lasting effects of reading achievement with the results of their studies that showed significantly higher and stronger reading attainment among the students who attended preschool programs.

Another educational benefit that researchers had hoped to discover as a result was that of improved motivation in school; since motivation leads to academic success (Schweinhart, 2003). The longitudinal studies of Reynolds et al. (2001) and Schweinhart (2003) both show that as a result of having had preschool experience students had stronger motivation in school and higher graduation rate from high school. Furthermore, the student acquiring stronger literacy skills and increased reading achievement, as a result of their preschool education, enhanced their motivation in school and it “enables them to increase their highest level of schooling” (Schweinhart, 2003, p. 6). The students’ motivation and success in school was another educational benefit that Daniels (1995) was able to document that “children who had received nursery (preschool) experience achieved higher scores in both standard assessment tasks and teacher assessments in all subjects” (Daniels, 1995, p. 8).

Further support for early childhood programs has been found in brain research studies and has often been used by advocates to offer credibility to their stand. In 2006, Freeley, then president of Association for Supervision and Curriculum Development (ASCD), in her proposal of “what we know” about early childhood education stated that
“we know more than ever about how the brain works and have a solid research foundation on which to base education decisions, create practical classroom applications, and develop brain-compatible teaching strategies” (p. 4). Freeley (2006) further explained that we should “utilize what we know from brain research to model teaching strategies that accommodate individual learning styles and meet the multidimensional needs of the whole child” (p. 5).

Social and emotional skills. Some arguments against more extensive early childhood programs stated that young children’s development cannot be standardized within longer or more intensive academic experiences (Kagan & Scott-Little, 2004). Many early childhood education advocates praised preschool programs not for the academic gains that children could make but for the group and social skills that they could acquire. King’s and Elkind’s work (as cited in Lester, 2007) supported the premise that children may be developmentally ready for the academic things but the real focus should be to “learn the social skills that are prerequisites for formal education” (p. 45). Mead (2008) also supported early childhood programs with a primary focus on socialization by stating “schools often focus on academic skills, but research suggests that the social and emotional development that occurs -- learning self-control, sticking with difficult tasks, resolving conflicts verbally rather than by force -- is just as important, if not more important, to future school achievement as academic content” (p. 28). Although the development of social skills has been of equal if not greater importance for young children, academic skills have often been more easily documented through concrete data. Thus many researchers have continued to utilize academics as
their primary focus so they have results that they can show to powerful decision-makers, such as state education officials and state legislators.

Additional support of socialization skills is provided in Elkind’s work (as cited in Lester, 2007) that highlights the types of learned behaviors that lead to academic success, “toddlers need to learn only three things before entering Kindergarten, and they’re all socialization skills: listen to adults and follow instructions, complete simple tasks on their own, and work cooperatively with other children.” (Lester, 2007, p. 45.)

**Long-lasting benefits.** Long-lasting effects that were documented from students having had preschool experience include higher rates of high school graduation and higher participation in post-high school education. Schweinhart (2003) asserted because those students demonstrated improved motivation in school that “also enables them to increase their highest year of schooling, which leads in adulthood to higher monthly earnings and less chance of being arrested for criminal activities” (Schweinhart, 2003, p. 6). The documented benefits of the students’ increased success in school and increased motivation in school often resulted in improved behavior in school and less disciplinary problems that might have cost time out of school for suspensions or expulsions.

Likewise, Schweinhart in his longitudinal study, found that the students who had participated in a preschool program “significantly outscored the no-program group on: a) a test of general literacy at age 19 and . . . age 27; b) a school achievement test at age 14 and its reading, language, and arithmetic subtests; and several intellectual and language tests given from after the first preschool year and up to age 7” (Schweinhart, 2003, p. 4).

Additional long-lasting benefits for the students who had attended preschool programs were increased earnings and less chance of criminal behavior. Reynolds et al.
(2001) identified the “largest categories of public benefits were increased tax revenue associated with higher expected earnings capacity (28%), criminal justice system savings due to lower rates of arrest (28%), savings on tangible costs for crime victims (24%), and savings on school remedial services (18%)” (p. 2). Schweinhart (2003) agrees in his analysis that “increased taxes (were) paid by preschool-program participants because they had higher earnings” and court records showed significantly fewer arrests for those students than the no-program group (p. 5.)

Benefits to Society

**Economic benefits.** Another result determined by the research studies was the benefits to society that result due to the students’ participation in a quality preschool program over students who did not participate. Reynolds et al. (2001) discussed the 40% reduction in the students’ need for grade retention and both Reynolds et al. (2001) and Schweinhart (2003) highlighted the 41% reduction and less-than-half showing a need for remediation and special education services, respectively.

Another benefit to society was that of increased earnings for the preschool program participants. Masse & Barnett (2002) completed a benefit-cost analysis and looked at the Carolina Abecedarian Project in North Carolina that provided intensive preschool programs to children in low-income families in the early 1970s. Increased earnings and the greater purchasing power that accompanies a higher income were documented as a long-term benefit for the preschool participants as well as the increased/projected tax revenues due to the higher income level (Masse & Barnett, 2002). Likewise, Barnett (1995) in his review of 36 studies of programs that provide early childhood care and education supported the long-term positive benefit for the
preschool program participants in the form of greater adult economic success, which could also result in increased taxes paid because of their higher earnings.

Additional support of the benefit of reduced expenditures to society over the lifetime of the participants of the preschool program over non-participants was provided by Schweinhart (2003) who documented that significantly fewer program participants received welfare assistance or other social services as adults as compared to the non-participants; program participants also averaged significantly fewer arrests than non-participants. This data was included in the cost-benefit ratio calculations in the form of monetary benefits “saved by the potential victims of crimes never committed, reduced justice system costs, and reduced welfare costs” (p. 5). Reynolds et al. (2001) also documented the economic benefits to the general public in the form of “criminal justice system savings due to lower rates of arrest (28%) and savings on tangible costs for crime (24%)” (p. 2).

Other economic benefits of the preschool programs were attributed to the parents of the children participating. With their children experiencing increased success academically, financially, vocationally, and emotionally as evidenced by improved behavior and motivation in school, the mothers could have the opportunity to “reallocate their time to allow them to establish better, longer-term, and more productive relationships with employers” (Bracey and Stellar, 2003, p. 783). Being able to improve their work status and career aspirations, the parents would also realize benefits through an increased financial well-being and improved life style. As a result, they would also be more likely to be a positive role model and to make a significant positive impact on the lives of their children.
Other cost-benefit analyses. The cost-benefit analysis of preschool education has been researched and discussed many times to highlight the benefits to society and the return on its investment that would result from investing in quality early childhood education for children. Bracey and Stellar (2003) focused on three preschool programs that on the outset appeared to be costly when compared with Head Start and even private preschool programs. However, upon analysis of the Abecedarian Project, they found a “benefit-cost ratio for the program was 4 to 1” which showed that “society received four dollars in return for every dollar invested” (pp. 782-783). Bracey and Stellar (2003) further analyzed that this ratio was not as high as those found for the Perry and Chicago projects which “yielded benefit-cost ratios on the order of 7 to 1” (pp. 782-783).

National Association of Elementary School Principals (NAESP), in its October 2005 newsletter, proposed more support for society’s investment in preschool education and discussed the long-term outlook. “A report by WestEd estimates that a national commitment to investing in high-quality early childhood program would ‘initially cost about $19 billion a year; but that in less than 20 years all levels of government would see the financial benefits’ (and) within 30 years, the reports indicate, the benefits ‘would double the costs’ of investing in program” (NAESP, 2005, p. 2).

In the WestEd report, Lynch (2005) proposed a national preschool program for all three- and four-year-olds living in poverty (20% of the population at that age) at the cost of about $12,000 per participant, patterned after the quality of the Perry Preschool Project. Lynch proposed that the preschool program would serve 1.6 million children at about $19.4 billion and then he estimated a cost-analysis projected out to the year 2050. He has calculated the positive economic effects and found that for the first 16 years of the
program annual costs would exceed budget benefits but on a continual decline. The
government budget benefits considered were: 1) lower educational expenses due to less
grade retention and less remedial or special education expenses, 2) lower criminal
justice costs, 3) higher incomes and ability to pay more taxes, and 4) reduced welfare
costs for students and families (Lynch 2005). Lynch (2005) further projected that after
16 years the deficit would turn into a surplus that would grow each year, which could
culminate in a net surplus of $167 billion in 2050 (p. 5).

Lynch (2005) also described the total benefits of this national preschool program
and not only the benefits to participants but also to society and the government by citing:

A Federal Reserve Bank of Minneapolis study (Rolnick & Grunewald, 2003)
determined that annual real rates of return on public investments in the Perry
Preschool Project were 12% for the non-participating public and government, and
4% for the participants, so that total returns equaled 16%. (p. 3)

Lynch (2005) further projected that the increased earnings of the preschool participants
could help in financially sustaining public retirement benefit programs, such as Social
Security, and potentially improving the chance that future generations escape poverty.

**Funding of Preschool Programs**

Within most conversations about implementing a quality preschool program, there
has been agreement on most considerations, i.e., the benefits to children, the service to
families and communities, and the positive impact of involving parents and families.
Current literature has explored potential funding opportunities since the main determinant
of whether discussions of creating a preschool program have continued and come to
fruition usually has been the source(s) of funding.
Gayl et al. (2009) found in their Title One research, there were three model districts: Chicago, Illinois; Montgomery County, Maryland; and Hamilton County, Tennessee. The Chicago Child-Parent Centers (CPC) program used Title One funds and has been the oldest and most-researched with children’s eligibility for the program determined by their residence within a Title One school’s attendance area. Their investments were found to be cost-effective and produced impressive results in that participants in the CPCs outperformed the non-participants in reading and math achievement and “had consistently lower rates of grade retention and special education placement” (Gayl et al., 2009, p. 4).

Maryland’s Montgomery County Public Schools (MCPS) offered the Title One schools additional federal funds to expand existing half-day Head Start programs to full day and found that “children who attended the full-day program made significantly larger gains in reading skills and some gains in math” (Gayl et al., 2009, p. 4). The results showed more significant gains for female and Hispanic students and for students receiving English for Speakers of Other Languages (ESOL) services (Gayl et al., 2009). Gayl et al. (2009) also discussed the Hamilton County School District in Chattanooga, Tennessee that utilized Title One funds and state preschool funds to offer a full-day early childhood program in school and community-based settings. Attendance requirements included the students who live within a Title One school zone and “preference is given to children who score low on the district’s screening instrument or whose school is on notice with the state’s Department of Education as not having made significant gains on standardized test scores” (Gayl et al., 2009, p. 5).
The states that have worked through the funding process of how to begin their preschool program and how to continue to fund their program have most likely assimilated a combination of state, federal, and local monies. To begin their preschool program, Oklahoma established theirs as a part of the state funding formula; Illinois began theirs with state funding; and Georgia began theirs with funding from the lottery (Ackerman et al., 2009).

Houtz (2005) also examined some of these states’ current funding sources and found that Georgia now combines funding through a public-private partnership while California allots about $800 million per year from tobacco taxes into early education. Ackerman et al. (2009) explained that after beginning their preschool program through legislation that established the Florida Partnership for School Readiness, Florida now has had the Partnership overseeing the regulations for programs but funding is passed on to county-level coalitions. Due to limited funding, many states have had to make choices and sacrificed some quality in their preschool programs (Barnett, 2005). NIEER’s research (2008) found that “in most states the level of funding per child reported from all sources appears to be too low for programs to meet all ten benchmarks for quality standards” (p. 4).

Other than public and grant funding sources for preschool education, Houtz (2005) discussed Washington’s program that was started from the Bill & Melinda Gates Foundation which pledged up to $90 million over ten years. The Gates Foundation had not initially planned to focus its efforts on pre-kindergarten but had first begun by investigating ways to help at-risk youth (Houtz, 2005). The need for quality preschool education became evident with finding that only one in four children attending the
lowest-income schools were ready for school in kindergarten and that the “quality of early-learning programs is uneven at best, and access to the best programs is unequal” (Houtz, 2005, p. 3).

Differences have existed between public schools that are successful in implementing a quality early childhood program and those that are not. The National Institute for Early Education Research (NIEER, 2008) asserted that securing sufficient funding is crucial to providing children with a high-quality education but in today’s economic climate with budget limits and deficits school districts are even more challenged in trying to initiate or maintain a quality program. In analysis of the 2008 data on state spending on preschool programs, NIEER found that “despite incomplete data for some states, we estimate that at least 17 of 38 states spend enough money to meet all 10 of NIEER’s quality benchmarks” (p. 13).

**Characteristics of Quality Programs**

Characteristics of early childhood education programs and the definition of high-quality programs have been interpreted in many variations as they are determined in the implementation of early childhood programs. Barnett (2005) identified the *Ten Benchmarks for High-Quality Preschool Education* established by the National Institute for Early Education Research as:

1. Curriculum standards
2. Teacher degree requirement
3. Teacher specialized training requirement
4. Assistant teacher degree requirement
5. Teacher in-service requirement
A primary characteristic of preschool programs addressed in the research studies was that of the curriculum and instruction delivered in the preschool program, which has appeared to be as varied as the number of programs that have been implemented. With a focus on the whole child, Freeley (2006) has proposed that “the goals of early childhood education should include helping children to make decisions, solve problems, and get along with others” (p. 4). She further stated, “early education for the whole child cannot be reduced to teaching facts and skills” (Freeley, 2006, p. 4). Bracey and Stellar (2003) through their analysis of the three studies scrutinized the curriculum and instruction and found that in the High/Scope Program “the curriculum and instruction flowed from both constructivist and cognitive/developmental approaches” (p. 781). This differed greatly from the curriculum of another program that utilized Direct Instruction “to impart specific bits of knowledge through rapid-fire drill and highly programmed scripts” (Bracey & Stellar, 2003, p. 781).

Another issue related to curriculum and instruction was that of the absence of common early learning standards. Although the field of early childhood education has had program standards for many years and “has welcomed general descriptions of developmental domains, specifications of learning or outcomes that could be attached to
high-stakes assessments have been resoundingly rejected” (Kagan & Scott-Little, 2004, p. 389). State policy makers that have advocated for common standards and accountability in K-12 education have begun to request the same for state-supported prekindergarten programs (Kagan & Scott-Little, 2004). Many experts in early childhood education have resisted attempts to adopt common early learning standards to hopefully avert related attempts to subject preschool children to assessments that will be utilized as accountability measures. Despite this resistance, Kagan & Scott-Little (2004) explained that as of May 2002 40% of the states had officially adopted early learning standards with very little common ground. Kagan & Scott-Little (2004) further asserted that “early learning standards specify what young children should know and be able to do (and) are designed to apply to children from ages 3 to 5 years old” (p. 390). They further analyzed the adopted state standards and compared them to five developmental domains of early learning standards “identified by the National Education Goals Panel (NEGP): physical and motor development, social and emotional development, approaches toward learning, language and literacy, and cognition and general knowledge” (Kagan & Scott-Little, 2004, p. 391.) According to their analysis, they found that the most commonly addressed domains in priority order were: language and literacy, cognition and general knowledge, and social and emotional development (Kagan & Scott-Little, 2004). They further proposed the challenges ahead for the early learning standards movement that are related to the young children, the content, the intentions, alignment, pedagogy, and the programs and the early childhood system (Kagan & Scott-Little, 2004, p. 393-394).
Other Measures of Quality

An alternative method of determining quality, as proposed by Bracey and Stellar (2003) has been that of categorizing and identifying the characteristics of high quality programs as “low child/teacher ratios, highly qualified and well-paid teachers, intellectually rich and broad curricula, parents engaged as active partners with the program, and starting dates at or before the child reaches age 3” (p. 782). Gill (2007) reiterated the importance of certified teachers in that “the National Institute for Early Education Research (NIEER) contends degrees are necessary” and that “children in classrooms taught by teachers with bachelor’s degrees play more imaginatively and creatively and score higher on language tests” (p. 8).

Still another opinion of quality in early childhood education has occurred on a more global scale. “The age of quality is now well and truly upon us, and not just in relation to early childhood institutions, but every conceivable type of product and service” (Dahlberg, Moss, & Pence, 2007, p. 4). Wherever we look “people are seeking answers to the same questions: What is quality? How do we measure quality? How do we assure quality?” (Dahlberg et al, p. 3) Quality matters in today’s world, especially when we are considering the care and education of our young children and for the most part, “quality remains a challenge, something to be achieved, rather than a problem, something to be questioned” (Dahlberg et al, p. 3).

Many experts in early childhood education have attempted to define quality for us and we find that “we are constantly being offered solutions, before we have asked the critical questions” (Dahlberg et al, p. 6). All discussions about early childhood education should not start with what the program needs to look like, but should “start with the child,
How do we construct the young child and early childhood? What is our understanding of who the young child is, can be, and should be?” (Dahlberg et al, p. 7) From these questions we should hopefully come to a positive view of the child, which “produces a rich child, active, competent and eager to engage with the world” (Dahlberg et al, p. 7). Next we can begin with questions about early childhood education and programs. “What are their purposes? What do we think they are for?” (Dahlberg et al, p. 7)

Dahlberg and others (2007) continued a discussion of the construction of the child and early childhood as often being determined for them by adults and what they believe children are and what they should be. Per Dahlberg and others, the constructions of the young child that are most common are the following:

- The Child as Knowledge, Identity, and Culture Reproducer
- The Child as an Innocent, in the Golden Age of Life
- The Young Child as Nature . . . or as the Scientific Child of Biological Stages
- The Child as Labour Market Supply Factor (Dahlberg et al, pp. 43-47).

These constructions of the child seem to propose a view of “a ‘poor’ child, weak and passive, incapable and under-developed, dependent and isolated” (Dahlberg et al, p. 48). Instead of this construction much of Europe has been in the process of rethinking children and childhood with “The Child as a Co-constructor of Knowledge, Identity, and Culture” and as seen by Reggio Emilia, “the idea of ‘the rich child’ and that ‘all children are intelligent’” (Dahlberg et al, p. 48-50). In this construction of the ‘rich’ child, learning can be described as the following:
• Activity in which children construct knowledge, make meaning of the world, together with adults and other children

• “Rich” child is engaged actively with the world; he or she is born equipped to learn and does not ask or need adult permission to start learning

• Young child is understood and recognized as being part of, a member of, society (Dahlberg et al, p. 50).

In the thinking and work in Reggio, “relationships -- between children, parents, pedagogues and society -- are at the centre of everything they do, viewing the early childhood institution as ‘an integral living organism, a place of shared lives and relationships among many adults and very many children’” (Dahlberg et al, p. 59). In this understanding, the early childhood institution has taken on a different form to conform to the image of the ‘rich’ child and allows experiences for the child like the following:

• Communication is the key to children’s learning

• Child is seen as an active interacter, not a passive receiver

• ‘Pedagogy of listening’ -- listening to the ideas, questions and answers of children, and struggling to make meaning from what is said, without preconceived ideas of what is correct or valid

• Time is not organized by the clock, but according to children’s own sense of time, their personal rhythms and what they need for the projects on which they are working (Dahlberg et al, p. 59-60).
In an early childhood institution, children and adults “can engage together in projects of social, cultural, economic and political significance” (Dahlberg et al, p. 61).

In comparison to this view of the ‘rich’ child and the early childhood institution is the perspective of Vygotsky, which has been more prevalent in the United States, and follows the belief “that in the preschool years, children need to acquire a set of fundamental cognitive, linguistic, and social-emotional competencies that shape their minds for further learning, not just academic learning, but all learning” (Bodrova & Leong, 2005, p. 44). Vygotskians have believed that through explicit instruction by parents or teachers, children will acquire the skills of “oral language, deliberate memory, focused attention, and self-regulation” (Bodrova et al, p. 44). From this perspective, the major goal of preschool programs “for the whole child is to transform a child who is wholly reactive into one who is wholly intentional” and help the child “move from reactive thinking to the ability to think before they act” (Bodrova et al, p. 45).

Vygotskians have further believed that early childhood teachers can “foster the development of self-regulation in three ways: by helping children develop mature intentional play, by modifying existing activities to support cognitive skills, and by minimizing or eliminating activities that are counterproductive to developing such skills” (Bodrova et al, p. 46).

**Successes of Preschool Programs**

Some recent publications have focused on the definition of quality early childhood education and preschool programs and the successes they have realized. In her discussion of high-quality preschool programs, Mead (2008) highlighted the importance of articulation and states that there must be “a clear vision of high-quality early
education, starting in pre-K and continuing through third grade” (p. 29). Phillips’ research (as cited in Davis, 2009) further explored what constitutes high-quality programs and emphasizes the importance of the teacher and the quality of the child-adult interactions and “suggests that the quality of the early care environment has a significant impact on cognitive, language, and social development; children who have the most supportive and stimulating one-on-one interactions with the care provider (what Dr. Phillips terms ‘high quality care’) demonstrate more advanced development” (p. 1).

To ensure high quality in current preschool programs, one should look to the forerunners in early childhood education and not reinvent the wheel but capitalize on their successes. Perkins-Gough (2007) in an interview with Edward Zigler, one of the designers of Head Start, highlighted that Zigler promotes building on success with the “two great achievements in the design of Head Start. First, the program emphasized social and emotional development. It emphasized health, comprehensive services, and social services to families. Our second victory was to introduce parent participation” (p. 10). Zigler further shared with Perkins-Gough that current studies, i.e., the National Impact Study and a study through Washington University, have drawn the conclusion that dollars spent on Head Start are worthwhile (Perkins-Gough, 2007).

Since school districts are implementing preschool programs, those preschool programs are finding a home in elementary schools. Because of that, elementary principals are finding that they need to learn more about early childhood education programs. A void that has become evident in the literature and a topic for future study is that of exploring and advocating for efforts to include information on early childhood education in principal preparation programs. Because school districts that implement a
preschool program find a place for their program in elementary schools, we need to ensure that elementary principals are equipped to support their youngest learners. Shore, Shue, and Lambert (2010) found in their case study that “in North Carolina, over 700 elementary schools housed preschool classrooms in the 2009-2010 school year” (p. 32). They further found through the results of a survey to principals the following:

- A vast majority of our 174 principal respondents were in favor of having preK students on their campuses.
- A significant majority, 88%, reported that they had no training in their principal preparation programs that addressed administering a preschool program.
- All had training at or above a master’s degree, but only 9% had ever worked with preschoolers before becoming principals.
- Thirty-five percent were unaware that North Carolina had adopted preschool standards . . . and 53% did not use the document to make curricular decisions. (Shore et al, p. 32.)

The importance of the principal as the instructional leader has been documented over and over as being a key component of increased student achievement and continual school improvement. In a discussion of the impact of good principals, Ron Edmonds was quoted as saying, “There may be schools out there that have strong instructional leaders, but are not yet effective; however, we have yet to find an effective school that did not have a strong instructional leader as the principal” (Jessie, 2007, p. 1). Knowing the importance of principals as instructional leaders should impel us to ensure that they receive the scope of preparation necessary to promote the success of every child. If
elementary principals will be supervising preschool programs in their buildings, then they need preparation programs that equip them with the knowledge and skills needed to lead quality early childhood education programs. Shore, Shue, and Lambert found that not only are principals willing to take preschool programs under their wing but they also recognize the need for their own related professional development, i.e., “when asked if they thought that principal preparation programs should include information on early childhood education, 88.46% responded ‘yes’” (p. 34). If principals themselves recognize this as a void in their preparation programs, then certainly future study is warranted in including the support of early childhood education in principal preparation programs.

Public schools can and have implemented quality preschool programs with a great deal of success as evidenced by 1,400 public schools across the country at the end of 2007 that were successfully maintaining a preschool program as part of the 21st Century initiative (Perkins-Gough, 2007). Mead (2008) gave an example of the PK-3 reform approach in Deep Creek Elementary School in Baltimore County Maryland, which in 2001 was ranked one of the lowest in the county’s elementary schools, with its third graders reading at a first-grade level. Six years later, after the principal and teachers had “aligned reading and math curriculum from pre-k through third grade and offered summer learning and after-school programs for struggling students, nearly three-quarters of its students read on grade level” (Mead, 2008, p. 29).

**Universal Preschool**

Besides successes and achievements of early preschool programs, one should also ascertain what was not achieved so as not to repeat the same mistakes. In the Perkins-
Gough (2007) interview, Zigler shared a lesson learned that he now supports the idea of providing universal preschool rather than the focus of Head Start of directing all efforts to only poor children (Perkins-Gough, 2007). He explained that he now agrees with John Merrow who asserted that Head Start was a failure because “Head Start has been alive for 42 years and is only serving 50 percent of eligible children” (Perkins-Gough, p. 12). Zigler further explained that although research shows there are bigger benefits in targeting preschool for poor children than the results one might see in middle-class children, the problem that exists in a targeted program is that one “never get(s) funding to serve all the children who need it” (Perkins-Gough, 2007, p. 12). He proposed that the reason it does not get funding is that people in poverty cannot make contributions to political campaigns and that legislators listen to people with money and power (Perkins-Gough, 2007).

Much of the current literature on preschool education has discussed universal preschool and many politicians have promoted ‘preschool for all’ on policymakers’ agendas. Ackerman, Barnett, Hawkinson, Brown, and McGonigle (2009) compared the efforts and lessons learned of six states, Florida, Georgia, Illinois, New York, Oklahoma, and West Virginia, which have been at the forefront in providing preschool education for all 4-year-olds and proposed that other states should take instruction from them before beginning their own journey. “The lessons these states offer include taking advantage of the larger K-12 educational context as a means for moving policy agendas, the importance of capacity for program expansion, and the value of having time to both plan ahead and review how programs might be improved” (Ackerman et al., 2009, p. 19). Davis (2009) discussed specifically the experience of Oklahoma as one of the first states
to offer a preschool for all program in their public schools and who have some of the highest participation rates, “between 60 and 70 percent of all four year olds attend preschool” (p. 2). The National Institute for Early Education Research (NIEER) in its report, *The State of Preschool 2008*, updated the preschool participation rate for Oklahoma as nearly 90% of the 4-year-olds who are receiving a free public education. The research by NIEER (2009) also shows that in 2007-2008 more than 80% of all of the four-year-olds in the United States were attending some kind of preschool program with half in public programs, state pre-K, Head Start, or special education, and the other half in private programs.

With these six states, Florida, Georgia, Illinois, New York, Oklahoma, and West Virginia, pioneering universal preschool programs, the rest of the states could benefit from their lessons learned in their planning and implementation of their own program. One of the primary considerations in planning for a universal preschool is the funding of the program (Ackerman et al., 2009). Zigler (as cited in Perkins-Gough, 2007) discussed the appropriateness of starting a state-funded preschool for low-income children, but the need to expand it to all children “if you want to get the state legislature to maintain and continue funding the program, the program has to have a constituency” (p. 12). Zigler further explained his support of the universal approach in a discussion about integrated classes stating that children benefit from learning about one another with all social classes together and “research now indicates that poor children’s education accomplishments are greater when they are in classes with middle-class children than when they are in classes only with other poor children” (Perkins-Gough, 2007, p. 12). In their comparison of the six states’ preschool programs, Ackerman et al. (2009) proposed
that the lessons learned from these forerunners should be able to allow other states to improve their programs by following these lessons: moving the policy agenda, increasing access requires creating capacity, collaborating has benefits and challenges, increasing capacity requires consistent political support and funding, and providing time and opportunities for pre- and post-implementation decision making.

Gill (2007) also advocated for universal preschool and discussed that “most neuroscientists believe that the pre-adolescent brain should be nurtured early and stimulated frequently” (p. 1). Jay Giedd’s work (as cited in Gill, 2007), as chief of the National Institute of Mental Health’s Brain Imaging Child Psychiatry Branch, referred to “the critical stage of pre-adolescent brain development as ‘pruning’” and “a ‘use-it-or-lose-it’ hypothesis in discussing the importance of early childhood education” (p. 1). Similar to Gill’s philosophy, many early childhood advocates have believed that we are wasting a great deal of powerful potential learning time by not engaging young children in full-time formal learning experiences since most brain research shows that about 70% of an individual’s learning will occur between the ages of three and five. To further support universal preschool programs, Gill (2007) also stated that besides “scientific arguments favoring early childhood education, advocates have said it makes good economic sense to provide universal pre-K for children whose parents have full-time jobs and leave their toddlers to the care of non-educators” (p. 1). Thus, most early childhood advocates have understood and promoted quality early childhood education programs as a means to increase and improve student achievement. Indiana’s Education Roundtable (2003), in Indiana’s P-16 Plan for Improving Student Achievement, proposed that the state’s next steps should be to provide high quality programs that ensure young children’s
readiness for school and make high quality kindergarten available for every child. Unfortunately several years later, the state leadership has continued to discuss whether full-day early childhood programs are a good investment of state dollars for children.

Many states have continued to discuss whether they can begin a universal preschool program and often their discussions focus on funding versus quality (Barnett, 2005). Although funding is of primary importance in establishing a program of high quality, NIEER (2008) found that six state-funded programs that did not sufficiently fund their pre-K programs met eight or more NIEER benchmarks which included “Alabama and North Carolina, the two states that meet all 10 NIEER benchmarks” (p. 14). In looking toward the future, “the president’s FY10 budget request included $12.6 billion in Title I resources with a specific set-aside of $500 million for state matching grants to districts that use Title I funds to launch or expand high-quality pre-k and other early childhood programs” (Gayl et al., 2009, p. 6). Even though the Secretary of Education and the administration have initiated policies and proposals with a new commitment to support early education, Congressional committees rejected the specific set-aside for pre-k but would see the issue again in the next budget cycle and in legislation to reauthorize the Elementary and Secondary Education Act (Gayl et al., 2009).

With the well-documented benefits of a quality preschool education and its cost-effectiveness as a school reform strategy, the need to implement statewide universal preschool programs has not gone away but has continued to be a topic of discussion. Current literature has shown that high-quality preschool programs return benefits to taxpayers from reduced special education placements, high school dropout rates, and crime rates and that “new developments in neuroscience and child development research
demonstrate that young children can learn far more than we previously realized” (Mead, 2008, p. 29). Zigler, in his interview with Perkins-Gough (2007), discussed the concern that the United States has no system to standardize early childhood education like other industrialized countries have. He also asserted that with no system the U. S. is compromising children’s readiness for school in that 35% of U. S. children show up not ready for school but with “poor kids, that’s probably close to 50 to 60 percent” (Perkins-Gough, 2007, p. 13).

Through the review of literature, there were more proponents of Preschool for All or Universal Pre-Kindergarten discovered than programs that are targeted only for the disadvantaged children. The prevailing opinions were that the problems associated with lack of preschool education are common to both low-income and middle-class students and the benefits of preschool education multiply advantages for both socioeconomic levels also. Barnett and Hustedt shared that “problems that we tend to associate with students from low-income families -- grade retention and high dropout rates, for example -- are more common among middle-class students than we often assume.” They further proposed that providing high-quality preschool programs could “reduce such problems for middle-class students by 25 to 50 percent, again saving taxpayers’ money in the long term” (Barnett et al, p. 55).

Gormley (2005) shared that “the beauty of UPK (Universal PreKindergarten) is that it benefits everyone, while helping disadvantaged children the most” (Gormley, p. 249). He further cited that “Nobel laureate James Heckman has noted, early childhood education programs do a better job of fostering human capital than job-training programs, tax incentives, and other programs that focus on adults” (Gormley, p. 249). Finn (2010)
also discussed Pre-Kindergarten and cites “economist James Heckman, who argues that this is a fundamental national strategy for building human capital, enhancing workforce productivity, and reducing welfare costs” (Finn, p. 15). Smith also shared that the “Committee for Economic Development (CED) came out with a strong endorsement for high-quality universal early education programs.” She further cited that “a group of leading economists, brain scientists, and child development experts reviewed recent research on early education programs for low-performing students and decided that early childhood education is probably one of the best public investments a state can make” (Smith, 2004, p. 39).

Related to the advocacy for Preschool for All, has been the support given to preschool as a cost-effective intervention to closing the achievement gap and increasing student achievement. Gormley again supported Universal Prekindergarten in his comments that although disadvantaged children may reap more benefits than advantaged children, disadvantaged children may also benefit more from the presence of advantaged children in the classroom” (Gormley, p. 249). He further offered that “universal programs are less vulnerable to budget cutbacks than means-tested programs” (Gormley, p. 249). Doggett (2010) shared that PreK-for-all will provide a considerable return on investment with the example of California, which would show a return of $3 for every dollar invested and Pre-K for all U. S. children would yield $8 for every dollar spent (p. 9). She further indicated that “state policy makers believe that PreK is the first step to education reform and a key strategy for turning around underperforming schools” (Doggett, p.10). She also discussed the progress made in state support over the last decade with access to PreK that has increased to over 60% and that “the number of states
meeting eight or more of the 10 National Institute Early Education Research Benchmarks for quality has increased from 5 to 18” (Doggett, p. 10).

The current rate for implementation of universal preschool in the United States has been the most favorable growth rate that could be expected based on past experience at about 100,000 children per year, but “it will take another 20 years for the United States to achieve universal access for four-year-olds” (NIEER, 2008, p. 9). Young children that live in one of the eleven states that currently have no preschool program (Arizona, Hawaii, Idaho, Indiana, Mississippi, Montana, New Hampshire, North Dakota, South Dakota, Utah, and Wyoming) could waste a great deal of learning potential as they wait up to twenty years for their state to join the other fifty states in offering universal preschool (NIEER, 2011).

**Closing the Achievement Gap**

Since most of K-12 education is focused on accountability and closing the achievement gap, most recent literature on preschool education has also began to address those concerns. Gayl, Young and Patterson (2009) studied Title I funds and preschool education, and they found that school districts looked at “early education as a strategy to help ensure that all children are prepared to enter kindergarten, able to achieve academic proficiency by third grade, and graduate high school” and that research shows that quality preschool programs can reduce the achievement gap between children in poverty and middle-income children (p. 2). As many K-12 educators struggle with widening achievement gaps, they might need to do a closer examination of preschool as an option since a prominent study found that children who attended preschool made gains in
vocabulary 31% higher, math gains 44% higher, and an 85% increase in print awareness, which positively impacted later reading scores (Gayl et al., 2009).

Mead (2008) showed agreement that preschool education should be seriously considered as a strategy to use in addressing accountability efforts and achievement gaps in the assertion that “state pre-k expansion has tremendous promise to improve student achievement and help narrow achievement gaps — but only if districts do their part” (p. 29). Besides the benefits of preschool in improving student achievement, Gayl et al. (2009) also emphasizes that the school districts and communities that implement Title I-funded pre-k programs realize significant economic benefits due to the anticipated “savings from decreased grade retention and special education placements, as well as the broader advantages of improved graduation rates and greater success in college and through adulthood” (p. 3). Too many school districts have continued to hunt for the quick fix to their dilemmas of declining test scores, achievement gaps, and negative accountability results. Taking a closer look at funding preschool programs might not produce immediate results but would most likely provide a more long-lasting impact than other measures.

Of utmost importance to school districts has been that of closing the achievement gap not only between different ethnic groups but also between varied socio-economic groups. Barnett (2005) proposed “if we expect to close the achievement gap that exists between advantaged and disadvantaged students, and to increase the capabilities of all our children to successfully compete for jobs in the international economy, a more cohesive national plan recognizing the role of early childhood education will be required” (p. 18).
Through the review of literature the concern was consistently raised about being able to continue the gains made by participants in preschool education through the elementary school years and beyond. Takanishi and Kauerz (2008) propose that “for low-income children, sustaining the gains made as a result of attending high-quality pre-kindergarten programs (PK) programs requires continuing to provide them with high-quality learning experiences into the elementary school years” (Takanishi & Kauerz, 2008, p. 480). With policy makers continually discussing raising expectations for all students’ achievement and closing the gap, they are now beginning to focus more attention on making investments in preparing early learners rather than having to provide remediation later on in their schooling. Long-term studies are finding that providing preschool education can result in significant gains for preschool participants, but often the gains are not sustained beyond the primary years in elementary school. Therefore future study is justified in determining if extending research into coordinating efforts and promoting multi-grade collaboration from preschool through third grade will sustain the achievement gains.

Efforts to promote full-day Kindergarten have resulted in “mandatory kindergarten “in only 14 states and District of Columbia, 40% of American children attend half-day kindergarten programs of two or three hours per day, and only two states guarantee and fund children’s access to full-day kindergarten.” (Takanishi & Kauerz, p. 483.) Likewise, efforts to provide publicly funded preschool programs have been marginally successful, i.e., in the case of “Head Start, which after 42 years is available only to about 50% of the eligible children from families at or below the poverty line.” (Takinishi & Kauerz, p. 484.) Therefore it seems that we need to begin to look at
combining efforts to provide quality early childhood programs that will prepare children from preschool through third grade that will empower them to continue their success in school.

A vision of a P-3 focus could ensure “that children experience continuous learning opportunities that bolster their social, emotional, and cognitive development” (Takanishi & Kauerz, p. 481). This focus would appear in different forms at the various levels of the education system, Takanishi & Kauerz propose for example:

- At the school level, ... transition policies to help children and families navigate the changes that occur as children move from grade to grade.
- At the district level, ... common professional development requirements for both PK teachers and K-3 teachers.
- At the state level, ... common learning standards that are informed by research about the developmental characteristics of children and that are used by all publicly funded programs (p. 481).

A need for vertical alignment of P-3 education is obvious to ensure a seamless learning experience for all children that will set them on a path of early school success that will continue through their P-16 years. “Vertical alignment refers to the linkages of standards, curriculum, and assessments across the PK-3 grade levels” (Takanishi & Kauerz, p. 484). Efforts to focus on PK-3 are gaining attention but not enough to impact the change needed, “according to the Education Commission of the States, at least 30 states have P-16 plans (but) no state has systematically initiated PK-3 yet and full implementation of these plans is virtually absent” (Takanishi & Kauerz, p. 485).

Doggett also stresses the importance of these efforts stating that “without a robust early
education strategy to promote greater access, higher quality, and stronger preK-through-3rd-grade alignment -- and without investments to support these activities -- we will never close the achievement gap” (Doggett, p.11). Therefore the emphasis on P-3 education for future research is wide open and equipped for success.

Quality in Kindergarten

Discussions in K-12 education and among state legislators have occurred repeatedly over the past several years regarding full-day kindergarten versus half-day kindergarten and whether the research supports the extra learning time and increased expense (Plucker et al., 2004). These discussions and related research have been similar to the research pertaining to preschool programs and early childhood education. One of the most extensive full-day kindergarten studies was *The Early Childhood Longitudinal Study* conducted by the National Center for Education Statistics (NCES). It targeted 22,000 Kindergartners nationwide and tracked a sample of 1998 kindergartners through the fifth grade, both in public and private schools (NCES, 2003). The study found that full-day kindergarten students make greater gains in reading than those children who attend for a half-day program and showed “slight but significant” differences in other related skills (NCES, 2003, p. 18). The largest gains, respectively, for the full-day students were found to be in the following activities: read aloud, read silently, read student-chosen books, and work on a reading sheet (NCES, 2003). The lesser gains, in order from most to least, were: discuss new vocabulary, read from basal text, work on phonics, and learn letter names (NCES, 2003). The most encouraging results of this study were that full-day students were making greater gains in their individual application of the reading skills rather than showing large gains in the isolated skills that support
reading. These student gains could be related to the extra half-day of school time that they were able to spend on small group and individual engagement in the act of reading self-selected books of interest as opposed to the adult-selected text in large group.

In a related study of full-day versus half-day kindergarten in Indiana, Plucker et al. (2004) from the Center for Evaluation and Education Policy highlighted that:

The added time in a full-day program fundamentally changes the nature of activities that occur in that program. Not only do teachers tend to do more in full-day programs, they tend to do more of the instructional strategies that researchers recommend to promote young children’s learning. (p. 31)

Similar to the NCES study, this indicated that when early childhood teachers were not pressured with a list of skills that must be taught or presented to the students in a specified time they were more able and likely to allow the children the time to apply those skills in real reading and also introduce them to the love of reading.

On the other hand, most school districts have not experienced as much success in trying to establish quality early childhood programs, even full-day kindergarten. As an example, Murray (2005) highlights the state’s largest district, Indianapolis Public Schools, as having some full-day kindergarten classrooms paid for by grants, federal money and the district budget but that results in serving “only 38 percent of the district’s kindergarteners” (p. 2). Since regular state funding pays for only a half-day program for every kindergarten student in Indiana, some districts have been creative in funding their full-day program. Murray (2005) reported that “in Carmel Clay Schools, more than half of the kindergarteners are in full-day programs backed by a mix of federal, state and district money and parent fees” (p. 2).
Summary

This review of literature has researched several studies that have shown long-term benefits to students and benefits to society when preschool participants are enrolled in a high quality early childhood education programs. Some studies have offered alternative definitions, methods of determining quality, and characteristics of quality early childhood education programs. Studies have also identified sources of funding preschool programs, successes of preschool programs, and efforts to provide universal preschool to all young learners.

Still other studies have focused on early childhood education programs as an intervention effort to address closing the achievement gap. Related to efforts to provide quality preschool programs have been efforts to also provide full-day kindergarten to attempt to build a solid foundation for children in the early grades to achieve success in school. Research studies have highlighted the positive effects of providing a quality preschool with a smooth transition to full-day kindergarten and continued efforts to align PS-3 education for children.

The state of Indiana has been one of the eleven no-program states, identified by NIEER that not only has no universal preschool program but also has failed to provide full-day kindergarten for all children. School districts in Indiana have often struggled as they have tried to implement early childhood education programs on their own. Many have felt like Center Grove School Corporation that they are “at the heart of one of Indiana’s critical education shortcomings: the failure to do more to boost learning for children ages 3 to 6, before they enter first grade” (Murray, 2005, p. 1). This study has examined the efforts of those Indiana school districts, specifically small and mid-sized
school districts, that have implemented early childhood programs, identified benefits to students and to the school district, attempted to determine how they are funding their programs, and ascertained the efforts they have made to provide a high-quality program for their young children.
Chapter 3 -- Methodology

Introduction

Early childhood education programs, whether in the form of preschool or full-day kindergarten, have not been identified and utilized as an effective intervention for increasing student achievement. Even though the benefits have been researched and documented many times, discussions about utilizing early childhood programs to increase student achievement have not occurred as expected.

The original questions drafted as the research questions were deemed not appropriate for the scope of this study. Therefore, the research questions to be addressed in this study were reworded and are as follows:

1. What benefits related to student achievement does an investment in preschool and/or full-day kindergarten programs show for students and for a school district?

2. What means of funding do school districts utilize to implement an early childhood education program?

3. What characteristics do successful early childhood education programs possess, as determined by school district administrators?

Description of the Sample

The researcher identified a sample of 164 small and mid-sized Indiana school districts with total student enrollments of less than 5,000 students to survey regarding
their implementation of early childhood education programs. The sample of 164 small and mid-sized school districts were identified through the Indiana Department of Education website. (www.doe.in.gov) Through research on the Indiana Department of Education (IDOE) website, data was available on all school districts in Indiana including name of district and schools, grade levels, enrollment by grade, total enrollment, name of superintendent, and contact information. Through further investigation on the IDOE website, more demographics and information was available on school districts including the type of geographical area, student performance, attendance, and accountability data.

To first determine the total population for the study, 187 school districts with a student enrollment of 5,000 students or less were identified from the IDOE website. Then the sample of 164 school districts was selected from the population by eliminating the districts that were described as mainly suburban in the type of geographical area, which then identified the target school districts for the sample as those described as mainly rural or small town.

Small and mid-sized school districts in small town and rural areas were selected for the sample because they often have fewer opportunities for funding than larger suburban or metropolitan districts. Budgets in small and mid-sized school districts are usually stretched thin in supporting K-12 education programs with very little or no funds to support extra programs, such as early childhood education programs. Therefore, these districts must often be more creative in obtaining funding for extra programs than some larger districts that may have more options of funding sources.
The Instrument

Survey research was selected for this study because it was the most efficient approach to obtaining information from Indiana school districts regarding the early childhood programs they have in place. The online survey was developed specifically for this study since no existing survey was found that addressed all of the concerns of this study. (See Appendix A.) The introduction to the survey specified to the respondent that the preschool program described in the survey should include any regular early childhood education/preschool program other than one designed solely for special education preschool, which is financially supported and mandated by law. Thus the responses to the questions on the survey would reflect self-made decisions about the implementation of preschool programs.

The survey was constructed to assess the quality of preschool education programs as defined by the Ten Benchmarks of High-Quality Preschool Education established by the National Institute for Early Education Research (as cited in Barnett, 2005). They are as follows:

1. Curriculum standards
2. Teacher degree requirements
3. Teacher specialized training requirement
4. Assistant teacher degree requirement
5. Teacher in-service requirement
6. Maximum class size
7. Staff-child ratio
8. Screening referral requirements
The questions on the survey were designed to assess the quality of existing preschool education programs on six of the ten benchmarks listed above, i.e., curriculum standards, teacher degree requirements, teacher specialized training requirement, assistant teacher degree requirement, maximum class size, and staff-child ratio. Additional survey questions focused on the funding sources, benefits and long-lasting benefits, presence of full-day kindergarten, and the school district and preschool program demographics, i.e., district student enrollment, district locale, presence of preschool program, number of classes in program, and the daily/weekly schedule of the program. The additional categories of questions were structured to include the benefits of preschool education programs identified through the review of literature, the variety of sources utilized for program funding, and a comparison of school district and program demographics. The scope of the questions was intended to enhance the generalizability and the potential replicability of the research.

The validity of the survey instrument was established to demonstrate that the instrument measures what it is supposed to measure. “Data are valid to the extent they depict or deal directly with the topic under consideration” (Charles & Mertler, 2002, p. 41). The means of establishing validity of this instrument was accomplished through determining its content validity, which refers to the degree to which the contents of the data-collection instrument appear to be very similar and a representative sample of the content (Charles & Mertler, 2002, p. 157). The means of establishing “content validity is determined by expert judgment” (Charles & Mertler, 2002, p. 157). The content
validity of the survey instrument for this research study was determined through the use of a panel of experts. The instrument was given to members of the panel of experts to examine the questions of the survey in establishing its content validity. The members of the panel of experts included the following:

- Dr. Nancy Brooks, Department of Educational Studies – Ball State University
- Dr. Joseph McKinney, Department of Educational Leadership – Ball State University
- Dr. Denise Seabert, Department of Physiology and Health Science - Ball State University
- Dr. William Sharp, Department of Educational Leadership - Ball State University

These panel members were selected as experts to review the content validity of the instrument due to their experience in P-12 education and working with doctoral candidates. The process of the qualitative or subjective review of the instrument was initiated by providing the panel members with a copy of the draft instrument to be reviewed. The responses of the panel members were analyzed for each question on the instrument to look for consistencies among the panel members’ ideas, which would be an indicator that a change should be made. In this qualitative review of the instrument, it was the decision of the instrument creator what should or should not be included in the instrument.

The validity of an instrument has often been considered as a more important issue than the reliability, since “a valid test is always reliable, but a reliable test is not necessarily valid” (Charles & Mertler, 2002, p. 159). Therefore if an instrument does not measure what it is intended to measure, then it does not matter if it is reliable. Through a
statistical consultation with Stephanie Juillerat, Ph.D., Executive Director of the Office of Institutional Research and Assessment at Azusa Pacific University, the determination of the reliability of the survey instrument was deemed not necessary. Since the questions on the survey were not structured to elicit opinions or attitudes from the respondents, it would be unlikely that the responses given by the survey respondents would be different from one administration to another. Because the survey questions were constructed in such a manner to collect responses based on facts, the survey instrument would be likely to have internal consistency and not need a test of reliability. The survey and the email letter to participants (in the format of a Word document) can be found in Appendix A and B, respectively. The approval of this research study by the Ball State University Institutional Review Board (IRB) can be found in Appendix C.

**Research Design**

This study was designed as survey research to collect information about early childhood education programs in small and mid-sized school districts in Indiana. The state of Indiana has been identified as one of eleven no-program states that have no state-funded preschool program (NIEER, 2011). This study has been designed to generate quantitative data, which were mostly numerical (Charles and Mertler, 2002, p.179). Survey research was selected for this study to obtain data from a cross-section of school districts in Indiana to determine how many of them currently have early childhood education programs, what benefits have been realized from the programs, what sources of funding support the programs, and what best practice characteristics are common to those programs. According to Charles and Mertler (2002), survey research would be an appropriate type of research design because the “survey tends to be broader in scope and
less personal in nature” (p. 162). The survey research design was valuable for collecting information and assessing trends.

The research project (#253630-1) was submitted for approval to the Ball State University Institutional Review Board (IRB) on June 29, 2011. The IRB application was approved as an Exempt Review on September 22, 2011. (See Appendix C.)

**Procedures**

The survey was created as an online survey through SurveyMonkey and posted on and published through the SurveyMonkey website. The cover letter was sent through SurveyMonkey as an email with an embedded link to the survey, using an email database of the sample population of Indiana school superintendents. Two follow-up mailings of the letter and survey were also sent by email, each within five to nine days of the previous mailing. The original mailing was sent to 164 superintendents of Indiana school districts, the second mailing was sent to the non-respondents, and the final mailing was sent to those who had still not responded. When the survey responses were received by SurveyMonkey, the respondents’ email addresses were blocked from being sent the survey again.

The data were stored in SurveyMonkey and kept secure since the researcher had private login information that only allowed access to the survey and the survey results upon use of the private login, protected by a password. The collection of the survey responses was tracked through SurveyMonkey as well as the responses to the questions. The responses to each question on the survey were updated in the data on SurveyMonkey as each survey response is received. The responses to each survey question were then transferred to tables and charts to begin the data analysis.
Data Collection

The data were collected through the distribution of an online survey sent through SurveyMonkey using an email list-serve of school districts. A follow-up survey was sent twice by email five to nine days after the previous mailing to the non-responding school districts. The surveys were returned through SurveyMonkey, by email to Barbara Flory, or could have been sent by mail if desired by the respondent. The demographic information collected on the surveys identified whether a superintendent or designee of a small school district or a mid-sized school district completed the survey.

The data were collected and organized into categories related to the research questions and the demographics of the school districts. Related to research question #1, the survey data that related to the benefits and long-lasting benefits provided information about the trends toward potential economic benefits/savings to the school district. Related to research question #2, the survey data that identified the sources of funding provided relevant information on the means that a school district utilized to implement an early childhood education program. Related to research question #3, the survey data that was focused on the curriculum, the degree and training of the teaching staff, and the class size provided relevant information on the characteristics of the preschool programs.

Data Analysis

The data were compiled to determine what percent of small and mid-sized school districts have implemented early childhood education programs and what form of program they have implemented, preschool (full-day or half-day) and/or full-day kindergarten. The data were further analyzed to identify the most common sources of funding for the early childhood education programs. To determine the best practice
characteristics present in the early childhood education programs, the data were compiled to identify the characteristics implemented most consistently.

The use of percentage of survey responses was adequate for partial satisfaction of the purpose of this study. The percentage of responses was adequate to show the benefits of the programs, but was not appropriate to show the actual savings or whether the programs were cost-effective or have shown a cost-savings to the school district. The percentage of responses was able to identify common sources of funding used in implementation of a preschool program. The percentage of responses was also able to identify common practices of the school district in determining curriculum, degree and training of the teaching staff, and class size, which could also be utilized to determine staff-child ratio. Further research would need to be completed to accomplish all of the purposes of this study, specifically the financial savings and economic benefits that school districts have realized as a result of the preschool programs.

**Summary**

This study was designed to assess which small and mid-sized school districts have implemented early childhood education programs, what benefits have been realized from the programs, what sources of funding support the programs, and what common best practice characteristics those programs possess. The study was designed as survey research to collect quantitative data. The survey was sent to the sample of 164 small and mid-sized school districts in the state of Indiana.

The survey was designed specific to this research study and the validity of the instrument was upheld through the review by a panel of experts. The data were collected from an online survey and the responses were analyzed to identify the demographics of
the school district from which it was completed and returned. The data were analyzed and the results were displayed in charts and tables.
Chapter 4 -- Results

Introduction

The purpose of this study was to investigate whether school districts had made an investment in preschool education as an effective intervention for increasing student achievement. The research questions that were addressed in this study were as follows:

1. What benefits related to student achievement does an investment in preschool and/or full-day kindergarten programs show for students and for a school district?
2. What means of funding do school districts utilize to implement an early childhood education program?
3. What characteristics do successful early childhood education programs possess, as determined by school district administrators?

The data collection was accomplished through the distribution of an online survey through SurveyMonkey, emailed on November 14, 2011 using an email database of small and mid-sized school districts in Indiana. Two follow-up mailings of the survey were also sent by email: the first follow-up survey was sent five days later on November 19, 2011 and the last follow-up was sent nine days later on November 28, 2011, after the Thanksgiving holiday. The original mailing of the survey was sent to 164 superintendents of Indiana school districts, the second mailing was sent to 142, and the
final mailing was sent to 123. When survey responses were received by SurveyMonkey, the respondents’ emails were blocked from being sent the survey again. A total of 48 responses were received out of the 164 mailed for a response rate of 29.3%. Of the 164 intended recipients of the survey, ten were designated as “unsent/opted out/ bounced” and 123 as “unresponded.”

Of the 48 survey responses received, 40 were completed by the superintendent to whom it was addressed and eight were completed by a designee to whom the superintendent had forwarded the survey. The eight designees that completed the survey other than the superintendent consisted of one assistant superintendent, four principals, one preschool coordinator, and two directors of special education. Since the accuracy of the data collected is dependent on the first-hand knowledge of the respondents, the survey cover letter requested that if the superintendent felt that someone else in the school district were more likely to have knowledge of the information needed to complete the survey that they should please feel free to forward it to them as their designee. Of the data collected, 83.3% of responses came from the primary source, the superintendent and 16.7% from a reliable secondary source designated by the superintendent to have knowledge of the school district’s preschool program and to provide the best answers to the questions on the survey.

The forthcoming analysis of the survey data will be categorized according to the previously identified benchmarks of high-quality programs and the additional categories of questions listed below:

1. Demographics
2. Curriculum standards
3. Degree and training requirements
   - Teacher degree requirement
   - Teacher specialized training requirement
   - Assistant teacher degree requirement
4. Class size and staff-child ratio
   - Maximum class size
   - Staff-child ratio
5. Funding sources
6. Benefits and long-lasting benefits
7. Full-day Kindergarten program

**Demographics**

This study identified a sample of 164 small and mid-sized school districts in Indiana, with enrollments of up to 5,000 students, to survey regarding their implementation of early childhood education programs. Of the 48 survey responses received, 77.1% were from school districts with an enrollment of 1,001 to 3,000 students, 14.6% were from those with an enrollment of 0 to 1,000 students, and 8.3% were from those with an enrollment of 3,001 to 5,000. (See Chart 2 and Appendix D: Chart 2 and Graph 2.) Of the 48 survey respondents, 68.8% of the school reported 31.3% of the school districts were located primarily in small towns. (See Chart 3 and Appendix D: Chart 3 and Graph 3.)
Chart 2

Survey of Preschool Programs in Indiana School Corporations

<table>
<thead>
<tr>
<th>Our school corporation has a student enrollment of:</th>
<th>Response Percent</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 to 1,000 students</td>
<td>14.6%</td>
<td>7</td>
</tr>
<tr>
<td>1,001 to 3,000 students</td>
<td>77.1%</td>
<td>37</td>
</tr>
<tr>
<td>3,001 to 5,000 students</td>
<td>8.3%</td>
<td>4</td>
</tr>
</tbody>
</table>

answered question 48
skipped question 0

Chart 3

Survey of Preschool Programs in Indiana School Corporations

<table>
<thead>
<tr>
<th>Our school corporation is located in an area that is primarily:</th>
<th>Response Percent</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural</td>
<td>68.8%</td>
<td>33</td>
</tr>
<tr>
<td>Small town(s)</td>
<td>31.3%</td>
<td>15</td>
</tr>
<tr>
<td>Suburb(s)</td>
<td>0.0%</td>
<td>0</td>
</tr>
</tbody>
</table>

answered question 48
skipped question 0

From the 48 survey respondents, 64.6% of the school districts were reported to have a preschool program and 35.4% were reported to not have a preschool program. (See Chart 4 and Appendix A: Chart 4 and Graph 4.) Of the 31 school districts (64.6% of the 48 responses) that reportedly have a preschool program, 64.5% of the school corporations have one or two classes in their preschool program and 35.5% were reported to have three or more classes in their preschool program. (See Chart 5 and Appendix A: Chart 5 and Graph 5.)
Chart 4

<table>
<thead>
<tr>
<th>Survey of Preschool Programs in Indiana School Corporations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does our school corporation have a preschool program?</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Answer Options</td>
</tr>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>No</td>
</tr>
</tbody>
</table>

answered question 48  
skipped question 0

Chart 5

<table>
<thead>
<tr>
<th>Survey of Preschool Programs in Indiana School Corporations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Our preschool program consists of:</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Answer Options</td>
</tr>
<tr>
<td>1-2 class(es)</td>
</tr>
<tr>
<td>3+ classes</td>
</tr>
</tbody>
</table>

answered question 31  
skipped question 17

Most (71.9%) of the school districts that have a preschool program reported that their program is structured as a half-day program, meeting two to three hours per day, and 34.4% reported that theirs is a full-day program. More than half (53.1%) of the school districts with preschool programs also reported that their program meets five days per week and 21.9% reported theirs meet two to three days per week. (See Chart 6 and Appendix A: Chart 6 and Graph 6.)
Chart 6

<table>
<thead>
<tr>
<th>Answer Options</th>
<th>Response Percent</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>half-day / 2-3 hours per day</td>
<td>71.9%</td>
<td>23</td>
</tr>
<tr>
<td>full-day / 4-6 hours per day</td>
<td>34.4%</td>
<td>11</td>
</tr>
<tr>
<td>2-3 days per week</td>
<td>21.9%</td>
<td>7</td>
</tr>
<tr>
<td>5 days per week</td>
<td>53.1%</td>
<td>17</td>
</tr>
</tbody>
</table>

answered question 32
skipped question 16

Curriculum Standards

The survey question designed to assess the quality of the curriculum and instruction in the preschool education programs focused on the curriculum structures identified as the most common to preschool education programs through the review of literature, i.e., High Scope, state standards, direct instruction, locally-developed curriculum, and teacher-selected materials. High Scope is well-known in early childhood education as the curriculum utilized in Head Start and other preschool programs. The state of Indiana adopted the *Foundations to the Indiana Academic Standards for Young Children*, updated in February 2012, as the identified standards for preschool program education programs (Indiana Department of Education, 2006). In lieu of an established preschool curriculum structure and/or government-required guidelines, school districts will sometimes focus on a locally-developed curriculum, direct instruction, and/or teacher-selected materials.

The most common form of curriculum and instruction utilized as determined through the survey data was teacher-selected materials as 56.7%. A close follow-up to
that was identified as the Indiana state standards, *Foundations to the Indiana Academic Standards for Young Children*, utilized as a curriculum structure in 53.3% of the school districts reporting. The third and fourth most common form of curriculum structure was locally-developed curriculum as reported at 23.3% and direct instruction as reported at 20%. The least common form of curriculum structure identified through the survey was High Scope as reported at 6.7%. (See Chart 11 and Appendix A: Chart 11 and Graph 11.)

Of the 31 out of 48 school districts that responded on the survey that they do have a preschool program, 30 of the 31 school districts marked an answer to the question related to curriculum and instruction. Some respondents marked more than one answer option to the question with a total of 52 responses to the six answer options (including “other”) and 30 were documented as having “answered question.”

<table>
<thead>
<tr>
<th>Answer Options</th>
<th>Response Percent</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Scope</td>
<td>6.7%</td>
<td>2</td>
</tr>
<tr>
<td>State standards Foundations for Early Childhood Education</td>
<td>53.3%</td>
<td>16</td>
</tr>
<tr>
<td>Direct Instruction</td>
<td>20.0%</td>
<td>6</td>
</tr>
<tr>
<td>Locally-developed curriculum (corporation-wide)</td>
<td>23.3%</td>
<td>7</td>
</tr>
<tr>
<td>Teacher-selected materials</td>
<td>56.7%</td>
<td>17</td>
</tr>
<tr>
<td>Other (please specify)</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td><strong>answered question</strong></td>
<td></td>
<td>30</td>
</tr>
<tr>
<td><strong>skipped question</strong></td>
<td></td>
<td>18</td>
</tr>
</tbody>
</table>

Some individual school districts also added the form of curriculum and instruction utilized in their preschool program by entering their responses in the “other” answer
option. Their responses related to their preschool program curriculum structure included the following: special education preschool, Literacy Express, IEP – student disability, and Saxon.

**Degree and Training Requirements**

The survey questions designed to assess the degree and training requirements for the teaching staff in a preschool education program focus on both the qualifications and training of the teacher and the training of the assistant teacher. The survey responses to the question regarding the training of the teacher confirmed that 93.8% of the teachers in the school districts’ preschool programs have a four-year college degree. Other responses to the question regarding the qualifications of the teacher showed that 12.5% have a two-year degree and 3.1% had a high-school diploma. The survey responses also showed that 12.5% had received some training in early childhood education. (See Chart 8 and Appendix A: Chart 8 and Graph 8.)

**Chart 8**

<table>
<thead>
<tr>
<th>Survey of Preschool Programs in Indiana School Corporations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Our preschool class(es) is/are staffed by Teachers who have: (please check all that apply):</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Answer Options</th>
<th>Response Percent</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>certification (4-year degree)</td>
<td>93.8%</td>
<td>30</td>
</tr>
<tr>
<td>2-year degree</td>
<td>12.5%</td>
<td>4</td>
</tr>
<tr>
<td>any training in early childhood education</td>
<td>12.5%</td>
<td>4</td>
</tr>
<tr>
<td>high school diploma</td>
<td>3.1%</td>
<td>1</td>
</tr>
</tbody>
</table>

answered question 32

skipped question 16

The survey question that focused on the training of the assistant teacher showed that 58.6% of the assistant teachers in the school districts’ preschool programs came to
the position with a high-school diploma. The other responses showed that 44.8% had completed one-to-two years of college and 31% had received some training in early childhood education. Additionally, 13.8% of the assistant teachers had completed two-to-four years of college. Of the 31 school districts that responded that they had preschool education programs, 32 of them answered the question regarding the training of the teacher and 29 answered the question focused on the training of the assistant teacher.

(See Chart 9 and Appendix A: Chart 9 and Graph 9.)

Chart 9

<table>
<thead>
<tr>
<th>Survey of Preschool Programs in Indiana School Corporations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Our preschool class(es) is/are staffed by Teaching Assistant(s) who have: Please check all that apply):</td>
</tr>
<tr>
<td><strong>Answer Options</strong></td>
</tr>
<tr>
<td>2-4 years college</td>
</tr>
<tr>
<td>1-2 years college</td>
</tr>
<tr>
<td>any training in early childhood education</td>
</tr>
<tr>
<td>high school diploma</td>
</tr>
<tr>
<td><strong>answered question</strong></td>
</tr>
<tr>
<td>29</td>
</tr>
</tbody>
</table>

Class Size and Staff-to-Child Ratio

Of the 31 school districts that reported having a preschool program, all answered the question about the number of preschool classes they have. From their responses, 64.5% reported having one or two classes in their preschool program. Thirty-five and five-tenths percent responded that they have three or more classes in their preschool program. (See Chart 5 and Appendix A: Chart 5 and Graph 5.) Related to the size of the classes, 26 of the 31 school districts reportedly having preschool programs answered the question pertaining to the class size. Fifty-three and eight-tenths percent reported having
17 or fewer students in their preschool classes, 34.6% have 21 or more students in their classes, and 11.5% have between 18 and 20 students in their preschool classes. (See Chart 7 and Appendix A: Chart 7 and Graph 7.)

Using the responses from the school districts to the questions related to the number of classes and the size of the classes, the data could be combined with the data regarding the teachers and assistant teachers per class to calculate an approximate staff-to-child ratio for the preschool programs. Based on the report of a teacher and assistant teacher per class, the 53.8% with 17 or fewer students per class would have a staff-to-child ratio of nine students or less per staff member (9:1 or less). With a teacher and
assistant teacher per class, 34.6% with 20 or more students per class would have a staff-to-child ratio of eleven students per staff member (11:1). Again with a teacher and assistant teacher per class, 11.5% with 18 to 20 students per class would have a staff-to-child ratio of ten children per staff member (10:1).

**Funding Sources**

All of the thirty-one school districts that reported having a preschool program answered the question related to the sources of funding that they utilize to financially support their program. Those utilizing federal funds to support their preschool program, the most common source of funding, equaled 51.6%. The second most common funding source was state funds, which was reported by 41.9%. The third most common source of funding was federal grant, which was reported by 38.7%. The fourth and fifth sources of funding reported were local funds at 35.5% and parent fees at 32.3%. (See Chart 10 and Appendix A: Chart 10 and Graph 10.)

### Chart 10

<table>
<thead>
<tr>
<th>Survey of Preschool Programs in Indiana School Corporations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Our preschool program is funded by the following sources: (Please check all that apply.)</td>
</tr>
<tr>
<td><strong>Answer Options</strong></td>
</tr>
<tr>
<td>Federal funds (Title I, etc.)</td>
</tr>
<tr>
<td>Federal grant</td>
</tr>
<tr>
<td>State funds</td>
</tr>
<tr>
<td>State grant</td>
</tr>
<tr>
<td>Private funds</td>
</tr>
<tr>
<td>Private grant</td>
</tr>
<tr>
<td>Local funds - General, etc.</td>
</tr>
<tr>
<td>Parent fees - full or partial, income-based, etc.</td>
</tr>
<tr>
<td>Other (please specify)</td>
</tr>
</tbody>
</table>

answered question 31
skipped question 17
The least common sources of funding for the preschool programs were state grant at 12.9%, private funds at 6.5%, and private grant at 3.2%.

**Benefits and Long-lasting Benefits**

All of the 31 school districts that reported having a preschool program answered that question related to the benefits to students that they have seen as a result of students attending their preschool program. The most common observable benefit to students was the acquisition of socialization skills as reported by 93.5% of the school districts. The other most common benefit reported was motivation in school, as reported by 67.7% of the reporting school districts. Of the school districts with preschool programs, 6.5% reported that they have not seen any observable benefits to students in those that have attended their preschool program. (See Chart 12 and Appendix A: Chart 12 and Graph 12.)

**Chart 12**

<table>
<thead>
<tr>
<th>Answer Options</th>
<th>Response Percent</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improved motivation in school.</td>
<td>67.7%</td>
<td>21</td>
</tr>
<tr>
<td>Increased acquisition of socialization skills.</td>
<td>93.5%</td>
<td>29</td>
</tr>
<tr>
<td>No observable benefits</td>
<td>6.5%</td>
<td>2</td>
</tr>
</tbody>
</table>

answered question 31

skipped question 17

Twenty-nine of the 31 school districts that reported having a preschool program answered the question pertaining to the long-lasting academic benefits. Sixty-nine percent of the reporting school districts stated that they have seen increased reading
ability as the most common long-lasting academic benefit to students. The second most common long-lasting academic benefit to students was reported by 65.5% as that of having less need for remediation and special education services. The third most common long-lasting academic benefit was less need for grade retention, as reported by 51.7% of the school districts. Only 3.4% of the school corporations with preschool programs reported that higher graduation rates were a long-lasting benefit to students that had attended their preschool program. Of the reporting school districts, 10.3% stated that they had seen no observable long-lasting academic benefits to students who have attended their preschool programs. (See Chart 13 and Appendix A: Chart 13 and Graph 13.)

Chart 13

<table>
<thead>
<tr>
<th>Survey of Preschool Programs in Indiana School Corporations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Our preschool program has resulted in the following long-lasting academic benefits to our young children as measured and reported by teachers and administrators:</strong> (Please check all that apply.)</td>
</tr>
<tr>
<td><strong>Answer Options</strong></td>
</tr>
<tr>
<td>Improved reading ability</td>
</tr>
<tr>
<td>Less grade retention</td>
</tr>
<tr>
<td>Less need for remediation and special education services</td>
</tr>
<tr>
<td>Higher graduation rate</td>
</tr>
<tr>
<td>No observable benefits</td>
</tr>
<tr>
<td>Other (please specify)</td>
</tr>
</tbody>
</table>

answered question 29

skipped question 19

Full-Day Kindergarten and/or Preschool Programs

Related to the reason(s) for not having implemented a preschool program, 18 of the total 48 school districts that responded to the survey answered the question as to why
they do not have a preschool program. Seventy-seven and eight-tenths percent identified lack of funding as the most common reason for not implementing a preschool program and 61.1% reported that other budget priorities was the second most common reason for not having implemented a preschool program. The third most common reason for not having a preschool program was reported as the funds presently allocated to full-day kindergarten by 33.3% of the school districts. The final reason identified as why they have not implemented a preschool program was that of lack of available space (no extra classrooms), which was reported by 11.1% of the school corporations. (See Chart 14 and Appendix A: Chart 14 and Graph 14.)

<table>
<thead>
<tr>
<th>Survey of Preschool Programs in Indiana School Corporations</th>
</tr>
</thead>
<tbody>
<tr>
<td>The reason(s) we have NOT implemented a preschool program is/are the following (please check all that apply):</td>
</tr>
<tr>
<td><strong>Answer Options</strong></td>
</tr>
<tr>
<td>Lack of funding (federal, state, local, private, grant, etc.)</td>
</tr>
<tr>
<td>Funds presently allocated to full-day Kindergarten</td>
</tr>
<tr>
<td>Other budget priorities (state-mandated, locally-decided, etc.)</td>
</tr>
<tr>
<td>Lack of available space (no extra classrooms)</td>
</tr>
<tr>
<td>Lack of early childhood curriculum</td>
</tr>
<tr>
<td>Other (please specify)</td>
</tr>
</tbody>
</table>

answered question 18
skipped question 30

Of the 48 school districts that completed the survey, 46 of them, or 100%, reported that they have a full-day kindergarten program. (See Chart 15 and Appendix A: Chart 15 and Graph 15.)

All 48 school districts, 100%, reported that were no reasons that they have not
implemented full-day kindergarten because all of them have a full-day kindergarten program in place.

Chart 15

<table>
<thead>
<tr>
<th>Survey of Preschool Programs in Indiana School Corporations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does our school corporation have a full-day Kindergarten program?</td>
</tr>
<tr>
<td>Answer Options</td>
</tr>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>No</td>
</tr>
<tr>
<td>answered question</td>
</tr>
<tr>
<td>skipped question</td>
</tr>
</tbody>
</table>

Pertaining to having both a preschool and full-day kindergarten program, 43 of the 48 school districts that completed the survey answered the question. The question proposed that if the school district had “adequate funding accessible and classroom space available” that they would have both a preschool and full-day kindergarten program. Eighty-eight and four-tenths percent responded positively that they would have both preschool and full-day kindergarten programs if all conditions were met. (See Chart 16 and Appendix A: Chart 16 and Graph 16.)

Chart 16

<table>
<thead>
<tr>
<th>Survey of Preschool Programs in Indiana School Corporations</th>
</tr>
</thead>
<tbody>
<tr>
<td>If our school corporation had adequate funding accessible and classroom space available, we would have BOTH a preschool and full-day Kindergarten program.</td>
</tr>
<tr>
<td>Answer Options</td>
</tr>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>No</td>
</tr>
<tr>
<td>answered question</td>
</tr>
<tr>
<td>skipped question</td>
</tr>
</tbody>
</table>
Of the 43 school districts that answered this question, 11.6% responded negatively that they would not have both a preschool and full-day kindergarten program with those conditions.

**Conclusion**

The analysis of the data generated by the survey demonstrated that some small to mid-sized school districts of Indiana in the sample have given priority to the implementation of early childhood education programs. For those that have gone beyond providing full-day kindergarten to also providing a preschool program, it appeared that they have paid attention to the best practice characteristics in the implementation of their program. This will be examined further and discussed in detail in the final chapter, *Recommendations and Conclusions.*
Chapter 5 -- Recommendations and Conclusions

Summary of Study

The purpose of this study was to investigate whether school districts had made an investment in preschool education as an effective intervention for increasing student achievement. The research questions that were addressed in this study were as follows:

1. What benefits related to student achievement does an investment in preschool and/or full-day kindergarten programs show for students and for a school district?
2. What means of funding do school districts utilize to implement an early childhood education program?
3. What characteristics do successful early childhood education programs possess, as determined by school district administrators?

The data collection was accomplished through the distribution of an online survey through SurveyMonkey, emailed on November 14, 2011 using an email database of small and mid-sized school districts in Indiana. The original mailing of the survey was sent to 164 superintendents of Indiana school districts and a total of 48 responses were received out of the 164 mailed for a response rate of 29.3%. This response rate represented less than one-third of the population, which is not large enough for the results to be considered significant, but the data might be able to show some potential trends. Charles
and Mertler (2002) discuss the “crucial distinction between statistical significance and practical significance” (p. 196). In a research study with a small sample, the results may be considered not significant because the sample is so small. Rather than reject the results, they may have some important implications and practical significance (Charles & Mertler, p. 198).

Of the 48 survey responses received, 40 were completed by the superintendent to whom it was addressed and eight were completed by a designee to whom the survey was forwarded by the superintendent. Of the data collected, 83.3% came from the primary source, the superintendent and 16.7% from a reliable secondary source designated by the superintendent to have knowledge of the school district’s preschool program and to provide the best answers to the questions on the survey.

The survey was constructed to assess the implementation of best practice characteristics in preschool education programs as defined by the Ten Benchmarks of High-Quality Preschool Education established by the National Institute for Early Education Research (NIEER) (as cited by Barnett, 2005). They are as follows:

1. Curriculum standards
2. Teacher degree requirements
3. Teacher specialized training requirement
4. Assistant teacher degree requirement
5. Teacher in-service requirement
6. Maximum class size
7. Staff-child ratio
8. Screening referral requirements
9. Required support services

10. Meal services (p. 16)

The questions on the survey were designed to assess the implementation of best practice characteristics in existing preschool education programs on six of the ten benchmarks listed above, i.e., curriculum standards, teacher degree requirements, teacher specialized training requirement, assistant teacher degree requirement, maximum class, size, and staff-child ratio. Additional survey questions focused on the funding sources, benefits and long-lasting benefits, presence of full-day kindergarten, and the school district and preschool program demographics, i.e., district student enrollment, district locale, presence of preschool program, number of classes in program, and the daily/weekly schedule of the program. The additional categories of questions were structured to include the benefits of preschool education programs identified through the review of literature, the variety of sources utilized for program funding, and a comparison of school district and program demographics. The scope of the questions was intended to enhance the generalizability and the potential replicability of the research. The analysis of the survey data was categorized in relation to the previously identified benchmarks of high-quality programs and the additional categories of questions listed below:

1. Demographics

2. Curriculum standards

3. Degree and training requirements
   - Teacher degree requirement
   - Teacher specialized training requirement
   - Assistant teacher degree requirement
4. Class size and staff-child ratio
   - Maximum class size
   - Staff-child ratio

5. Funding sources

6. Benefits and long-lasting benefits

7. Full-day Kindergarten program

Discussion

Demographics

This study was intended to focus on the small and mid-sized school districts in Indiana and determine the extent to which they have implemented early childhood education programs as an intervention to improve student achievement. The introduction to the survey specified to the respondent that the preschool program described in the survey should include any regular early childhood education/preschool program other than one designed solely for special education preschool, which is financially supported and mandated by law. Thus the responses to the questions on the survey would reflect self-made decisions about the implementation of preschool programs.

Of the 48 survey responses received, 91.7% were from school districts with enrollments less than 3,000 students and 77.1% of those were school districts with enrollments less than 1,000 students. Thus a strong majority of the responses received were from some of the smallest school districts and, as a result, the data collected were highly reflective of the commitment of some of Indiana’s smallest school districts to preschool programs and early childhood education. The results of the data collected should also be an accurate reflection of the target population of the research study.
In a review of the past and current literature on early childhood education, the majority of research was focused on large urban areas and/or school districts. A majority of the research also targeted a population of children from a low socioeconomic level, which can be found in a higher concentration in urban settings. Daniels’ (1995) research efforts focused on preschool children of a lower socioeconomic profile in Great Britain while Reynolds et al. (2001) and Schweinhart (2003) focused on preschool programs in the United States that served children in poverty.

By focusing on small and mid-sized school districts in small town and rural areas, this study could provide information that was not currently prevalent in the literature. With almost two-thirds (64.6%) of the responding school districts reported having a preschool program in place, results show an attempt at providing early childhood education for their students. This is especially encouraging in light of the past several years of strained budgets for school districts in K – 12 education programs. With increased pressure of accountability measures, it was very encouraging to find that these school districts are willing to make this commitment to the young children of their school community and provide them with a preschool program to start their school career.

Of the responding school districts, a majority offered preschool classes that meet as a half-day program and over half of them scheduled the preschool classes to meet five days per week. Offering a five-day-per-week preschool program could provide more consistency for the young learners.

The results of this research study detailed in chapter four and analyzed further in this chapter showed support/did not show support of the research questions, as indicated below.
Research question #1: What benefits related to student achievement does an investment in preschool and/or full-day kindergarten programs show for students and for a school district?

Benefits and long-lasting benefits. Over many years, the academic achievement of students that attended a quality preschool program has been the focus for long-term studies. From the landmark studies of the Chicago Parent-Child Center Program and the High/Scope Perry Preschool Study to the VIP (Very Important Preschoolers) Village of California, the levels of achievement speak for themselves. The achievement of the VIP preschool graduates were compared to Title One elementary students and elementary students that did not attend VIP and the “preschool graduates have outscored both comparison groups and, in many cases, have doubled the scores of Title One students” and was “especially significant because the state-funded preschool students face the same socioeconomic barriers as Title One students” (Roberson, 1997/1998, p. 72).

All of the school districts that reported having a preschool program answered the question related to the benefits to students that have been observed as a result of students attending their preschool program. Over 90% of the respondents identified the increased acquisition of socialization skills and improved motivation in school as the most common observable benefits. Through the review of literature, these benefits to students were also identified as most common in the longitudinal studies of Daniels (1995) in Great Britain, the Chicago Child-Parent Center Program (Reynolds et al., 2001), and the High/Scope Perry Preschool Study (Schweinhart, 2003). These benefits were also corroborated in a study done in North Carolina by Shore, Shue, and Lambert (2010) of 174 principal respondents the majority of whom were in favor of having preschool in their schools.
The benefits to students that they cited included that it “eased the transition to kindergarten” and that they “begin to learn the rules of a public school setting” (Shore et al, p. 33). This was most encouraging to know that similar benefits to students are realized in other states also that have seen public schools implement preschool programs.

The most common long-lasting academic benefits identified by the responding school corporations included improved reading ability, less need for remediation and special education services, and less grade retention. These long-lasting academic benefits to students could be important to school districts in that they could show a trend toward some economic benefits/savings to school districts. It would appear that school districts could begin to realize these academic benefits and that the longer their preschool program was in effect the more benefits to students and the more cost-savings their community could realize. This was discovered in the longitudinal studies completed by Daniels (1995), Davies & Brember (1997), Reynolds et al. (2001), and Schweinhart (2003). These studies found the primary long-lasting benefits were improvements in student achievement and reductions in the need for remediation and special education services.

As preschool students progress successfully in school and retain these benefits, the more likely they would be to graduate from high school and not drop out of school. When these students have graduated from high school, they are more likely to go on to higher education, have a higher paying job, pay more taxes, participate more in the local economy in purchasing goods and services, and contribute positively to the community. Also by graduating from high school, these students are less likely to end up in the criminal justice system, to be dependent on services from welfare and other social services, and to be a negative influence on the community. As Barnett & Hustedt (2003)
found “both former preschool participants and taxpayers can benefit from public investments in preschool education” and “former preschool participants were less likely to cost taxpayers money in the long term for such public services as schooling, welfare, and the criminal justice system” (Barnett & Hustedt, p. 55). The long-lasting academic benefits to students can have far-reaching benefits to not only the students and their families, but also to the school district, the community in which they live, and society in general. The impact of these long-lasting benefits to students can have implications far beyond their years in school.

The data received from the responding school districts that have preschool programs in place indicated that there were benefits to students and there could be potential that their investment in preschool would result in economic benefits/savings to the school districts also. With most school districts having identified increased reading ability for their students, this could result in improved success in school. Increased reading ability and improved success in school could indicate that the school district would not need to provide extra instructional support or exceed their per-pupil expenditure to educate those children, which could ultimately result in economic savings to the district. Other school districts reported less need for remediation and special education services for their preschool students, which could potentially show financial savings in not having to allocate extra education costs beyond the per-pupil expenditure of general education services.

**Research question #2:** What means of funding do school districts utilize to implement an early childhood education program?
**Funding sources.** Since a determining factor in whether a school district will implement a preschool program or not is how program funding will be determined, the survey question related to the sources of funding was paramount to this research study and specifically addressed in one of the research questions. All of the school districts that reported having a preschool program answered the question related to the sources of funding for the program. The primary funding source for over half of the school districts was federal funds and the sources of secondary funding reported were state funds and federal grants. About one-third of the school districts reported utilizing local funds and one-third reported using parent fees. It was obvious that most school districts have resorted to securing a combination of funding and have utilized a variety of sources to financially support their preschool program. This was fairly consistent with the review of literature, in which some of the states that began universal preschool programs used some form of state funds as their primary source, i.e., Oklahoma used the state funding formula, Illinois also used the state funding, and Georgia used the state lottery funds (Ackerman et al., 2009).

Many preschool programs have struggled with what sources they can draw from for funding their preschool program and whether those funds would continue. They have become adept at securing financing and solicit money from any potential funding sources. It is quite common for the budget of a preschool program to be a varied mixture of funds from several sources, i.e., Alexandria Network Preschools in Virginia “receives no state or federal funding (apart from the school lunch program)” and “one-third of the
Network’s funds come from the city of Alexandria; one-third, from private foundations; the remainder from private donors” (Pool, 1998, p. 74).

With no funds designated as a standard source of funding, it has appeared that school districts have made extra efforts to determine a variety of sources of money that will finance their preschool program. They have appeared to combine federal and state funds, including grants in any mixture possible to find their programs. Also encouraging was that the school districts seemed to be willing to support their preschool program with their own local funds and parent fees.

**Research question #3:** What characteristics do successful early childhood education programs possess, as determined by school district administrators?

The responding school districts answered questions on the survey related to the previously identified benchmarks of high-quality preschool education and identified the best practice characteristics that they have implemented. Many based their curriculum and instruction on the state standards and teacher-selected materials, which could indicate a commitment to attempt to provide quality curriculum for their students. A large majority acknowledged that the teacher of the preschool class(es) had a four-year college degree, which could be an indication that a well-trained teacher is in the classroom. Many of the school districts identified having a class size of 20 students or less with a resulting staff-to-child ratio of ten-to-one (10:1). This staff-to-child ratio could allow more individual attention by staff members to each child to assist them in their learning.
**Curriculum standards.** Preschool curriculum developers have often been uneasy “about setting academic expectations or mandating sophisticated curricula for its programs” and even more uneasy “about results-based accountability, whereby kids are assessed to determine whether they have the skills, knowledge, traits, and attitudes to succeed in kindergarten and beyond.” (Finn, 2010, p. 13) With a lack of national and/or state guidelines or regulations over preschool programs, curriculum designers have been left to their own ingenuity to provide curriculum content and instruction that meets the needs of their early learners.

The survey question designed to assess the curriculum and instruction in the preschool education programs focused on the curriculum structures identified as the most common to preschool education programs through the review of literature, i.e., High Scope, state standards, direct instruction, locally-developed curriculum, and teacher-selected materials. High Scope has been well-known in early childhood education as the curriculum utilized in Head Start and other preschool programs. The state of Indiana adopted the *Foundations to the Indiana Academic Standards for Young Children* (updated in February 2012) as the identified standards for preschool program education programs (Indiana Department of Education, 2006). In lieu of an established preschool curriculum structure and/or government-required guidelines, school districts have sometimes focused on a locally-developed curriculum, direct instruction, and/or teacher-selected materials.

Over half of the responding school corporations identified the state standards, *Foundations to the Indiana Academic Standards for Young Children*, as the basis for the curriculum and instruction in their preschool program or identified teacher-selected
materials as their curriculum structure. This indicates a positive trend of the accountability movement that a majority of the responding school districts that have offered a preschool program saw the importance of following the state standards for preschool in the same manner that they adhere to the state standards for the kindergarten through 12\textsuperscript{th} grade program in their schools. Per Kagan and Scott-Little (2004), 40\% of the states had officially adopted early learning standards as of May 2002 with very little common ground. Therefore with the onset of most states implementing the Common Core standards for their K-12 program, an effort could be made to develop some commonality in early childhood education standards.

Having a majority of preschool programs utilizing teacher-selected materials as the basis for their curriculum and instruction would typically not be indicative of a quality curriculum structure because it would be dependent on the qualifications and training of the teacher. However as will be noted in the next section of this chapter, the teachers in the respondents’ preschool programs appeared to be well-educated with over 90\% of them possessing a four-year college degree. It would logically follow that if a teacher is more educated, they would most likely select more effective materials to utilize in the curriculum and instruction of their preschool program.

The survey respondents identified High Scope as the least used curriculum structure among their preschool programs. Since Head Start has utilized the High Scope curriculum and the results have been inconsistent as to the success of Head Start programs over the years, this could also be somewhat encouraging that school districts have recognized that inconsistency and have chosen to utilize another basis for their preschool curriculum and instruction.
**Degree and training requirements.** With many research studies in education showing the qualifications of the teacher in the classroom as being key to student achievement, a well-educated teacher can also be a positive factor in a preschool classroom. A strong majority of the responding school districts that have implemented a preschool program reported that they have a preschool teacher who has a four-year college degree. This is very encouraging to know that even though preschool education is not scrutinized by the same regulations as K – 12 education school districts have chosen to invest in a well-educated teacher for their preschool students.

The survey questions designed to assess the degree and training requirements for the teaching staff in a preschool education program focus on both the qualifications and training of the teacher and the training of the assistant teacher. Although the responses regarding the qualifications and training of the assistant teacher were varied, the results showed that that almost one-third had undergone some early childhood training to support the students in the preschool classroom.

**Class size and staff-child ratio.** Most of the responding school districts reported having 17 or fewer students in their preschool classes and about one-third reported having 21 or more students. This could indicate that the school districts make an effort to control the class size of their preschool programs to maximize the benefit of maintaining a smaller staff-to-child ratio. Based on the responses of having a teacher and assistant teacher per class, the majority of the school districts with 17 or fewer students per preschool class would have a staff-to-child ratio of nine students or less per staff member (9:1 or less). This again has shown positive efforts of the school districts to provide more teaching time per child even though it is not expected of them to comply with regulations.
Full-Day Kindergarten and/or Preschool Programs

As K – 12 school districts have implemented preschool programs and housed them in elementary schools, the integration of preschool has been successful when “the preK teachers are considered as just another grade level at their school” and “the kindergarten teachers were especially involved with the preK teachers” (Shore, 2010, p. 34). This example of preschool integration in elementary schools can serve as a model for other school districts that are interested in developing a preschool program.

Of the school districts that completed the survey, all of them reported that they have a full-day kindergarten program, which could also show a commitment to early childhood education. When asked their reasons for not having implemented a preschool program, the majority identified lack of funding and/or other budget priorities as their major reasons for not having implemented a preschool program. Also of the school districts who have not implemented a preschool program, one-third stated that their funds are presently allocated to full-day kindergarten and some reported that they have a lack of available space (no extra classroom space).

To further assess these school districts’ interest in early childhood education, a survey question proposed that if the school district had adequate funding and available space would they then have both a preschool and full-day kindergarten program. A majority responded positively that they would have both programs if all the necessary conditions were met. This was most encouraging that the commitment to early childhood education is strong enough that school corporations would want to have both programs to meet the learning needs of their youngest students.
Implications of the Results for Practice

Benefits and Long-lasting Benefits

The results identified in this study that could be replicated in the implementation of other preschool programs is that of incorporating a focus on socialization skills. The results of this study supported socialization skills as the primary benefit to students who attend preschool programs. King (2007) agreed that although many preschool programs have been focusing on academic learning and although children may be developmentally ready for academics “socialization skills are more important” in helping children learn to be successful in the world (as cited in Lester, 2007, p. 45).

As children acquire socialization skills, they respond more positively to adults and collaborate more effectively in groups of their peers. By improving their interaction with adults and their teamwork with other students, children have the skills to achieve more success in school and ‘success breeds success.’ Mead (2008) agreed that even though programs focus on academics “research suggests that the social and emotional development that occurs -- learning self-control, sticking with difficult tasks, resolving conflicts verbally rather than by force -- is just as important, if not more important, to future school achievement a academic content” (p. 28).

Characteristics of Quality Programs

Teacher quality. Another result of this study that could be replicated in practice was that of staffing the preschool classroom with a teacher that has certification and/or a four-year college degree. Gill (2007) supported the teacher quality NIEER benchmark by stating that NIEER found “that children in classrooms taught by teachers with bachelor’s degrees play more imaginatively and creatively and score higher on language tests” (p.
8). Gill further compared the teacher quality of Head Start with over 70% of their teachers who did not have college degrees with the preK teachers in public schools of whom over 80% hold bachelor’s degrees (Gill, p. 7).

In K-12 educational research, teacher quality has been identified as the most important factor in the classroom that determines how well students are learning. Mead (2008) also supported the NIEER quality benchmark by stating that a certified teacher is “also the strongest predictor of how much children will learn in preK” (p. 26).

**Staff-child ratio.** The combined results of preschool programs in this study with enrollments of 20 students or less could be another characteristic that could be included in the planning of other preschool programs. With a class size of 20 students per class, the preschool programs would achieve a staff-child ratio of ten-to-one (10:1), i.e., ten students per adult. Mead (2008) supported preschool programs with “small class sizes [no more than 20 students in four-year-old classrooms, with smaller class sizes for three-year-olds], and low ratios of children to adults [no more than 10 children for every adult in the classroom]” (p. 27). Keeping a low staff-child ratio allows for more one-on-one interaction between the teaching staff and students, which can produce increased benefits and student learning.

**Other quality characteristics.** The other results of this study not directly related to the research questions but that showed implications for practice are those related to full-day kindergarten and the district’s reasons for not having a preschool program. Results of this study showed that all respondents to the survey acknowledged that they had a full-day kindergarten program in place. Also of those respondents who did not have a preschool program, over three-fourths of them stated that lack of funding was the
primary reason that they did not have both full-day kindergarten and preschool programs. Therefore, the results of this study related to the sources of funding could have some implications for other school districts to replicate if they would want to create a preschool program. This could also be an indication that there might be a need for further research in the area of funding sources for early childhood education programs.

**Recommendations for Further Research**

**Benefits and Long-lasting Benefits**

The scope of this study was not able to determine the economic benefits and cost-savings that a school district realizes as a result of having a preschool program. To determine whether the preschool program has created economic benefits and been a cost-effective intervention to student achievement for school districts, a research study would best be structured as a longitudinal study and focus on a representative sample of school districts. In structuring a longitudinal study, future research could be patterned after the methodology utilized in researching and conducting cost-benefit analyses of the Chicago Child-Parent Centers (Reynolds et al., 2001), the High/Scope Perry Preschool Program (Schweinhart, 2003), and the Abecedarian Early Childhood Intervention Project (Masse & Barnett, 2002). The longitudinal study would need to identify a sample of school districts that have had preschool programs in place for a considerable length of time to be able to provide statistically significant data.

**Funding Sources**

An initial purpose of this study was to determine the sources of funding that school districts utilize to support their preschool program. The scope and design of this study was only able to identify a range of sources of funding but did not determine the
extent to which those funding sources are utilized. Further research could be done to
determine the percentage of support to the preschool program that is provided by each
source of funding. Exact costs could be identified as well as the exact combination of
funds that finances the preschool program. If grant funds are utilized for financial
support, the specific grants could be identified also. The impact of this further research
could provide data that would be useful to other non-program school districts in
exploring the feasibility and replicability of creating a preschool program.

**Curriculum Standards**

Another recommendation for further research would be that of studying the
curriculum structure for the preschool program. Since curriculum standards has been
identified as one of the ten quality benchmarks by NIEER, further research on the
curricular decisions made by the school districts before implementing their preschool
program could be useful information. The results of the potential research on curriculum
could be beneficial to other school districts that are considering the implementation of a
preschool program.

Since most of the states have adopted the Common Core Standards and have them
scheduled for implementation within the next several years, further research on current
early learning standards that states have in place and their alignment to the Common Core
Standards could be very beneficial not only to school districts but also to state
departments of education.

**Conclusion**

This study collected data from small and mid-sized school districts in Indiana
related to their implementation of early childhood education programs. The results of the
study were as follows:

1. The preschool programs have shown benefits to students that included increased acquisition of socialization skills and improved motivation in school.

2. The school districts have utilized a combination of federal funds, state funds, and federal grants as sources of funding for their preschool programs.

3. These preschool programs have been structured to incorporate characteristics of quality that include: curriculum based on the state early learning standards, teacher who has certification, and a small class size of 20 students, which provides a staff-to-child ratio of ten students per adult (10:1).

The scope of this study was not able to determine more specific data that would also be beneficial to school districts planning to implement a preschool program. Therefore, over the course of this study several recommendations for further research were realized as follows:

1. Study the economic benefits of preschool programs to school districts

2. Study the specific allocation of funding sources to support a preschool program

3. Conduct a curriculum study of the state early learning standards and their alignment to the Common Core standards

Although several questions still remain regarding these school districts’ experience with implementing preschool programs, the information they provided can provide good direction. These small school districts could serve as a model to others who might be interested in implementing a preschool program. Their experiences in
designing the program, staffing the program, funding the program, and supporting the academics in the program could provide an example for other school districts who might be interested in beginning a preschool program.
REFERENCES


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Leadership, 73-77.


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P-16 Education System. *Phi Delta Kappan*, 480-487.


Appendix A

SURVEY of PRESCHOOL PROGRAMS in INDIANA SCHOOL CORPORATIONS

Contact Information:  Barbara J. Flory, Ed.S.  
email:  bflory@apu.edu  
Phone - cell:  (574) 933 - 1854

Superintendent or superintendent designee:  Please complete this survey based on the current status of your school corporation, the existence of a preschool program, and details about the program. The preschool program described in the survey should include any regular early childhood education/preschool program other than one designed solely for special education preschool, which is financially-supported and mandated by law.
This survey should take no longer than 15-20 minutes to complete. Please mark more than one response to any question as applicable to your situation. Thank you very much for your participation in this research.

Survey Respondent and Demographic Information of School Corporation:

1. This survey was completed by:
   Name _____________________________________________________
   Title _____________________________________________________
   School Corporation _______________________________________

2. Our school corporation has a student enrollment of:
   _____ 0 to 1,000 students
   _____ 1,001 to 3,000 students
   _____ 3,001 to 5,000 students
   _____ more than 5,000 students

3. Our school corporation is located in an area that is primarily:
   _____ Rural
   _____ Small town(s)
   _____ Suburb(s)

4. Does your school corporation have a preschool program?
   _____ Yes
   _____ No
   * If you answered YES to question #4, please continue with questions #5 through #15, skipping #12.
   * If you answered NO to question #4, please skip to question #12 and continue through #15.

Description of Preschool Program:

5. Our preschool program consists of:
   _____ 1-2 class(es)
   _____ 3+ classes

6. Our preschool program operates according to the following schedule (please check all that apply):
   _____ half-day / 2 – 3 hours per day
   _____ full-day / 4 – 6 hours per day
2-3 days per week
5 days per week

Our preschool class(es) serve a population of:

less than 15 students
15 – 18 students
18 - 20 students
21+ students

Description of Staff for Preschool Program:

Our preschool class(es) is / are staffed by:

Teacher(s): certified (4-year degree)
2-year degree
any training in early childhood education
high school diploma

Teaching Assistant(s): 2 – 4 years college
1 – 2 years college
any training in early childhood education
high school diploma

Funding of Preschool Program:

Our preschool program is funded by the following sources (please mark all that apply and specify where appropriate):

Federal funds – Title I, etc.
Federal grant --
Other --

State funds --
State grant --
Other --

Private funds --
Private grant --

Local funds – General, etc.
Parent fees – full or partial, income-based, etc.
Other --

Curriculum for Preschool Program:

Our preschool program utilizes the following as a base for curriculum and instruction:

High Scope
State standards: Foundations for Early Childhood Education
Direct Instruction
Locally-developed curriculum (corporation-wide)
Teacher-selected materials
Other --
**Observed Outcomes of Preschool Program:**

11. Our preschool program has resulted in the following benefits to our young children (please mark all that apply):

- Improved motivation in school (as reported by teachers/parents)
- Increased acquisition of socialization skills (as reported by teachers/staff)
- Long-lasting academic effects (please specify all areas below)
  - Improved reading ability (as measured and reported by teachers)
  - Less grade retention (as measured and reported by teachers and administrators)
  - Less need for remediation and special education services (same as above)
  - Higher graduation rate (as measured and reported by administrators)
- Other -- _______________________________________
- No observable benefits

* If you answered NO to question #4, please continue here and answer questions #12 through #15.

**Potential Barriers to Implementing a Preschool Program:**

12. The reason(s) you have NOT implemented a preschool program is / are the following (please check all that apply):

- Lack of funding (federal, state, local, private, grant, etc.)
- Funds presently allocated to full-day Kindergarten
- Other budget priorities (state-mandated, locally-decided, etc.)
- Lack of available space (no classrooms vacant)
- Lack of early childhood curriculum
- Other -- ____________________________________________

**Other Early Childhood Initiatives:**

13. Does your school corporation have a full-day Kindergarten program?

- Yes (please skip to question #15)
- No (please answer questions #14 and #15)

14. The reason(s) you have NOT implemented a full-day Kindergarten program is / are the following (please check all that apply):

- Lack of funding (federal, state, local, private, grant, etc.)
- Other budget priorities (state-mandated, locally-decided, etc.)
- Lack of available space (no classrooms vacant)
- Lack of early childhood curriculum
- Other -- ____________________________________________

15. If our school corporation had adequate funding accessible and classroom space available, we would have BOTH a preschool and full-day Kindergarten program.

- Yes
- No

**Contact Information:**  Barbara J. Flory, Ed.S.  
email:  bflory@apu.edu  
Phone - cell:  (574) 933 - 1854

Thank you very much for your participation in this survey. Your cooperation is greatly appreciated.
Appendix B

November, 2011

Dear Superintendent,

As a former Indiana building and district administrator, I realize how valuable your time is and appreciate your attention to this email. I am currently a doctoral student at Ball State University and a faculty member at Azusa Pacific University in Azusa, California. The research for my dissertation is focused on the status of early childhood education programs in Indiana public schools.

This research study, *Quality Early Childhood Education: A Cost-Effective Intervention to Student Achievement*, is designed to ascertain the extent that small to mid-sized school corporations in Indiana have been able to implement early childhood education programs and to ascertain the initial quality of the programs implemented, based on the *Ten Benchmarks for High-Quality Preschool Education* established by the National Institute for Early Education Research. These benchmarks include:

1. Curriculum standards
2. Teacher degree requirement
3. Teacher specialized training requirement
4. Assistant teacher degree requirement
5. Teacher in-service requirement
6. Maximum class size
7. Staff-child ratio
8. Screening/referral requirement
9. Required support services

The research for my dissertation is centralized mainly on the first seven of the ten benchmarks that are the structural basis and foundation for a preschool program.

The only anticipated risk or discomfort from participating in this research study is that you may not feel comfortable answering some of the questions. Please know that your participation and response in answering questions is strictly voluntary and free of penalty or prejudice from the researcher. You may choose not to answer any question that you prefer not to answer and withdraw from the study at any time. Your response to the survey and participation in the research is greatly appreciated.

All data will be maintained as confidential and no identifying information such as names will appear in any publication or presentation of the data. Paper documents of the data will be stored in a filing cabinet, locked in the researcher’s office, and will also be filed on the researcher’s password-protected computer, until no longer needed and then discarded/shredded. The Principal Investigator will only have access to the data.

To collect the data on the presence and quality of early childhood programs in Indiana public schools, I am utilizing an online survey that should take no more than 15-20 minutes to complete. If you feel that someone else in your school corporation (as your designee) would be more likely to have the requested information on your preschool programs, please forward this survey to them to complete. Please follow the link below to access and complete the online survey.

For one’s rights as a participant in this research, you may contact the following: Research Compliance, Sponsored Programs Office, Ball State University, Muncie, IN 47306, (765) 285-5070, irb@bsu.edu. Please also feel free to contact me if you have any questions related to the survey or study. Thank you very much for your prompt response and participation in this study.
Researcher Contact Information:

Principal Investigator:  Faculty Supervisor:

Barbara J. Flory, Ed.S. (Graduate Student)  Dr. Joseph R. McKinney
10338n Darby Road  Educational Leadership
Apple Valley, CA 92308  Ball State University
Telephone: (574) 933 – 1854  Teachers College
Muncie, IN 47306
Email: bflory50@gmail.com  Telephone: (765) 285 - 8495

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Azusa Pacific University
High Desert Regional Center
Multiple-Subject Faculty and Site Coordinator
Office: (760) 952 – 1765, Ext. 2289
Fax: (760) 952 – 1734
Cell: (574) 933 – 1854
Email: bflory@apu.edu
Appendix C

IRBNet Board Action

From: Chris Mangelli <no-reply@irbnet.org>
Date: Thu, Sep 22, 2011 at 5:17 AM
Subject: IRBNet Board Action

To: Joseph McKinney <jmckinne@bsu.edu>, William Sharp <bsharp@bsu.edu>, Barbara Flory <bflory50@gmail.com>

Please note that Ball State University IRB has taken the following action on IRBNet:

Project Title: [253630-1] Quality Early Childhood Education: A Cost-Effective Intervention to Student Achievement
Principal Investigator: Barbara Flory, Ed.S.

Submission Type: New Project
Date Submitted: June 29, 2011

Action: APPROVED
Effective Date: September 22, 2011
Review Type: Exempt Review

Should you have any questions you may contact Chris Mangelli at <cmmangelli@bsu.edu>.

Thank you,

The IRBNet Support Team
Appendix D

Chart 2

### Survey of Preschool Programs in Indiana School Corporations

<table>
<thead>
<tr>
<th>Our school corporation has a student enrollment of:</th>
<th>Response Percent</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 to 1,000 students</td>
<td>14.6%</td>
<td>7</td>
</tr>
<tr>
<td>1,001 to 3,000 students</td>
<td>77.1%</td>
<td>37</td>
</tr>
<tr>
<td>3,001 to 5,000 students</td>
<td>8.3%</td>
<td>4</td>
</tr>
</tbody>
</table>

- answered question 48
- skipped question 0

Graph 2
Chart 3

Survey of Preschool Programs in Indiana School Corporations

Our school corporation is located in a area that is primarily:

<table>
<thead>
<tr>
<th>Answer Options</th>
<th>Response Percent</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural</td>
<td>68.8%</td>
<td>33</td>
</tr>
<tr>
<td>Small town(s)</td>
<td>31.3%</td>
<td>15</td>
</tr>
<tr>
<td>Suburb(s)</td>
<td>0.0%</td>
<td>0</td>
</tr>
</tbody>
</table>

answered question 48
skipped question 0

Graph 3

Our school corporation is located in a area that is primarily:

- 68.8% Rural
- 31.3% Small town
- 0.0% Suburb
Chart 4

Survey of Preschool Programs in Indiana School Corporations

<table>
<thead>
<tr>
<th>Answer Options</th>
<th>Response Percent</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>64.6%</td>
<td>31</td>
</tr>
<tr>
<td>No</td>
<td>35.4%</td>
<td>17</td>
</tr>
</tbody>
</table>

answered question 48
skipped question 0

Graph 4

Does our school corporation have a preschool program?

- 64.6% Yes
- 35.4% No
Chart 5

Survey of Preschool Programs in Indiana School Corporations

<table>
<thead>
<tr>
<th>Answer Options</th>
<th>Response Percent</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2 class(es)</td>
<td>64.5%</td>
<td>20</td>
</tr>
<tr>
<td>3+ classes</td>
<td>35.5%</td>
<td>11</td>
</tr>
</tbody>
</table>

answered question 31
skipped question 17

Graph 5

Our preschool program consists of:

- 64.5% 1-2 class(es)
- 35.5% 3+ class(es)
Chart 6

### Survey of Preschool Programs in Indiana School Corporations

Our preschool program operates according to the following schedule. (Please check all that apply)

<table>
<thead>
<tr>
<th>Answer Options</th>
<th>Response Percent</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>half-day / 2-3 hours per day</td>
<td>71.9%</td>
<td>23</td>
</tr>
<tr>
<td>full-day / 4-6 hours per day</td>
<td>34.4%</td>
<td>11</td>
</tr>
<tr>
<td>2-3 days per week</td>
<td>21.9%</td>
<td>7</td>
</tr>
<tr>
<td>5 days per week</td>
<td>53.1%</td>
<td>17</td>
</tr>
</tbody>
</table>

answered question 32

skipped question 16

Graph 6

Our preschool program operates according to the following schedule. (Please check all that apply)
Chart 7

**Survey of Preschool Programs in Indiana School Corporations**

<table>
<thead>
<tr>
<th>Answer Options</th>
<th>Response Percent</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>less than 15 students</td>
<td>26.9%</td>
<td>7</td>
</tr>
<tr>
<td>15 - 17 students</td>
<td>26.9%</td>
<td>7</td>
</tr>
<tr>
<td>18 - 20 students</td>
<td>11.5%</td>
<td>3</td>
</tr>
<tr>
<td>21+ students</td>
<td>34.6%</td>
<td>9</td>
</tr>
</tbody>
</table>

answered question: 26

skipped question: 22

Graph 7

*Our preschool class(es) have an approximate total enrollment of:*
Chart 8

### Survey of Preschool Programs in Indiana School Corporations

Our preschool class(es) is/are staffed by Teachers who have:  (please check all that apply):

<table>
<thead>
<tr>
<th>Answer Options</th>
<th>Response Percent</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>certification (4-year degree)</td>
<td>93.8%</td>
<td>30</td>
</tr>
<tr>
<td>2-year degree</td>
<td>12.5%</td>
<td>4</td>
</tr>
<tr>
<td>any training in early childhood education</td>
<td>12.5%</td>
<td>4</td>
</tr>
<tr>
<td>high school diploma</td>
<td>3.1%</td>
<td>1</td>
</tr>
</tbody>
</table>

*answered question* 32  
*skipped question* 16

Graph 8

Our preschool class(es) is/are staffed by Teachers who have:  (please check all that apply):
Chart 9

Survey of Preschool Programs in Indiana School Corporations

Our preschool class(es) is/are staffed by Teaching Assistant(s) who have: Please check all that apply:

<table>
<thead>
<tr>
<th>Answer Options</th>
<th>Response</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-4 years college</td>
<td>13.8%</td>
<td>4</td>
</tr>
<tr>
<td>1-2 years college</td>
<td>44.8%</td>
<td>13</td>
</tr>
<tr>
<td>any training in early childhood education</td>
<td>31.0%</td>
<td>9</td>
</tr>
<tr>
<td>high school diploma</td>
<td>58.6%</td>
<td>17</td>
</tr>
</tbody>
</table>

answered question 29
skipped question 19

Graph 9
Chart 10

<table>
<thead>
<tr>
<th>Answer Options</th>
<th>Response Percent</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal funds (Title I, etc.)</td>
<td>51.6%</td>
<td>16</td>
</tr>
<tr>
<td>Federal grant</td>
<td>38.7%</td>
<td>12</td>
</tr>
<tr>
<td>State funds</td>
<td>41.9%</td>
<td>13</td>
</tr>
<tr>
<td>State grant</td>
<td>12.9%</td>
<td>4</td>
</tr>
<tr>
<td>Private funds</td>
<td>6.5%</td>
<td>2</td>
</tr>
<tr>
<td>Private grant</td>
<td>3.2%</td>
<td>1</td>
</tr>
<tr>
<td>Local funds - General, etc.</td>
<td>35.5%</td>
<td>11</td>
</tr>
<tr>
<td>Parent fees - full or partial, income-based, etc.</td>
<td>32.3%</td>
<td>10</td>
</tr>
<tr>
<td>Other (please specify)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

answered question  31
skipped question  17

Graph 10

Our preschool program is funded by the following sources: (Please check all that apply.)

- Federal funds (Title I, etc.): 51.6%
- Federal grant: 38.7%
- State funds: 41.9%
- State grant: 12.9%
- Private funds: 6.5%
- Private grant: 3.2%
- Local funds - General, etc.: 35.5%
- Parent fees - full or partial, income-based, etc.: 32.3%
Chart 11

### Survey of Preschool Programs in Indiana School Corporations

Our preschool program utilizes the following as a base for curriculum and instruction:

<table>
<thead>
<tr>
<th>Answer Options</th>
<th>Response Percent</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Scope</td>
<td>6.7%</td>
<td>2</td>
</tr>
<tr>
<td>State standards Foundations for Early Childhood Education</td>
<td>53.3%</td>
<td>16</td>
</tr>
<tr>
<td>Direct Instruction</td>
<td>20.0%</td>
<td>6</td>
</tr>
<tr>
<td>Locally-developed curriculum (corporation-wide)</td>
<td>23.3%</td>
<td>7</td>
</tr>
<tr>
<td>Teacher-selected materials</td>
<td>56.7%</td>
<td>17</td>
</tr>
<tr>
<td>Other (please specify)</td>
<td></td>
<td>4</td>
</tr>
</tbody>
</table>

*answered question* 30  
*skipped question* 18

Graph 11
Chart 12

<table>
<thead>
<tr>
<th>Survey of Preschool Programs in Indiana School Corporations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Our preschool program has resulted in the following benefits to our young children as reported by teachers/staff/parents: (Please check all that apply.)</td>
</tr>
<tr>
<td><strong>Answer Options</strong></td>
</tr>
<tr>
<td>Improved motivation in school.</td>
</tr>
<tr>
<td>Increased acquisition of socialization skills.</td>
</tr>
<tr>
<td>No observable benefits</td>
</tr>
<tr>
<td><strong>answered question</strong></td>
</tr>
<tr>
<td><strong>skipped question</strong></td>
</tr>
</tbody>
</table>

Graph 12

Our preschool program has resulted in the following benefits to our young children as reported by teachers/staff/parents: (Please check all that apply.)
Our preschool program has resulted in the following long-lasting academic benefits to our young children as measured and reported by teachers and administrators: (Please check all that apply.)

<table>
<thead>
<tr>
<th>Answer Options</th>
<th>Response Percent</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improved reading ability</td>
<td>69.0%</td>
<td>20</td>
</tr>
<tr>
<td>Less grade retention</td>
<td>51.7%</td>
<td>15</td>
</tr>
<tr>
<td>Less need for remediation and special education services</td>
<td>65.5%</td>
<td>19</td>
</tr>
<tr>
<td>Higher graduation rate</td>
<td>3.4%</td>
<td>1</td>
</tr>
<tr>
<td>No observable benefits</td>
<td>10.3%</td>
<td>3</td>
</tr>
<tr>
<td>Other (please specify)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

answered question 29  
skipped question 19

Our preschool program has resulted in the following long-lasting academic benefits to our young children as measured and reported by teachers and administrators: (Please check all that apply.)
Chart 14

### Survey of Preschool Programs in Indiana School Corporations

The reason(s) we have NOT implemented a preschool program is/are the following (please check all that apply):

<table>
<thead>
<tr>
<th>Answer Options</th>
<th>Response Percent</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of funding (federal, state, local, private, grant, etc.)</td>
<td>77.8%</td>
<td>14</td>
</tr>
<tr>
<td>Funds presently allocated to full-day Kindergarten</td>
<td>33.3%</td>
<td>6</td>
</tr>
<tr>
<td>Other budget priorities (state-mandated, locally-decided, etc.)</td>
<td>61.1%</td>
<td>11</td>
</tr>
<tr>
<td>Lack of available space (no extra classrooms)</td>
<td>11.1%</td>
<td>2</td>
</tr>
<tr>
<td>Lack of early childhood curriculum</td>
<td>0.0%</td>
<td>0</td>
</tr>
<tr>
<td>Other (please specify)</td>
<td></td>
<td>5</td>
</tr>
</tbody>
</table>

answered question 18

skipped question 30

Graph 14

The reason(s) we have NOT implemented a preschool program is/are the following (please check all that apply):
Chart 15

Survey of Preschool Programs in Indiana School Corporations

<table>
<thead>
<tr>
<th>Does our school corporation have a full-day Kindergarten program?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Answer Options</td>
</tr>
<tr>
<td>----------------</td>
</tr>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>No</td>
</tr>
</tbody>
</table>

answered question 46
skipped question 2

Graph 15

Does our school corporation have a full-day Kindergarten program?

- Yes: 100.0%
- No: 0.0%
### Chart 16

**Survey of Preschool Programs in Indiana School Corporations**

If our school corporation had adequate funding accessible and classroom space available, we would have BOTH a preschool and full-day Kindergarten program.

<table>
<thead>
<tr>
<th>Answer Options</th>
<th>Response Percent</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>88.4%</td>
<td>38</td>
</tr>
<tr>
<td>No</td>
<td>11.6%</td>
<td>5</td>
</tr>
</tbody>
</table>

- **answered question**: 43
- **skipped question**: 5

### Graph 16

If our school corporation had adequate funding accessible and classroom space available, we would have BOTH a preschool and full-day Kindergarten program.

- 88.4% Yes
- 11.6% No