

AN EXPLORATORY STUDY OF 2007-08 IDAHO
EARLY CHILDHOOD SPECIAL EDUCATION OUTCOME DATA

by

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ABSTRACT

Legislation such as No Child Left Behind (NCLB) and the Individuals with Disabilities Education Improvement Act (IDEA) of 2004 include accountability and enforcement provisions for the education of all children, including children with disabilities. The United States Department of Education, through the Office of Special Education Programs (OSEP), requires all local educational agencies (LEAs) to submit, on an annual basis, data regarding the developmental outcomes and academic achievement of preschool children and youth with disabilities ages 3 through 21 in accordance with NCLB and IDEA 2004. OSEP has established indicators that are meant to inform and support Early Childhood Special Education (ECSE) performance, assessment, and reporting. Functional performance of preschool children with disabilities in the three early childhood outcome areas is measured and reported to OSEP through the completion of the Child Outcome Summary Form (COSF). The information needed to properly complete the COSF should come from multiple sources and settings. The 2007-08 school year marks the first time that Idaho has submitted ECSE/COSF data to the federal government through OSEP. An exploratory study of the Idaho sample yielded expected as well as unexpected findings. Analyses of the Idaho sample found gender, ethnicity, region, and length of intervention predictive of higher scores on one or more early childhood outcome areas. Preschool girls in the Idaho sample scored, with statistical significance, higher than preschool boys only in outcome one and outcome three.

Generally, preschool girls score higher than preschool boys across all domains. White preschool children in Idaho scored higher than their non-white peers in outcome two, which is supportive of ethnicity studies on the national level. (The vast majority of non-white preschool children in the 2007-08 ECSE Idaho sample are Hispanic.) Preschool children in the rural regions of Idaho (north central Idaho and southeast Idaho) scored higher than did their suburban peers in southwest Idaho. While the 2007-08 Idaho ECSE/COSF sample represented a low incidence of reporting and a high degree of reporting error, findings suggest that increased length of intervention predictive of higher COSF scores across all outcome areas. Beyond the OSEP accountability requirements, strong ECSE outcome data may prove helpful for educators in Idaho in the facilitation of pre-kindergarten student growth and to make meaningful early childhood program improvements.

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CHAPTER ONE: INTRODUCTION TO THE EXPLORATORY STUDY

A watchword in modern education is accountability. Educational accountability is the assurance that degrees or certificates are evidence of proficiency at some minimum level (ERIC, 1984). Accountability in education further refers to the practice of holding educational systems responsible for the quality of their products—students' knowledge, skills, behaviors, and attitudes (Levin, 1974). In the United States, educational accountability has its roots in cost accounting. In this context, cost accounting is a process for quantifying learning outcomes and attaching costs to them (Levin, 1974). Kirst (1990) makes the comparison that just as one can determine the cost of producing an automobile, so too could one determine the cost of producing a trained graduate. While educational accountability is more complex than output efficiency, waning public confidence in education is driving the need for educators to document learning.

Today more than ever, tough economic times requiring increased fiscal responsibility, competition in the global market place, as well as ethical and social ramifications of a democratic education are a few of the factors driving results-based education (Gutmann, 1987). Legislation such as No Child Left Behind (NCLB) and the Individuals with Disabilities Education Improvement Act of 2004 (IDEA 2004) include accountability and enforcement provisions in the education of all children, including children with disabilities. To this end the U.S. Department of Education authorized the Office of Special Education Programs (OSEP) to annually collect data regarding

developmental outcomes and academic achievement for infants, toddlers, children and youth with disabilities birth through age 21 (OSEP, 2008). OSEP provides financial and leadership support to assist states and local education agencies (LEAs) to meet the mandates of NCLB and IDEA 2004. OSEP has established indicators to inform and support early childhood special education (ECSE) performance. As a part of each state's Annual Performance Reports (APRs) in compliance with NCLB and IDEA 2004, OSEP now requires that each state reports on three child outcome indicators for preschool special education (Part B/619) programs (OSEP, 2008).

Indicator Number Seven for ECSE performance is measured through the use of the Child Outcome Summary Form (COSF). (More detailed information regarding the COSF is provided in subsequent chapters of this exploratory study.) The three ECSE outcomes are functional in that they reflect a child's ability to take meaningful action in the context of everyday living (OSEP, 2008). Outcome One is an evaluation of positive social-emotional skills including social relationships; Outcome Two is an evaluation of the acquisition and use of knowledge and skills including early language/communication and early literacy; and Outcome Three is an evaluation of the preschool child's ability to use appropriate behavior such that his/her needs are met (OSEP, 2008).

Study Purpose

The purpose for the exploratory study of the 2007-08 Idaho ECSE outcome data is threefold. First, the results of this exploratory study may serve as impetus for further and much needed investigation into the process and end product of ECSE outcome data. OSEP, the Early Childhood Outcome (ECO) Center, and the Idaho State Department of

Education acknowledge that in the initial years of data collection the data probably will not be highly reliable and valid (ECO, “Federal Requirements,” 2006). Second, evaluation of ECSE outcome data may provide clarity and increased support that are necessary in order to facilitate and streamline the COSF reporting for the ECSE teachers and service providers. Finally, evaluation of ECSE outcome data as covered on COSF has the potential to be powerful information that can help to inform instruction and program improvements while advancing student performance as more work is done to promote proper reporting.

CHAPTER 2: LITERATURE REVIEW

A Nation at Risk Report

President Ronald Reagan commissioned a committee to study education in America and the findings were presented in April of 1983 in a highly publicized report entitled *Nation at Risk*. While debate in this country regarding education reform and accountability did not begin with the release of the *Nation at Risk* report, the bell certainly sounded loudly calling many concerned citizens, law makers, leaders of commerce, educators, and others back to school. While subsequent studies such as the *Sandia Report* in 1990 refute many of the *Nation at Risk* findings as contextually inaccurate (Ansary, 2009) the *Nation at Risk* report stands as a seminal work that served to kick-start tough talk about the state of education in America. The *Nation at Risk* report created a sense of urgency and accountability in education that continues today.

A Nation at Risk report spoke to a rising tide of mediocrity in America in which there was once “unchallenged preeminence in commerce, industry, science, and technological innovation” (“A Nation at Risk,” 1983, p. 1). Some of the *Nation at Risk* findings are based on the results of 19 academic tests in which American students were never first and frequently scored last compared to students in other industrialized nations (“A Nation at Risk,” 1983). Further, the *Nation at Risk* report cited (a) SAT scores dropping between 1960 and 1980, (b) decline in achievement in the sciences, and (c) business and military agencies forced to spend millions on remedial education for new

hires and new recruits (Ansary, 2009). Reagan's commission recommendations included a strong public commitment to education, high educational standards and expectations, and the promotion of a learning society starting from preschool on into adulthood. A *Nation at Risk* report called for strong support for the twin goals of equity and high-quality schooling in America in which neither goal is to yield to the other in practice and principle ("A Nation at Risk," 1983). Other questions raised in the wake of a *Nation at Risk* report is how students are assessed, how varying state and local education agencies' (LEAs) standards compare, and how such findings are meaningfully evaluated and reported.

National Assessment of Education Progress (NAEP)

Some of the data used to assess how students perform on the national stage comes from the National Assessment of Education Progress (NAEP), which is often referred to as "The Nation's Report Card." NAEP reports statistical information about student performance and factors related to educational performance and includes students drawn from both public and private schools for grades 4, 8, and 12 (NAEP, 2005). The rigorous assessments used by NAEP to examine long-term trends in student performance began in the early 1970s. Over the years, NAEP has given several long-term assessments to monitor student progress in a variety of subjects used for the purposes of accountability and program reform. NAEP scores are often used as a guide placed alongside state scores to validate local educational performance or to impugn states' efforts (NAEP, 2005). NAEP, as one part of the accountability movement, reminds educators, the

general public, and policy makers, that assessment and evaluation are foundational aspects of the educational reform movement.

Goals 2000: Education America Act

While decision makers with varying political agendas continued to debate over the process of schooling America's youth, consensus was that education is the major foundation for future strength of this country. To this end, a bi-partisan group in Congress joined with the Clinton Administration to form the "Goals 2000: Educate America Act," which President Bill Clinton signed into law on March 31, 1994. The purpose of the Act was,

To improve learning and teaching by providing a national framework for education reform; to promote research, consensus building, and systematic changes needed to ensure educational opportunities and high levels of educational achievement for all students, to provide a framework for reauthorization of all Federal education programs; to promote the development and adoption of a voluntary national system of skill standards and certifications; and for other purposes.

(H.R. 1804, 1994, p. 1)

Central in the Act was the commitment that control of education would remain with state and LEAs but that the federal government would step up to form a new partnership in an effort to improve student academic achievement ("Summary Goals 2000," 1994). At the heart of "Goals 2000" was a program of grants that allowed states

and LEAs the opportunity to develop and implement their own educational reforms focused on raising student achievement (“Summary Goals 2000,” 1994).

The National Education Goals as stated in the Act (Sec. 102) are as follows:

“By the Year 2000 -

1. All children in America will start school ready to learn.
2. The high school graduation rate will increase to at least 90 percent.
3. All students will leave grades 4, 8, and 12 having demonstrated competency over challenging subject matter.
4. United States students will be first in the world in mathematics and science achievements.
5. Every adult American will be literate and will possess the knowledge and skills necessary to compete in a global economy and exercise the rights and responsibilities of citizenship.
6. Every school in the United States will be free of drugs, violence, and the unauthorized presence of firearms and alcohol and will offer a disciplined environment conducive to learning.
7. The nation’s teaching force will have access to programs for the continued improvement of their professional skills.
8. Every school will promote partnerships that will increase parental involvement and participation in promoting social, emotional, and academic growth in children.”

(“Summary Goals 2000,” 1994, pp. 1-2)

Within the framework of these goals, participating states and LEAs were asked to set rigorous standards to promote educational excellence. States were asked to come up with strategies for helping students reach these challenging standards. States were granted unprecedented flexibility when developing and implementing broad-based reform. “Goals 2000” was a direct outgrowth of the state-led education reform movement of the 1980s (“Summary Goals 2000,” 1994). As work continued on “Goals 2000,” a change in presidential administrations and a new focus on educational accountability and reform spawned a reauthorization of the law.

No Child Left Behind (NCLB)

No Child Left Behind Act (NCLB) of 2001 signed into law by President George W. Bush in January 2002 is a reauthorization of Public Law 107-87, the Elementary and Secondary Education Act (ESEA) of 1965. ESEA, though extremely important to American education, has proven to be very difficult to implement and manage (Jorgensen and Hoffmann, 2003). So it should be no surprise that NCLB by its nature and complexity has also proven to be a challenging undertaking. Under NCLB, “all students” are required to meet grade level expectation on state standards by 2013-14 (OESE, 2006). The performance of “all students” in communication, arts, and math is evaluated within a subgroup. Subgroups are groups of students categorized by race, ethnicity, economic status or disability. The subgroups areas are Asian and Pacific Islander, African American, Hispanic, Native American, White, Free/Reduced Lunch, IEP (special education), LEP (Limited English Proficiency), and Other/Non-response (Missouri Department of Elementary and Secondary, 2006). Each subgroup in a school

is required to meet annual yearly progress (AYP) unless there are 30 or fewer students in the subgroup. There must be 50 students in the IEP and LEP subgroups for them to be accountable for AYP (Missouri Department of Elementary and Secondary, 2006, p. 1). The tracking of subgroups called for in NCLB has brought more fully to the surface the rumblings that have been occurring in tandem with the education accountability and reform movement, namely the civil rights of children with disabilities (Jorgensen and Hoffmann, 2003). While children with disabilities is not the only subgroup tracked by NCLB, the special education population is of particular pertinence in this exploratory study (OESE, 2006).

Individuals with Disabilities Education Improvement Act Aligned to NCLB

It was not until the 1970s that courts began to act upon the principle that children with disabilities even had a right to public education, let alone a free and appropriate public education (FAPE). Various legal actions (i.e., lawsuits) of the time helped to bring about Public Law 94-142 or the Education for All Handicapped Children Act (EAHCA) of 1975. Legislation during the 1980s reflected a national concern for young children with disabilities which brought about the 1986 amendment to EAHCA (EAHCA is sometimes referred to as EHA) or P.L. 99-457 (OSEP, 2000). Public Law 99-457 extended all rights and protections of the earlier law to children with disabilities ages three to five regardless of state age limits (Bagnato et al., 2000). A later amendment to EHA came in 1990 which changed the name to the Individuals with Disabilities Education Improvement Act or IDEA (OSEP, 2000). Further changes were made in 1997 and the current reauthorization, IDEA 2004, was amended in part to align with

NCLB. Both laws support the notion that students with disabilities should have access to the general education curriculum.

Despite the rigorous mandates found in NCLB and IDEA 2004 for inclusion of students with disabilities in standards-based reform, special educators have not played a major role in the development of either state content standards or the development of curriculum frameworks (Wakeman, Browder, Meier, & McColl, 2007). Further, to receive much needed federal money, states must articulate their education plans for all children, including children with disabilities, and report progress on an annual basis.

NCLB and IDEA 2004 - State Performance Plans

In accordance with IDEA 2004, each state is required to have a performance plan evaluating the state's implementation of Part B and describing how the state will improve such implementation (Part B SPP, 2005). This plan is called the Part B State Performance Plan (SPP). IDEA 2004 Part B, Sections 611 and 619 formula grant programs, assist states in providing a free appropriate public education (FAPE) in the least restrictive environment for children with disabilities ages 3 through 21. The states report annual performance of its LEAs on the targets of its State Performance Plan (SPP) called Part B Annual Performance Reports (APR); this information is submitted to the Secretary of Education and is also made available to the general public (Part B SPP, 2008). Each state provides SPP and APR reports, as required by IDEA 2004, and Annual Yearly Progress (AYP), as required by NCLB. The AYP report is evaluative in nature and is intended to highlight where LEAs need improvement and should focus their resources. It is important to note that in compliance with IDEA 2004 and NCLB, the

state AYP report is meant to detail the performance of all student subgroups and is not to be a reporting of the average student performance (Part B SPP, 2008). Schoen and Fusarelli (2008) make the point that already built into IDEA 2004 and NCLB are the mechanisms for accountability including the ability for non-educators to monitor progress (Schoen and Fusarelli, 2008).

Tracking Subgroups

Current public debate on education reform calls for the closing of the achievement gap among the various subgroups and traditional white, middle-class students. Further, our educational system is now recognizing that one means of leveling the playing field is to prevent educational deficiencies that down the road are much more time consuming and costly to rectify (Barnett, Epstein, Friedman, Stevenson-Boyd, & Hunstedt, 2008). Research has demonstrated that quality preschool programs for at-risk children and children with special needs have positive short- and long-term effects on young children's learning and development.

Corroborated benefits for early childhood interventions include benefits in academic achievement, behavior, educational progression and attainment, delinquency and crime, and labor market success, among other domains (Karoly, Kilburn, & Cannon, 2005). Further, early childhood interventions with better-trained caregivers and smaller child-to-staff ratios appear to offer more favorable results. Increasing public investment in effective preschool education programs for all 3 and 4-year old children can produce substantial education, social, and economic benefits (Barnett, 2008). Well-designed early childhood interventions have been found to generate a return to society ranging from

\$1.80 to \$17.07 for each dollar spent on the program (Karoely et al., 2005). Thus, effective early childhood special education programs may be one of the most significant ways to positively impact the education achievement of students with disabilities.

Early Childhood Standards and Assessment of Early Childhood Programs

Each state has their own early learning content standard designed for prekindergarten children, ages 3 to 5-years. Barbara Bowman, President Emeritus of the Erikson Institute, said:

Standards are an essential first step for designing effective preschool curricula since they represent an agreed upon agenda for teaching and learning...Standards...recognize the interconnectedness of emotional, social, cognitive, and physical development and learning—the whole child. Like all good standards, they should be used as the base for reflective teachers as they create experiences that build on what children already know and capture their interest in learning.

(Henderson, 2004, p. 2).

Of further importance explains Henderson (2004), is the utilization of fundamental guiding principles in early education.

“These guiding principles include the following:

- Early learning and development are multidimensional, in which domains are highly interrelated.
- Young children are capable and competent.
- Children are individuals that develop at different rates.

- Children exhibit a range of skills and competencies in any domain of development.
- Knowledge of child development and growth and expectations must be consistent with this knowledge.
- Young children learn through active exploration in child-selected and teacher-selected activities.
- Families are the primary caregivers and educators of young children.”

(Henderson, 2004, pp. 4-5).

Even when early childhood programs utilize appropriate standards, capturing accurate child outcomes is difficult. Meisels (2006) points out that children differ greatly in their (a) early experiences, (b) opportunities to learn, (c) genetic inheritance, and (d) family structure, all of which adds to the challenge of evaluating outcomes (pp. 8-9). Meisles (2006) reports that accountability can be meaningful in early childhood education only if it is not monolithic in concept or high-stakes in its implementation.

Issues surrounding standards-based assessments and early childhood accountability policies are important, challenging, and controversial (Kagan et al., “NECA Report,” 2007). Between 2003 and 2007, states invested 1.9 billion dollars in preschool to improve child outcomes (Kagan et al., “NECA Recommendations,” 2007, p. 1). However, few have implemented a comprehensive effort for assessing and improving performance to ensure that early childhood programs return intended results (Kagan et al., “NECA Recommendations,” 2007, p. 1). The National Early Childhood

Accountability (NECA) Task Force began work in 2005 to study and make recommendations to help states improve program performance and enhance positive outcomes for preschool children (Kagan et al., “NECA Recommendations,” 2007, p. 1).

For most states, early childhood programs consist of Head Start, child care, ECSE, and state-funded pre-kindergarten. Each of these programs have their own approach to program standards, assessment and reporting requirements, technical assistance, program monitoring, and professional development as well as their own legislative and regulatory requirements (Kagan et al., “NECA Report,” 2007, p. 18). NECA Task Force experts concur with the findings of others in early education who have expressed deep concerns about the potential misuse of EC assessment data when used to “reward or punish” early childhood programs on the basis of their children’s test scores (Kagan et al., “NECA Report,” 2007, p. 15).

Unfortunately, there is no comprehensive or universal system in place guiding early educators and policy makers. Sue Urahn, managing director of Pew’s Center on the States said,

Without a consistent means of measuring results and evaluating practices, states have no way of identifying successful practices in programs that work, or of helping to improve programs that don’t.

(Kagan et al., “NECA Recommendations,” 2007, p. 1)

As reported by the National Association of Early Childhood Specialists in State Department of Education (NAECS/SDE) (2003), a growing body of research is concluding that early childhood programs should be evaluated for continuous

improvement. Assessments must be useful to accomplish the multiple and interrelated purposes of early care and education and early intervention (Bagnato et al., 2000, p. 34). Researchers (Bagnato & Neisworth, 1999) support a developmental approach to assessment and cite eight critical qualities deemed essential in early childhood assessment (Bagnato et al., 2000). The eight critical qualities are that the assessments be useful, acceptable, authentic, collaborative, convergent, equitable, sensitive, and congruent (Bagnato et al., 2000, p. 34). Further, comprehensive goals should be used for evaluation, and evaluations should use valid designs while employing multiple sources of data. Sampling should be used when assessing individual children as part of large-scale program evaluation with safeguards in place to insure the validity and reliability of results (NAECS/SDE, 2003). Individuals conducting the evaluations should be well-trained and receive continuous support. The children's gains over time should be the primary emphasis and the results should be shared with the public (NAECS/SDE, 2003, pp. 5-6). While the challenges of early childhood accountability are many, the role of bolstering the capacity of early childhood programs, preparing all children for school, and narrowing the achievement gap among the various subgroups must be met.

Early Childhood Special Education

While the work continues to assess early childhood programs to justify public funding for all 3 and 4-year old children, the majority of preschool programs currently funded by local, state, and federal governments are Head Start and early childhood special education program (ECSE) programs. Early childhood special education refers to services and supports for children with disabilities ages three through five years (Bagnato

et al., 2000, p. 18). Accountability for the early childhood subgroup, ECSE, falls under the charge of the Office of Special Education Programs (OSEP) in accordance with provisions of IDEA 2004. OSEP requires local ECSE programs to report on child and family outcomes on an annual basis (ECO, “Federal Requirements,” 2006). Under the reauthorization of IDEA 2004, ECSE children must have access to and demonstrate progress in the general curriculum. The assumption is that outcomes assessed are based on developmentally appropriate preschool curriculum that is in alignment with a particular state’s early learning content standards. Further, the ECSE child’s IEP would provide any accommodations and or modification necessary to meet needs toward the successful achievement of these standards (Preschool Special Education General Information, 2009).

For this exploratory study, the focus is on OSEP’s early childhood Indicator Number Seven which tracks young students on IEPs in regard to their functional performance in three outcomes areas using a 7-point Likert scale called the Child Outcome Summary Form (COSF). LEAs are responsible to submit their COSF report on or before July 15 on an annual basis to their State Department of Education. Given the relatively new federal requirements, a brief review of the law including participants and terminology is necessary to contextualize the literature review pertinent for this exploratory study (ECO, “Federal Requirements,” 2006).

Early Childhood Indicator Number Seven

While the gathering of the information to complete the Child Outcome Summary Form (COSF) should come from multiple sources and settings, summary completion of

Indicator Number Seven is ultimately done by the case manager. Indicator Number Seven addresses the percentage of preschool children on IEPs that demonstrate improvement in three outcome areas. The three outcomes are:

Outcome One: Positive social-emotional skills including social relationships.

Outcome Two: Acquisition and use of knowledge and skills including early language/communication and early literacy.

Outcome Three: Use of appropriate behavior to meet their needs.

(Spiker, Hebbeler, & Bagnato, 2008, p. 19)

Positive social-emotional skills as assessed in Outcome One, for 3 to 5-year-old preschool children, refer to the age-appropriate manner in which the child relates to adults and peers. Further measurement in this domain includes the preschool child's ability to learn and follow rules including positive interaction in a group setting.

Assessment of social-emotional functioning for preschool children includes a close examination of issues pertaining to attachment, separation, and autonomy. Age-appropriate behavior in this domain includes positive expressions of emotion and feelings. Of further importance in the social-emotional area is the preschool child's ability to engage in age-appropriate social interaction and play (Spiker et al., 2008).

Acquisition and use of knowledge assessed for Outcome Two measures include a preschool child's ability to think and reason. Preschool children ages 3 to 5-years-old are assessed on their ability to remember and problem solve. Further measures in this domain include age-appropriate recognition and use of early concepts, specifically symbols, pictures, numbers, classifications, and spatial relationships. Preschool children

must also show positive and age-appropriate functioning in their ability to imitate as well as understanding of physical and social worlds. Finally, assessment in Outcome Two involves the preschool child's age-appropriate abilities in the areas of expressive language, communication, and early literacy (Spiker et al., 2008).

Outcome Three involves a global measure of a preschool child's ability to take appropriate action to meet their own needs. The IEP team will employ various means to capture a sense of the child's proficiency in taking care of these basic needs. Further assessment in this domain involves a preschool child's ability to properly use tools such as a fork, crayon, and toothbrush. Other functional skills in this domain include the preschool child's ability to get from place to place and integration of other motor skills for task completion. Age-appropriate functioning in Outcome Three include (especially in the case of the slightly older child) the ability to contribute to one's own health and safety. Preschool children are assessed on their ability to engage in self-help skills such as toileting, grooming, dressing, and feeding. The preschool child should be observed acting in an age-appropriateness manner to obtain the things he/she wants and needs (Spiker et al., 2008).

The data reported on COSF is one small component of an annual requirement of the State Performance Plan (SPP) and Annual Performance Report (APR) in accordance with requirements of NCLB and IDEA 2004.

Early Childhood Outcomes Center (ECO)

The Early Childhood Outcomes Center (ECO) provides national leadership for ECSE by using data for program improvement through evidence, inference, and action.

The ECO Center is a collaborative effort of the SRI International, the University of North Carolina at Chapel Hill Frank Porter Graham Child Development Institute, Research Triangle Institute, and the University of Connecticut (ECO, “Federal Requirements,” 2006). The ECO Center was originally funded by the Office of Special Education Programs (OSEP) and is currently funded through September 2013. The ECO Center assists states with the implementation of high-quality outcomes measurement systems for early intervention and preschool special education programs in the areas of knowledge development, technical assistance and dissemination, and leadership and coordination (ECO, “Federal Requirements,” 2006).

The Child Outcome Summary Form (COSF)

The Child Outcomes Summary Form (COSF) developed by the Early Childhood Outcome Center (ECO) is a 7-point Lickert scale with 7 indicating functioning at an age-appropriate level. The summarization is completed electronically for 3 to 5-year-old ECSE children with Individualized Education Plans (IEPs) on three child outcome areas as required by the Office of Special Education Programs (OSEP) (ECO, “Federal Requirements,” 2006). COSF is not an assessment instrument, but a summary for accountability, program planning, and program improvement. When COSF scores are submitted by a LEA, the Department of Education is to examine the data to answer five questions regarding the proportion of ECSE students progressing at different rates. COSF is the result of a request by Congress for the states to produce outcome data to quantify developmental gains made by young children in their special education programs and to provide cost-benefit data to maintain funding (ECO, “Federal

Requirements,” 2006). See Appendix D for a copy of the COSF.

The COSF might best be conceptualized as generating a global sense of how a child is functioning across settings and situations. It is essential that the special education professional understand age-expected child development, have a firm understanding of the three child outcomes, and possess a clear understanding of how to use the COSF rating scale. In addition, it is most important that the rater understand what is considered age-appropriate expectations for a child functioning within the child’s culture. Further, the Division for Early Childhood (DEC) recommends using multiple sources of information such as professional team members, families, service providers, and caregivers when completing the COSF. The DEC also recommends the use of multiple types of measurement information such as observations, interviews, work samples, file reviews, anecdotal records, portfolios, informed clinical opinion, criterion-based observations, and norm-referenced assessments for completing COSF (“Child Outcomes,” 2009).

Returning to the fact that an outcome score of 7 for a student on COSF represents age-appropriate functioning, accurately assigning scores that are below this benchmark (scores 1 through 6) can be challenging. To determine appropriate scores in the 4 to 6 range, the rater should determine if the child’s functioning is age-appropriate across all or almost all settings. If the answer to this question is “No,” the rater must determine to what extent the child uses age-appropriate skills across settings and situations and score accordingly with a 4 or a 5. Finally, in making the differentiation between an outcome rating of 6 or 7, the rater must ascertain if any of the IEP team members have concerns

about the child's functioning with regard to the outcome area. If the answer is "Yes," the rating score would be a 6. If the answer to this question is "No," (meaning no IEP team member has concern regarding his or her functioning in the outcome area), the score would be a 7 (ECO, 2007).

When a rater has determined that the answer to a summary question in regard to a particular outcome is "No," meaning the child does not ever function in ways that would be considered age-appropriate with regard to an outcome, further work is necessary to ascertain whether the score is a 1, 2, or 3. At this point the rater needs to determine if the child uses any immediate foundational skills related to the outcome upon which to build age-appropriate functioning across settings and situations. If the answer remains "No," then the child would receive a score of 1 in this outcome. A score of 2 or 3 would be based on the extent to which a child is using immediate foundational skills across settings and situations (ECO, 2007). Preschool children differ greatly and caseloads are usually diverse, so making COSF assessment determinations is often quite difficult. To this end "crosswalks" or tangible examples of what a skill, at a particular score level should look like were produced to help case managers make these important determinations.

Crosswalks and Anchor Assessments

Crosswalks are another tool available for assisting ECSE teachers in the completion of COSF. Crosswalks give a visual indication of which items on an assessment tool relate to the three outcome areas. Crosswalks identify relationships between assessment instruments and the three childhood outcomes (ECO, "Crosswalks," 2006). The crosswalks are often a web-based resource prepared by the publishers of the

various assessment instruments that link each element of a particular assessment with the corresponding outcome area and can be used as a guide when completing the COSF (“Child Outcomes,” 2009).

There are 10 ECSE program entry and program exit anchor assessments that are currently being utilized in Idaho to assess young children in ECSE programs. The following anchor assessments are given for a variety of reasons including providing the information necessary to complete the COSF to meet federal reporting requirements from OSEP (“Idaho Early Childhood Outcomes,” 2006).

- Assessment, Evaluation, and Programming System (AEPS) for infants and children birth to age 6.
- Battelle Developmental Intervention 2nd Edition (BDI-II) for infants and children birth to 7-years 11-months.
- Bayley III Scales of Infant and Toddler Development 3rd Edition for infants and toddlers birth to 3.5-years.
- Brigance Revised for infants and children birth to 7-years. The fifth anchor assessment is the Carolina Curriculum for Infants and Toddlers with Special Needs for birth to 5-years.
- Creative Curriculum Developmental Continuum for children 3 to 5-years.
- Hawaii Early Learning Profile (HELP) for infants and children birth to 3-years.
- Observational Scale for Infants and Toddlers (OUNCE) birth to age 3.5-years.

- High Scope (COR) Infant and Toddler for infants and toddlers birth to 3-years.
- High Scope (COR) Preschool Crosswalk for children 2 to 6-years

Summary

Perhaps the only consensus among varying educational stakeholder groups is that educational accountability is here to stay. Over a quarter of a century of educational reform in America has resulted in only mixed results at best. While work continues toward the achievement of higher academic standards for American students, a gap in achievement still exists among the various subgroups tracked in the current legislation in regard to meeting basic academic proficiency levels. In the past five years, the debate over reform and accountability has extended to include early childhood educational programs. LEAs are now required to provide data regarding how their three to five-year olds on IEPs are achieving in three broad-based outcome areas. The federal government is interested in student functioning in Indicator Number Seven, which is summarized on COSF and included in the state's Annual Progress Report (APR). The Idaho 2007-08 ECSE outcome data represents Idaho's first attempt at meeting this federal mandate. Given the new requirements and the complexities involved when assessing young children, an analysis of Idaho's first ECSE outcome data sample is important. Securing valid and reliable ECSE data is necessary to inform instruction to better meet student needs and promote positive student growth and functioning. Further, solid ECSE outcome data can be used to guide program improvements and to address cost-benefit measures for accountability to taxpayers.

CHAPTER 3: METHODS

Design of the Study

This exploratory study is an analysis of early childhood special education (ECSE) outcome data for 2007-08 submitted by school districts throughout Idaho to the Idaho Department of Education and then onto the Office of Special Education Programs (OSEP) as a part of the State Performance Plan (SPP)/Annual Performance Report (APR). The subjects for this study are three to five year olds on Individual Education Plans (IEPs) receiving ECSE services in Idaho during the 2007-08 school year. The Idaho State Department of Education supplied the researcher with the early childhood special education (ECSE) outcome data. The total Idaho 2007-08 ECSE outcome data sample size for this exploratory study is 830.

Dependent and Independent Variables

In this study, the dependent variable is the three separate ECSE outcomes as described by the Child Outcome Summary Form (COSF). In brief, the first dependent variable is Outcome One, a measure of positive social-emotional skills. The second dependent variable is Outcome Two, a measure of the acquisition and use of knowledge and skills of early language/communication and early literacy. The third dependent variable is Outcome Three, a measure of appropriate behavior to meet student needs. The independent variables are gender, ethnicity, region (suburban and rural), and length of intervention.

Sample and Population

The total sample, N=830, represents three to five year olds on IEPs who exited early childhood special education (ECSE) services during the 2007-08 school year in the state of Idaho (as reported by LEAs to the Idaho Department of Education). Table 1 outlines the demographical information for the 2007-08 Idaho ECSE outcomes data in regard to independent variables: gender, ethnicity, and region.

Further examination of the 2007-08 Idaho ECSE data led to a logical division or analysis by region, with region as an independent variable. Boise, Meridian, Nampa, Caldwell and other Treasure Valley/southwest Idaho school districts were identified as the Suburban group, and as Region One. Region Two essentially refers to north central Idaho. Region Three is essentially southeast Idaho. Regions Two and Three together are designated as the Rural group; that is, those counties with a smaller population base commensurate to the large land area. (See Appendix C for a visual representation of regional divisions as well as named Idaho LEAs represented.)

**Table 1. Idaho ECSE Outcome Data 2007-08/Independent Variables
Gender, Ethnicity, and Regional Breakdowns**

	Gender and Ethnicity					
	Female	Male	White Female	Male	Non-white Female	Male
Idaho Sample Total 830	267 (32%)	563 (68%)	213 (80%)	465 (83%)	54 (20%)	98 (17%)
	Gender		Ethnicity			
	Female	Male	White		Non-white	
<u>Region One/ Suburban Group</u> (Southwest)	80 (30%)	187 (70%)	212 (79%)		55 (21%)	
Total Region One Sample: 267 (32.17% of 830)						
<u>Region Two/ Rural Group</u> (North central)	81 (30%)	188 (70%)	222 (83%)		47 (17%)	
Total Region Two Sample: 269 (32.41% of 830)						
<u>Region Three/ Rural Group</u> (Southeast)	106 (36%)	188 (64%)	245 (83%)		49 (17%)	
Total Region Three Sample: 294 (35.42% of 830)						

The length of intervention is the final independent variable examined in this exploratory study of the 2007-08 Idaho ECSE outcome data. To meet federal reporting standards, a student must receive at least six months of intervention prior to the report of ECSE outcomes. Given a high level of reporting errors in the 2007-08 Idaho ECSE

sample, this variable is of minimal value in this study. (See Appendix B for details about length of intervention.)

Research Questions

The following three research questions provided the basis for analyzing the data:

Research Question 1. Are there statistically significant relationships between the four independent variables (gender, ethnicity, region, and length of intervention) and the dependent variable Outcome One (positive social-emotional skills including social relationships)?

Research Question 2. Are there statistically significant relationships between the four independent variables (gender, ethnicity, region, and length of intervention) and the dependent variable Outcome Two (acquisition and use of knowledge and skills of early language/communication and early literacy)?

Research Question 3. Are there statistically significant relationships between the four independent variables (gender, ethnicity, region, and length of intervention) and the dependent variable Outcome Three (use of appropriate behavior to meet student needs)?

CHAPTER 4: RESULTS

Exploratory Study Results

The subjects for this study are 3 to 5-year-old children exiting early childhood special education (ECSE) programs in Idaho during the school year 2007-08. The Idaho sample size is N=830, representing all ECSE submissions for the school year 2007-08. The data was submitted to the Idaho State Department of Education by various local educational agencies (LEAs) across Idaho in response to federal mandates by the Office of Special Education Programs (OSEP) as outlined in the Individuals with Disabilities Education Improvement Act (IDEA) of 2004. The data, obtained from the COSF, is used to summarize functional improvement in positive social-emotional skills including social relationships (Outcome One), acquisition and use of knowledge and skills of early language/communication and early literacy (Outcome Two), and use of appropriate behavior to meet student needs (Outcome Three). Three regression analyses were done. An alpha level of .05 was used for all statistical tests and only results that showed statistical significance are discussed in the study results.

First Regression Analysis Results for Outcome One

Research Question 1 asked, “Are there statistically significant relationships between the four independent variables (gender, ethnicity, region, and length of intervention) and the dependent variable Outcome One (positive social-emotional

skills including social relationships).” The independent variable, gender, was found to have statistical significance of $p = .01$ in predicting higher scores for Outcome One. There is a significant statistical likelihood that young girls will be evaluated as having higher social-emotional skills than young boys in Outcome One. The independent variable, region, was found to have statistical significance of $p < .01$ predictive of higher scores for Outcome One. The COSF scores on Outcome One for the Suburban group (Region One/southwest Idaho) were consistently lower than scores in the Rural group (Region Two/north central Idaho and Region Three/southeast Idaho). The independent variable, length of intervention, was found to have statistical significance of $p < .01$ predictive of scores in Outcome One. As would be expected, the longer the intervention, the higher the COSF score in Outcome One.

Table 2. Results for Regression Analysis for Outcome One, Social-Emotional skills (N=830)

Independent Variable	B	SE B	β
Gender	.259	.087	.011*
Ethnicity	.214	.064	.063
Region	-.360	-.121	.002*
Length of Intervention	.001	.153	.000*

*indicates statistical significance, $p < .05$

Second Regression Analysis Results for Outcome Two

Research Question 2 asked, “Are there statistically significant relationships between the four independent variables (gender, ethnicity, region, and length of intervention) and the dependent variable Outcome Two (acquisition and use of knowledge and skills of early language/communication and early literacy)?” The independent variable, ethnicity, was found to have statistical significance of $p < .01$. Specifically, young white children were consistently evaluated as higher functioning in Outcome Two than were their non-white peers. The independent variable, region, was found to have statistical significance of $p < .01$ predictive of score for Outcome Two. The COSF scores on Outcome Two for the Suburban group (Region One/southwest Idaho) were consistently lower than scores in the Rural group (Region Two/north central Idaho and Region Three/southeast Idaho). The independent variable, length of intervention, was found to have statistical significance of $p < .01$ predictive of score on Outcome Two. The longer the intervention, the higher the COSF score in Outcome Two.

Table 3. Results for Regression Analysis for Outcome Two, Knowledge and language/communication (N=830)

Independent Variable	B	SE B	β
Gender	.170	.057	.096
Ethnicity	.375	.111	.001*
Region	-.317	-.106	.007*
Length of Intervention	.001	.138	.000*

*indicates statistical significance, $p < .05$

Third Regression Analysis Results for Outcome Three

Research Question 3 asked, “Are there statistically significant relationships between the four independent variables (gender, ethnicity, region, and length of intervention) and the dependent variable Outcome Three (use of appropriate behavior to meet student needs).” The independent variable, gender, was found to have statistical significance of $p = .02$ predictive of higher scores for Outcome Three. There is a significant statistical likelihood that girls will score higher than boys in their use of appropriate behavior to get their needs met. The independent variable, region, was found to have statistical significance of $p = .02$ predictive of score for Outcome Three. Children in the Suburban group (Region One/southwest Idaho) were consistently evaluated as lower functioning on Outcome Three than were children in the Rural group (Region Two/north central Idaho and Region Three/southeast Idaho). The independent variable, length of intervention, was found to have statistical significance of $p = .02$ predictive of scores on Outcome Three. The longer the intervention, the higher the COSF scores in Outcome Three.

Table 4. Results for Regression Analysis for Outcome Three, Functional behavior skills (N=830)

Independent Variable	B	SE B	β
Gender	.233	.078	.023*
Ethnicity	.097	.029	.402
Region	-.387	-.130	.001*
Length of Intervention	.001	.080	.022*

*indicates statistical significance, $p < .05$

CHAPTER 5: DISCUSSION, CONCLUSIONS, LIMITATION AND RECOMMENDATIONS

Discussion

Gender

This exploratory study of Idaho ECSE outcome data 2007-08 confirms some generally accepted patterns in education. For many years demographical findings support common gender ratios of at least two to one [boys to girls] in special education; in this study, 68% of the children are male. In an on-going national study, the Pre-Elementary Education Longitudinal Study (PEELS) (2003-2009), comparable gender ratio are shown at 29% female and 71% males in a preschool special education sample (“Early School Transitions,” 2009, p. 42).

A regression analysis of the Idaho ECSE sample found results supportive of the plausible notion that girls in early childhood are higher functioning in the areas of social-emotional skills including social relationships (Outcome One) and functional behavior skills necessary to meet needs (Outcome Three) and thus received higher COSF scores on Outcomes One and Outcome Three than do their male counterparts. This result is consistent with findings of (Fantuzzo et al., 2007) that preschool boys demonstrated significantly higher levels of classroom behavior problems, particularly externalizing and disruptive problems than girls.

The outcome in these domains should not be minimized as children's social behavior and peer relationships in preschool have a lasting effect on their social development as they enter grade school, which impacts academic success (Ewing and Taylor, 2008). However, further analysis of the 2007-08 ECSE Idaho sample found no statistically significant correlation between gender and Outcome Two (use of knowledge and language/communication and early literacy). These results are inconsistent with the norm on several levels.

Research (Gallagher & Lambert, 2006) shows that well-developed social skills are good predictors of academic success (Manwaring, 2008, p. 64). Further, in a longitudinal study of preschoolers and academic outcomes (Dale, Jenkins, Mills, & Cole, 2004) found that there was a "significant correlation between social skills and academic skills" (Manwaring, 2008, p. 64). In another longitudinal study, Early Childhood Longitudinal Study – Birth Cohort (ECLS-B), cognitive development and social-emotional development were closely tied. Further, the disparities found in ECLS-B are evident by 9 months and shown to grow larger by 24 months (Halle et al., 2009, p. 19).

The thrust of Outcome Two is acquisition of early literacy skills. The First Findings from the Third Follow-up of the Early Childhood Longitudinal Study, Birth Cohort (ECLS-B) (2007) found early childhood females received higher scores in receptive vocabulary, expressive language, overall literacy, math knowledge, and knowledge of colors and fine motor skills than did their male peers (Jacobson-Chernoff, Denton-Flanagan, McPhee, & Park, 2007, pp. 7-10). Further, in every age group, boys have scored lower than girls on U.S. Department of Education reading tests annually for

more than 30 years (Bowie, 2007, p. 1). Preschool girls in the Idaho sample scored, with statistical significance, higher than preschool boys only in Outcome One and Outcome Three. As given in the body of evidence briefly detailed, preschool girls score higher than preschool boys across all domains. Given that there is no statistical correlation of gender reflective of higher scores in Outcome Two (acquisition of knowledge and language including early literacy) in the Idaho sample, there is a need to closely examine Idaho's early childhood outcome data over the next years to determine if further findings are consistent. If so, then additional resources are needed to understand what is happening in Idaho's ECSE programs.

Perhaps a meaningful explanation for the gender disparity may be that performance on skills particular to Outcome One and Outcome Three are heavily influenced by teacher observation and teacher-child relationship quality. A growing body of evidence suggests that the quality of the relationship between the child and the classroom teacher makes an important contribution to early school adjustment, particularly in social and behavioral domains (Ewing & Taylor, 2008). Teacher-child closeness is more strongly associated with positive behavioral adjustment for girls as compared to boys. Young girls seem to be more attuned and responsive to their teachers and therefore may be in a better position to benefit from their guidance and instruction (Ewing & Taylor, 2008). Perhaps ECSE teachers expect that young girls will perform at higher levels in certain social developmental domains and in turn that little boys "will be boys," with these two teacher perceptions combining to influence evaluations.

Another explanation may be that the social-emotional and behavioral evaluations are simply a reflection of strong cultural and societal expectations which dictate the gender roles of compliance in little girls and promote (or at least indirectly permit) a higher incident of maladaptive social behavior in little boys. The Kohlberg studies (Kohlberg, 1996; Kohlberg & Ullian, 1974) and other foundational works establish that children between 3 and 5 year of age discover and construct their definition of gender, creating a set of criteria that separates “maleness” and femaleness” and replicate behaviors they have seen modeled. Further, their responses indicated that it is the developmental nature of preschoolers to rigidly apply prevalent gender stereotypes (Freeman, 2007). Parents and professionals send messages about gender roles by the ordinary routines they create at home and school. Adults are powerful role models as young children map out the dimensions of their gender identity (Freeman, 2007). There is also a need to better understand the factors involved in why preschool girls in Idaho receiving special education services consistently were evaluated as higher functioning in social-emotional and self-help skills and not in the acquisition of knowledge and language/communication skills and early literacy, as compared to preschool boys on IEPs.

Expanding the scope of gender differences, other factors affect educational outcomes in young children. Early childhood is a time when biological predisposition can be accentuated or minimized. Temperament is an important area of study referent to biologically based differences in a child’s capacity to adapt behavior in response to the environment (Behavioral-Developmental Initiatives, 2009). In fact, some temperamental

features are correlated with classroom behavior and achievement scores and predict overall student achievement better than their scores on tests of cognitive ability (Behavior-Development Initiatives, 2009). Parents and teachers need to be educated about differences in temperament and other biological predispositions in order to make the necessary accommodations to inform instruction and promote positive early childhood outcomes.

Ethnicity

The statistical significance predictive of lower scores for non-white children in Outcome Two (acquisition and use of knowledge and skills including early language/communication and early literacy) as compared to their white peers is a typical occurrence in our public schools. In the First Findings from the Third Follow-up of the Early Childhood Longitudinal Study, Birth Cohort (ECLS-B) (2007) similar statistical correlation supportive of the Idaho findings were found. Specifically, Hispanic preschoolers scored lower than their White peers in receptive vocabulary, expressive language, overall literacy, math knowledge, knowledge of colors, and use of fine motor skills (Jacobson-Chernoff et al., 2007, pp. 7-10). These findings are pertinent given that the vast majority of non-white students in the 2007-08 Idaho ECSE sample are Hispanic.

The prevalence of English as a second language among the non-white population provides one explanation for the disparity of scores in Outcome Two because of the strong language based skills required to understand and perform cognitive and language tasks found on the anchor assessments. Anchor assessments are typically administered in English. Thus, the reliability of the scores may also be suspect. Young Hispanic children

are attending preschool in much lower numbers than their non-white and African American peers (ARRA, 2009). Low attendance in preschool programs among Hispanic children is attributed to language barriers, cost, transportation, and a shortage of preschool spots in poor neighborhoods (Ramirez, 2009, p. 2). Access to early childhood intervention is becoming even more essential for this subgroup given the demographics of the Hispanic population.

Presently, 21% of the children under age five in the United States are Hispanic, with this population expected to increase 146% by 2050 (Early Childhood Education and Latino Children, 2009). Hispanic children who have the opportunity to participate in a high-quality early education program showed dramatic gains in cognitive and language skills, two specific areas that predict strong kindergarten readiness (Early Childhood Education and Latino Children, 2009, p. 1). The National Task Force on Early Childhood Education for Hispanics reported that “the most promising opportunities for raising Hispanic achievement are in the early childhood years” (Early Childhood Education and Latino Children, 2009, p. 2).

Of further concern is the fact that there is a disproportionate number of English Language Learners (ELL) in special education. Compared to ELL students without disabilities, ELL students with disabilities are likely to receive fewer language support services and be instructed only in English as high quality dual language programs are few and far between (ARRA, 2009). While ethnicity did not play a statistically significant role in scores for Outcomes One and Three across all regions in this study, achievement

gaps among the Hispanic population and other ethnicities as compared to their white peers cannot be overlooked. Researchers (Johnson-Powell & Yamamoto, 1997) urge educators to gain knowledge about what constitutes normal and abnormal behavior within a specific culture as not to bias instruction and assessment (Early Mental Health, 2003, p. 13).

While these findings may also reflect progress by Idaho ECSE programs toward the narrowing of achievement gaps for Hispanic children, the mixed results across the three outcome domains in this study are suspect. Multiple studies have shown that Hispanic children have lower levels of school readiness at the start of kindergarten than White and Black children (Duncan & Magnuson, 2005; Fryer & Levitt, 2004; Rumberger & Arellano, 2004; Zill, Collins, West, & Hausken, 1995; Reardon & Galindo, 2006, p. 5). Educational outcomes of Hispanic students in U.S. schools lag, on average, well behind those of non-Hispanic Whites and Asians, and in some cases, behind those of non-Hispanic Black students (Fry, 2003; Hirschman, 2001; Lee & Burkham, 2002; Rumberger & Arellano, 2004; Van Hook & Balistreri, 2002; Reardon & Galindo, 2006, p. 5). Several general observations may be made based upon analyses of the results. Young boys, particularly those who are non-white, may be at greater risk of being evaluated as lower functioning in all areas but especially in the areas of social-emotional functioning and in their use of self-help skills. Future analyses of Idaho ECSE data should note whether the pattern identified in this study continues.

Region

Explaining why there is a statistical correlation between regions in Idaho and outcomes scores is more difficult. Within the sample of 830 Idaho ECSE students, 303 student records were returned as receiving less than the minimum six months of intervention. Of the 303, 261 students records indicated zero days of intervention and 42 additional records list more than zero but less than six months of intervention (six months being the minimum length of intervention required for reporting purposes). These incomplete records represent 37% of the total records submitted (N=830), which is significant and cannot be discounted. Two hundred and twelve student records, representing 70% of the inaccurate records came from the Rural group (Region Two/north central Idaho and Region Three/southeast Idaho). Given the much higher propensity of incomplete records in the Rural regions, the statistical significance of the geographical region predictive of higher scores across Outcome areas One, Two, and Three may be suspect. A plausible explanation may be that the high level of support and resources necessary for practitioners to prepare and report reliable and valid COSF scores may have been somewhat lacking in the rural areas. Thus, the COSF scores in the rural areas may be inflated.

In the Digest of Education Statistics 2008, research conducted and compiled by the National Center for Educational Statistics (NCES) reported that for the 2007-08 school year (the same year represented in the Idaho ECSE sample), 3,889 children ages 3 to 5-years were served under IDEA 2004 Part B in Idaho (Synder, Dillow, & Hoffman,

2009). Yet, only 830 ECSE students (or just 21% of the total served under IDEA 2004 Part B) were represented in the COSF reporting for the 2007-08 school year. Thus, meaningful analyses of COSF data are difficult given the apparent reporting error level of the sample and the low incident of reporting for the Idaho ECSE population regardless of region. A much higher level of consistency and accuracy of reporting across all regions in Idaho must be achieved before any meaningful conclusions can be drawn regarding regional program effectiveness or ineffectiveness.

Length of Intervention

Finally, while this regression analysis does support statistically the relationship between length of intervention and outcome scores, these findings may be suspect because of the high level of inaccurate reporting and non-reporting as previously referenced. Nonetheless, while the largest public investment in early education is for child care subsidies, research has shown that an earlier start and longer duration of intervention in quality preschool educational programs produces better results (Barnett, 2008).

Conclusion

The brain develops more rapidly between birth and age five than at any other time. These early years are a time of vast social-emotional, physical and cognitive growth (Early Childhood Education and Latino Children, 2009). High-quality early intervention capitalizes on young children's potential, helping to ensure later success in school and in life (Early Childhood Education and Latino Children, 2009). Participation in early childhood education helps a child to develop stronger language skills and to

perform better once they enter school. Children that participate in pre-K programs are 30% more likely to graduate from high school and more than twice as likely to go to college than children that do not attend pre-K programs (Early Childhood Education and Latino Children, 2009). Further, early childhood intervention programs are designed to mitigate the factors that place children at risk for poor outcomes (Karoly et al., 2005). Not providing high-quality early childhood education intervention perpetuates a substantial achievement gap that exists between subgroups of children at the time they enter kindergarten and earlier (Kagan et al., "NECA Report," 2007, p. 13).

Yet, while policy makers claim appreciation of the significance of learning that occurs in the early years, participation in early childhood education programs is far from universal. In 2006, child care and preschool was a 48 billion dollar industry (Education Sector Debates, 2006). So while the hefty price tag is a major issue, much of the debate in early childhood centers on whether preschool should be universal (or publically funded for all preschool children) or targeted (preschool for poor and other disadvantaged subgroups). Opponents of universal preschool say results for poor children are erroneously generalized to all children. Opponents feel that it is not known whether mass state preschool systems could reach a level of quality that would compete with middle-class home environments (Education Sector Debates, 2006). Opponents feel that universal preschool encroaches on the right of parents to raise their children (in a nation of extreme diversity) as they see fit; and that early development should not be about getting three and four year olds ready for standardized testing (Education Sector Debates, 2006).

Idaho is one of 12 states in this country that do not offer state-funded preschool services for all children (Barnett, Epstein, Friedman, Stevenson-Boyd, & Hunstedt, 2008). Targeting certain children, only 17% of 4-year olds and 8% of 3-year olds in Idaho receive state-funded early childhood intervention through ECSE and Head Start (Barnett et al., 2008). Governmental funding as a result of childcare grants and provisions of NCLB and IDEA 2004 provide (free of charge for participants) early childhood educational services in Idaho for young children in only two subgroups: students from families with low SES and students with disabilities. Despite the fact that not quite one quarter of the children ages three to five-year old in Idaho receive state-funded preschool services, the cost of these programs to tax payers is high. In turn, taxpayers and other citizen groups demand accountability for dollars spent.

Still, educators are uneasy about the effect that increased performance demands may have on young children and early childhood programs (Kagan et al., “NECA Report,” 2007, p. 3). Poor accountability initiatives may result in misleading feedback, impose onerous burdens, and lead to misguided decisions (Kagan et al., “NECA Report,” 2007, p. 15).

The National Early Childhood Accountability (NECA) Task Force has been formed to oversee the assessment and improvement of early childhood learning and program quality. Their 2007 report entitled, “Taking Stock: Assessing and Improving Early Childhood Learning and Program Quality” speaks, in part, to early childhood accountability and assessment efforts in this country that are “fragmented and uncoordinated” (Kagan et al., “NECA Report,” 2007, p. 18).

Further, the NECA Task Force has developed recommendations pertinent to early childhood educational accountability. They recommend the formation of valid and reliable standards-based assessments on a continuum from PreK through grade 3. Further, the NECA Task Force strongly suggests that data analysis and reporting methods should come from assessments of children and program quality together (Kagan et al., “NECA Report,” 2007, p. 3). An accountability measure for Idaho ECSE programs is the COSF, which includes the reporting of a limited assessment measure for young children in relative isolation without the inclusion of other important factors which affect programming. Thus, this exploratory study provides some tentative, but valuable information that may ultimately help inform and strengthen Idaho’s early childhood accountability system.

Gender and Eligibility

Analysis of the 2007-08 Idaho ECSE outcome data, the first reporting of its kind in Idaho, has illuminated several significant issues. Analysis of the data supports typical gender norms in special education as 68% of the Idaho ECSE sample is male. Ninety-three percent of the sample is eligible for services in developmental delay (DD) and speech/language impairments (SLI), which is also typical of national eligibility norms for this age range. Exploratory study results showed that girls outperformed boys in the social-emotion and functional behavior domains in this study (regardless of ethnicity), which is also consistent with national preschool norms (Fantuzzo et al., 2007). In general terms, research found higher levels of aggressive behavior associated with lower

emergent literacy scores among preschoolers (“Early School Transitions,” 2003-2009, p. 42). More specifically aligned with exploratory study findings, research (Coolahan, Fantuzzo & Mendez, 2000; Lutz, Fantuzzo, & McDermott, 2002; Mendez, McDermott, & Fantuzzo, 2002) reveals that girls demonstrated significantly higher regulated behavior than boys (Fantuzzo et al., 2007). Girls also demonstrate greater self-control and less externalizing classroom behavior problems than boys (Fantuzzo et al., 2007, p. 21). Research (Coolahan et al., 2000; Lutz et al., 2002; Mendez et al., 2002) further indicates that boys demonstrate higher levels of classroom behavior problems, particularly externalizing and disruptive problem than girls (Fantuzzo et al., 2007, p. 21).

Atypical findings in this exploratory study of the 2007-08 Idaho ECSE sample include no statistical correlation for girls’ higher scores in relation to the boys in Outcome Two, which is acquisition of knowledge and language skills (early literacy). Young girls generally score higher than little boys across all domains in the preschool setting, as supported by the U.S. Census Bureau findings of the National Center for Educational Statistics (2001) in which girls scored higher than boys in all domains of school readiness skills (U.S. Census, 2001).

Ethnicity

Also representative of typical national norms were the lower scores in Outcome Two (acquisition of knowledge and language skills/early literacy) for non-white males and females. These findings were consistent with national findings in reference to the achievement gap for at-risk subgroups in comparison to their white peers as corroborated in Early Childhood Longitudinal Study, Birth Cohort (“Early School Transitions,” 2007).

The vast majority of the non-white children in the 2007-08 Idaho ECSE sample are Hispanic. Hispanic children comprise an at-risk subgroup with documented achievement gaps across all academic domains. The Idaho sample findings are consistent with this trend.

Region

Another unexpected result was the discovery of higher outcome scores for children receiving ECSE services in the rural areas of north central and southeast Idaho verses children receiving ECSE services in the suburban areas of southwest Idaho. However, further analysis and study of this ECSE data sample to determine a meaningful explanation for the disparity, such as improved programming in the outlying areas, is likely unwarranted because of the high level of reporting error. Seventy percent of the total reporting error in the 2007-08 Idaho ECSE sample occurred in the rural group data. The reporting error in the suburban group is 30%. While the error rate in the suburban group was much lower, the overall rate of reporting error for the 2007-08 Idaho ECSE sample as a whole arguably rendered the findings too diluted to draw any productive conclusions on regional effectiveness or ineffectiveness.

Length of Intervention

Analysis of the Idaho 2007-08 ECSE outcome data support the typical statistical correlation found between length of intervention and higher scores across all outcome areas. No support can be provided to dispute the conventional wisdom that the longer a child receives early childhood intervention, the higher their outcome score or performance regardless of the measure used to ascertain growth. National studies

consistently show that an earlier start and longer duration of intervention in quality preschool educational programs produces better results (Barnett, 2008).

Limitations

A major limitation of this exploratory study of the 2007-08 Idaho ESCE outcome data is the fact that the sample is unlikely to be an accurate representation of Idaho's ECSE population. The Digest of Education Statistics 2008 prepared by the National Center for Educational Statistics (NCES) (2009) reported that there were 3,889 preschool children ages 3 to 5-years in Idaho for the 2007-08 school year served under IDEA 2004, Part B (Synder et al., 2009). Yet the sample size for this exploratory study (though it represents all COSF records submitted to the Idaho State Department of Education) is N=830 or just 21% of the Idaho ECSE population for the 2007-08 school year (Synder et al., 2009). Another limitation affecting the usefulness of results is the high degree of inaccurate reporting. Of the 830 COSF reports, 303 student records were returned as receiving less than the minimum six months of intervention. Of the 303, 261 students records indicated zero days of intervention and 42 additional records list more than zero but less than six months of intervention (six months being the minimum length of intervention required for reporting purposes). These incomplete records represent 37% of the total records submitted (N=830), which is significant and cannot be discounted. Given that 70% of the incomplete reporting came from the Rural group, giving credence to the statistical significance of higher scores across all three outcome areas is problematic. The conclusion of increased program effectiveness in rural regions in relation to the suburban region, given the level of reporting error, cannot be supported.

Analysis of an additional independent variable, eligibility, proved insignificant in statistical terms because only 7% of the students identified in this study qualified for services in areas other than DD and SLI. Future samples of Idaho ECSE outcome data may provide justification for analysis of eligibility as well as aspects of program design.

Recommendations

Some people believe that accountability in early childhood education, especially early childhood special education, is not a means to an end. The process and product that is ECSE accountability are complex and dynamic. While an exploratory study of the Idaho 2007-08 ECSE outcome data yielded potentially more questions than answers with a number of findings warranting further study and investigation. Perhaps the strongest recommendation as a result of a low incidence of reporting and a high degree of reporting error in the Idaho sample is the need for increased technical support. Case managers and other pertinent IEP team members need, especially in the outlying areas in Idaho, additional training and technical support to secure accuracy on COSF reporting. Another recommendation to support COSF reporting accuracy is the installation of a second rater system to catch recording errors that, left unchecked, serve to corrupt data.

Typical early childhood assessments find scores for girls higher across all domains as compared to boys. The absence of a correlation predictive of higher scores in Outcome Two (acquisition of knowledge and language including early literacy) for girls as compared to boys and the correlation between lower scores in Outcome One (social-emotional) and Outcome Three (functional behavior) by boys as compared to girls—support the recommendation that increased professional education and support is needed

to increase the awareness and support of gender differences relevant to meeting the social-emotional, behavioral, and academic needs of preschool boys and girls.

In addition, continued professional education and support are needed to increase the awareness and support of cultural and language issues relevant to meeting the needs of Hispanic children and other non-White and ELL children in Idaho ECSE programs. This recommendation is reasonable given the lower scores on Outcome Two, acquisition of knowledge and language including early literacy, by non-White children in Idaho as compared to their White peers.

Perhaps beyond the scope of an exploratory study, further study of subsequent COSF data sets is recommended for a possible expansion of independent variables worthy of analyses. Given the fact that the 2007-08 Idaho ECSE sample was the first reporting of such data, future COSF samples may be more accurate and complete as to allow further analyses of such additional variables as eligibility, aspects of program design (like teacher-student ratio) and instructional models. Other recommendations for future study may include analysis of risk factors such as SES and maternal education. Further, ECSE children have limited opportunities to receive FAPE in the general setting or least restrictive environment because state-funded preschool for all children is not available in Idaho. Future research, including the examination of COSF outcome data, is necessary to further substantiate the need for funding universal preschool in Idaho.

REFERENCES

- American recovery and reinvestment act: Recommendations for addressing the needs of English language learners (ARRA). (2009). Retrieved July 22, 2009, from <http://nieer.org/pdf/ELL-stimulous-recommendations.pdf>.
- “A Nation at Risk.” (1983). Retrieved July 14, 2009 from <http://www.ed.gov/pubs/NatAtRisk/risk.html>.
- Ansary, Tamin. (2009). *Education at risk: Fallout from a flawed report*. Retrieved July 18, 2009, from <http://www.edutopia.org/landmark-education-report-nation-risk>.
- Bagnato, S.J., Broudy, A., Duns, C.J., Harbin, G., Hemmeter, M.L., McLean, M.E., et al. (2000). DEC recommended practices in early intervention/early childhood special education. *Council for Exceptional Children*. Retrieved October 2, 2009, from http://eric.gov/ERICDocs/data/ericdoc2sql/content_storage_01/00000196/80/16/ef/4d.pdf.
- Bagnato, S.J., & Neisworth, J.T. (1999). Collaboration and teamwork in assessment for early intervention. *Child Adolescence Psychiatry Clinicians North America*, 8, 347-363.
- Barnett, W.S. (2008). *Preschool education and its lasting effects: Research and policy implications*. Boulder and Tempe: Education and the Public Interest Center & Education Policy Research Unit, 1-35.
- Barnett, W.S., Epstein, D.J., Friedman, A.H., Stevenson-Boyd, J., & Hunstedt, J.T. (2008). *National institute for early education research (NIEER) yearbook – the state of preschool 2008*. Retrieved June 20, 2009, from <http://nieer.org/yearbook/>.
- Behavior-Developmental Initiatives. (2009). *Temperament in the classroom*. Retrieved October 3, 2009, from <http://www.temperament.com/education.html>.
- Bowie, M.D. (2007). *New research helps teachers boost boys’ reading test scores*. Retrieved July 31, 2009, from <http://www.prweb.com/release/2007/12/preweb580061.htm>.

- Child Outcomes Measurement System. (2009). Retrieved July 13, 2009, from http://www.healthandwelfare.idaho.gov/Portals/_Rainbow/Manuals/PACS/ITP_eManual/...
- Coolahan, K., Fantuzzo, J., & Mendez, J. (2000). Preschool peer interaction and readiness to learn: Relations between classroom peer play and learning behavior and conduct. *Journal of Educational Psychology*, 92, 458-465.
- Dale, P.S., Jenkins, J.R., Mills, P.E., & Cole, K.N. (2004). When paths diverge: "Errors of prediction" from preschool test scores to later cognitive and academic measures. *Journals of Special Education*, 37, 237-248.
- Duncan, G.J., Magnuson, K.A. (2005). Can family socioeconomic resources account for racial and ethnic test score gaps? *The Future Children*, 15, 35-54.
- Early Childhood Education and Latino Children. (2009). Retrieved July 21, 2009, from http://www.education.com/reference/article/Ref_Early_Latino/.
- Early Childhood Outcome Center (ECO) – Decision Tree for Summary Rating Discussions. (2007). Retrieved July 20, 2009, from http://www.fpg.unc.edu/~eco/pages/states_cosf_materials.cfm.
- Early Childhood Outcomes Center (ECO) – Federal Requirements. (2006). Retrieved January 15, 2009, from http://www.fpg.unc.edu/~eco/pages/fed_req.cfm.
- Early Childhood Outcome Center (ECO) – Instruction to the ECO Crosswalks of Birth-to-Five Assessment Instruments to Early Childhood Outcomes. (2006). Retrieved October 6, 2009, from http://www.fpg.unc.edu/~eco/assets.pdfs/Crosswalk_intro.pdf.
- Early School Transitions and the Social Behavior of Children with Disabilities: Selected Findings from the Pre-Elementary Education Longitudinal Study (PEELS) (2003-2009). Retrieved July 31, 2009, from <http://ies.ed.gov/ncer/pdf/20093016.pdf>.
- Early Mental Health Intervention Task Force. (2003). *Addressing missed opportunities for early childhood mental health intervention: Current knowledge and policy implications*. Retrieved October 3, 2009, from <http://www.apa.org/pi/cyf/emhireport.pdf>.
- Education Sector Debates. (2006). *Universal or targeted preschool – a debate between W. Steven Barnett and Bruce Fuller, May 2006*. Retrieved October 3, 2009 from http://www.educationsector.org/usr_doc/Preschool_Debate.pdf.

- ERIC Clearinghouse for Junior Colleges Los Angeles, CA. (1984). *Educational accountability*. Retrieved September 12, 2009, from <http://www.ericdigests.org/pre-926/educational.htm>.
- Ewing, A.R., Taylor, A.R. (2008). The role of child gender and ethnicity in teacher-child relationship quality and children's behavioral adjustment in preschool. *Early Childhood Research Quarterly*, 24, 92-105.
- Fantuzzo, J., Bulotsky-Shearer, R., McDermott, P., McWayne, C., Frye, D., & Perlman, S. (2007). Dimensions of Social-Emotional Classroom Behavior. *School Psychology Review*, 36, 44-62.
- Freeman, N.K. (2007). Preschoolers' perceptions of gender appropriate toys and their parents' beliefs about generalized behaviors: Miscommunication, mixed messages, or hidden truths? *Early Childhood Education Journal*, 34, 357-366.
- Fry, R. (2003). *Hispanic youth dropping out of the U.S. schools: Measuring the challenge*. Washington, DC: Pew Hispanic Center.
- Fryer, R.G., & Levitt, S.D. (2004). Understanding the black-white test score gaps in the first two years of school. *The Review of Economics and Statistics*, 86, 447-464.
- Gallagher, P.A., & Lambert, R. (2006). Classroom quality, concentration of children with special needs and child outcomes in head start. *Exceptional Children*, 73, 31-52.
- Gutmann, A. (1987). *Democratic Education (Rev. ed)*. Princeton, NJ: Princeton University Press.
- Halle, T., Forry, N., Hair, E., Perper, K., Wandner, L., Wessel, J., & Vick, J. (2009). *Disparities in early learning and development: Lessons from the early learning childhood longitudinal study*. Retrieved on July 31, 2009, from http://www.childtrends.org/Files/child_Trends-2009_07_10_FR_DisparitiesEL.pdf.
- Henderson, K. (2004). *Guiding principles of Illinois early learning standards*. Retrieved July 30, 2009, from http://www.isbe.state.il.us/earlychi/pdf/early_learning_standards.pdf.
- Hirschman, C. (2001). The educational enrollment of immigrant youth: A test of the segmented assimilation hypothesis. *Demography*, 38, 317-336.
- H.R. 1804 Goals 2000: Educate America Act. (1994). Retrieved July 15, 2009, from <http://www.ed.gov/legislation/GOALS2000/TheAct/index.html>.

- Idaho Early Childhood Outcomes Project Selected Anchor Assessments. (2006). Retrieved June 22, 2009, from tcnew.idahotc.com/files/earlychildhood/anchors.pdf.
- Jacobson-Chernoff, J., Denton-Flanagan, K., McPhee, C., & Park, J. (2007). *Preschool: first findings from the third follow-up of the early childhood longitudinal study, birth cohort (ECLS-B)*. Retrieved July 31, 2009, from <http://nces.gov/pubs2008/2008025.pdf>.
- Johnson-Powell, G., & Yamamoto, J. (Ed.). (1997). *Transcultural child development: Psychological assessment and treatment*. New York: Wiley.
- Jorgensen, M.A., Hoffmann, J. (2003). *History of the No Child Left Behind Act of 2001 (NCLB)*. Retrieved October 17, 2009, from [http://222.pearsonassessments.com/NR/rdonlyres/D8E33AAE-BED1-4743-98A1-BDF4D\\$9D7274/0/HistoryofNCLB_Rev2_Final.pdf](http://222.pearsonassessments.com/NR/rdonlyres/D8E33AAE-BED1-4743-98A1-BDF4D$9D7274/0/HistoryofNCLB_Rev2_Final.pdf).
- Kagan, S.L., Garcia, E., Barnett, W.S., Bowman, B., Bruder, M., Buch, L., et al. (2007). *NECA task force issues recommendations to help states assess and improve early education programs*. Retrieved August 5, 2009, from http://www.pewtrusts.org/news_room_detail.aspx?id=30964.
- Kagan, S.L., Garcia, E., Barnett, W.S., Bowman, B., Bruder, M., Buch, L., et al. (2007). *The report of the national early childhood accountability task force (NECA) taking stock: Assessing and improving early childhood learning and program quality*. Retrieved July 28, 2009, from http://pewtrusts.org/uploadedFiles/wwwpewtrustsorg/Reports/Pre_k_education/task_force_report1.pdf.
- Karoly, L.A., Kilburn, M.R., Cannon, J.S. (2005). *Proven benefits of early childhood interventions a Rand research brief*. Retrieved January 31, 2009, from http://www.rand.org/pubs/research_briefs/RB9145/index1.html.
- Kirst, M.W. (1990). *Accountability: Implications for state and local policymakers*. Washington, DC: U.S. Department of Education, Office of Educational Research and Improvement.
- Kohlberg, L. (1996). *The development of sex differences*. Stanford, CA: Stanford University Press.
- Kohlberg, L., & Ullian, D.Z. (1974). *Sex differences in behavior*. New York: John Wiley & Sons.

- Lee, V.E., & Burkham, D.T. (2002). *Inequality at the starting gate: Social background differences in achievement as children begin school*. Washington, DC: Economic Policy Institute.
- Levin, H.M. (1974). A conceptual framework for accountability in education. *School Review*, 82, 363-391.
- Lutz, M.N., Fantuzzo, J., & McDermott, P. (2002). Multidimensional assessment of emotional and behavioral adjustment problems of low-income preschool children: Development and initial validation. *Early Childhood Research Quarterly*, 17, 338-355.
- Manwaring, J.S. (2008). Wendy or tinkerbelle – how the underrepresentation of girls impacts gender roles in preschool special education. *Teaching Exceptional Children*, 40, 60-65.
- Meisels, S.J. (2006). *Occasional paper/6 Herr research center for children and social policy Erikson Institute*. Retrieved July 28, 2009, from <http://www.Erikson.edu/downloads.cmsFile.ashx?VersionID=1289&PropertyID=78>.
- Mendez, J.L., McDermott, P., & Fantuzzo, J. (2002). Identifying and promoting social competence with African American preschool children: Developmental and contextual considerations. *Psychology in the Schools*, 39, 111-123.
- Missouri Department of Elementary and Secondary. (2006). *Questions and answers About No Child Left Behind 2005 update*. Retrieved July 15, 2009, from <http://dese.mo.gov/divimprove/nclb/QandA.html>.
- National Assessment of Education Progress (NAEP). (2005). *About national NAEP*. Retrieved July 16, 2009, from <http://nces.ed.gov/nationsreportcard/about/national.asp>.
- National Association of Early Childhood Specialists in State Departments of Education (NAECS/SDE). (2003). *Early childhood curriculum, assessment, and program evaluation*. Retrieved July 28, 2009, from <http://naecs.crc.uiuc.edu/position/pscape.html>.
- Office of Elementary and Secondary Education (OESE). (2006). *Legislation, regulations, and guidance*. Retrieved July 19, 2009, from <http://www.ed.gov/offices/list/oese/legislation.html>.
- Office of Special Education Programs (OSEP). (2000). *History – twenty five years of progress in educating children with disabilities through IDEA*. Retrieved October 2, 2009, from <http://www.ed.gov/policy/speced/leg/idea/history.pdf>.

- Office of Special Education Programs (OSEP). (2008). *Programs and projects*. Retrieved July 15, 2009, from <http://www.ed.gov/about/offices/list/osep/osep/programs.html>.
- Part B State Performance Plan (SPP) for 2005-2010. (2005). Retrieved July 7, 2009, <http://www.vesid.nysed.gov/specialed/spp/plan/preschooloutcomes.htm>.
- Part B State Performance Plans (SPP) Letters and Annual Performance Report (APR) Letters. (2008). Retrieved July 18, 2009, from <http://Idea/partbspap/index.html>.
- Preschool Special Education General Information. (2009). Retrieved July 22, 2009, from <http://ode.state.oh.us/GD/Templates/Pages/ODE/ODEDetail.aspx?page=3&TopicRelationID=1540&ContentID=5339&Content=55438>.
- Ramirez, M. (2009). *Little pre-k access for Latinos*. Retrieved July 21, 2009, from <http://archives.chicagotribune.com/2009/apr/15/local/chi-early-childhood-latinosapr15>.
- Reardon, S.F., & Galindo, C. (2006). *Patterns of Hispanic students' math and English literacy test scores in the early elementary grades*. Retrieved July 28, 2009, from <http://www.ecehispanic.org/work/patterns.pdf>.
- Rumberger, R., & Arellano, B. (2004). *Understanding and addressing the California Latino achievement gap in early elementary school (No. 2004-01)*. Santa Barbara, CA: University of California Linguistic Minority Research Institute, University of California, Santa Barbara.
- Schoen, L., & Fusarelli, L.D. (2008). Innovation, NCLB, and the fear factor. *Educational Policy*, 22, 181-203.
- Spiker, D., Hebbeler, K., & Bagnato, S. (2008). *The how and why of functional child outcomes in an outcomes measurement system for Part C and Part B preschool programs*. Retrieved October 22, 2008, from <http://www.fpg.unc.edu/~ecol/presentations.cfm>.
- Summary of Goals 2000: Education America Act. (1994). Retrieved July 17, 2009, from <http://www.ed.gov/fund/data/>.
- Synder, T.D., Dillow, S.A., & Hoffman, C.M. (2009). *Digest of education statistics 2008 by the national center for educational statistics (NCES)*. Retrieved August 1, 2009, from <http://nces.ed.gov/pubs2009/2009020.pdf>.
- The Nation's Report Card (NAEP). (2005). Retrieved July 16, 2009, from <http://nces.ed.gov/nationsreportcard/about/national.asp>.

- U.S. Census Bureau Statistical Abstract. (2001). *Section 4 education US National Center for educational statistics (NCES)*. Retrieved July 31, 2009, from <http://www.census.gov/prod/2002pubs/01statab/educ.pdf>.
- Van Hook, J., & Balistreri, K.S. (2002). Diversity and change in the institutional context of immigrant adaption: California schools 1985-2000. *Demography*, 39, 639-654.
- Wakeman, S.Y., Browder, D.M., Meier, I., & McColl, A. (2007). The implications of No Child Left Behind for students with developmental disabilities. *Mental Retardation and Developmental Disabilities Research Reviews*, 13, 143-150.
- Zill, N., Collins, M., West, J., & Hauksen, E.G. (1995). *Approaching kindergarten: A look at preschoolers in the United States (No. NCES 95-280)*. Washington, DC: U.S. Department of Education, Office of Educational Research and Improvement.

APPENDIX A

Early Childhood Special Education Acronyms

EARLY CHILDHOOD SPECIAL EDUCATION ACRONYMS

APR	Annual Performance Report
APR	Annual Progress Report
ARRA	American Recovery and Reinvestment Act
AYP	Annual Yearly Progress
AUT	Autism
CI	Cognitive Impairment
COSF	Child Outcome Summary Form
DD	Developmental Delay
DEC	Division for Early Childhood
EC	Early Childhood
ECO	Early Childhood Outcomes Center
ECLS-B	Early Childhood Longitudinal Study-Birth Cohort
ECSE	Early childhood special education
ELL	English Language Learners
ESEA	Elementary and Secondary Education Act
ESY	Extended School Year
FAPE	Free and appropriate public education
IDEA 2004	Individuals with Disabilities Education Improvement Act of 2004
IEP	Individualized Education Plan
K	Kindergarten
LEA	Local Education Agency

EARLY CHILDHOOD SPECIAL EDUCATION ACRONYMS (CONTINUED)

NAECS/SDE	National Association of Early Childhood Specialists in State Department of Education
NAEP	National Assessment of Education Progress
NCLB	No Child Left Behind
NCES	National Center for Educational Statistics
NECA	National Early Childhood Accountability (Task Force)
NIEER	National Institute for Early Education Research
OESE	Office of Elementary and Secondary Education
OSEP	Office of Special Education Programs
PEELS	Pre-Elementary Education Longitudinal Study
PreK	Pre-Kindergarten
SES	Socio-Economic Status
SLI	Speech/Language Impairments
SPP	State Performance Plan
TBI	Traumatic Brain Injury
OHI	Other Health Impairments

APPENDIX B

Length of Intervention Computation

Establishment of baseline: Number of days that constitute a traditional school year in Idaho for students in Kindergarten through Grade 12:

1. Idaho Kindergarten through Grade 12 students attend school 180 days each school year (9-month traditional school track, not including Extended School Year [ESY]) representing 36 weeks x a 5-day school week.

Establishment of pre-K baseline: Number of days that constitute a traditional school year in Idaho for students in ECSE programs:

2. 2007-08 Idaho ECSE students typically attend school 144 days (9-month traditional track, not including ESY) representing 36 weeks x 4-day school week.

Establishment of pre-K baseline: Number of days for 6-month minimum length of intervention:

3. Given a 144 day school year for 2007-08 Idaho ECSE programs (9-month traditional school track, not including ESY), the 6-month minimum length intervention required by OSEP for COSF reporting represents 4 weeks per month x 4 school days per week x 6 months intervention = 96 school days.

Establishment of error computation: Records containing $0 \geq 95$ in length of intervention:

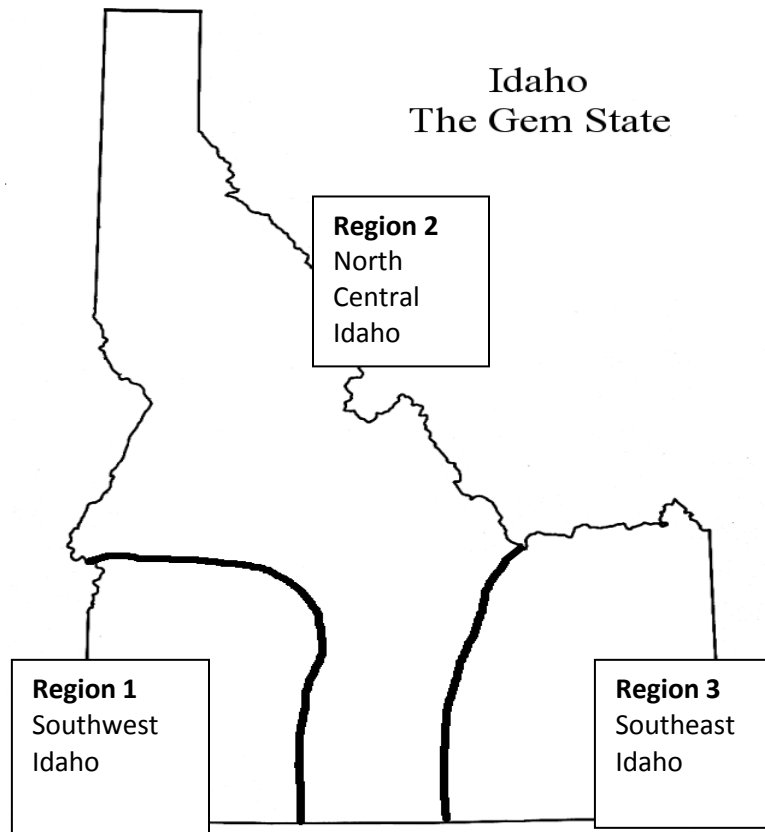
4. In the 2007-08 Idaho ECSE outcome data, individual student records listing $0 \geq 95$ were replaced with 96 days representing the 6-month minimum length of intervention in compliance with OSEP requirements.

Clarification: (Does not affect length of intervention computation):

5. Independent variable, length of intervention, is presented in terms of “days of intervention.” While the length of the school day is not specifically quantified, it should also be noted that a typical ECSE day of intervention in Idaho is 3 hours to 3 hours and 15 minutes in duration.

APPENDIX C

Outline Map of Idaho – Three Regions Defined



There are 116 school district in Idaho (148 total LEAs); of the 116; 73 (63%) of school districts in Idaho submitted ECSE outcome data for 2007-08

Reporting districts in Region 1 (suburban group/southwest Idaho): Basin, Boise, Caldwell, Cossa, Emmett, Fruitland, Kuna, Meridian, Middleton, Mountain Home, Nampa, New Plymouth, Payette, Vallivue, and Weiser.
(15 total)

Reporting districts in Region 2 (rural group/north central Idaho): Blaine, Boundary, Cascade, Castleford, Coeur D' Alene, Cottonwood, Council, Filer, Genesee, Gooding, Grangerville, Hagerman, Hansen, Highland, Jerome, Kamiah, Kellogg, Kimberly, Lakeland, Lake Pend Oreille, Lapwai, Lewiston, McCall-Donnelly, Meadows, Midvale, Minidoka, Moscow, Orofino, Post Falls, Plummer-Worley, St. Maries, Twin Falls, Valley, Wendell, and West Bonner.
(35 total)

Reporting districts in Region 3 (rural group/southeast Idaho): Aberdeen, American Falls, Bear Lake, Blackfoot, Bonneville, Butte, Cassia, Firth, Fremont, Grace, Idaho Falls, Jefferson, Pocatello, Preston, Mackay, Madison, marsh Valley, Snake River, Soda Springs, Sugar-Salem, Teton, and West Side.
(23 total)

APPENDIX D

Child Outcomes Summary Form (COSF)

CHILD OUTCOMES SUMMARY FORM

Date: ____/____/____
 Mon Day Yr

Child Information

Name: _____

Date of birth: ____/____/____
 Mon Day Yr

ID: _____

Persons involved in deciding the summary ratings:

Name	Role

Family information on child functioning (Check all that apply):

- ☐ Received in team meeting
- ☐ Collected separately
- ☐ Incorporated into assessment(s)
- ☐ Not included



1. POSITIVE SOCIAL-EMOTIONAL SKILLS (INCLUDING SOCIAL RELATIONSHIPS)

To answer the questions below, think about the child's functioning in these and closely related areas (as indicated by assessments and based on observations from individuals in close contact with the child):

- *Relating with adults*
- *Relating with other children*
- *Following rules related to groups or interacting with others (if older than 18 months)*

1a. To what extent does this child show age-appropriate functioning, across a variety of settings and situations, on this outcome? *(Circle one number)*

Not Yet		Emerging		Somewhat		Completely
1	2	3	4	5	6	7

Supporting evidence for answer to Question 1a

Source of information	Date	Summary of Relevant Results

1b. *(If Question 1a has been answered previously):* **Has the child shown *any* new skills or behaviors related to positive social-emotional skills (including positive social relationships) since the last outcomes summary?** *(Circle one number)*

Yes	1 → Describe progress:
No	2

2. ACQUIRING AND USING KNOWLEDGE AND SKILLS

To answer the questions below, think about the child's functioning in these and closely related areas (as indicated by assessments and based on observations from individuals in close contact with the child):

- *Thinking, reasoning, remembering, and problem solving*
- *Understanding symbols*
- *Understanding the physical and social worlds*

2a. To what extent does this child show age-appropriate functioning, across a variety of settings and situations, on this outcome? *(Circle one number)*

Not Yet		Emerging		Somewhat		Completely
1	2	3	4	5	6	7

Supporting evidence for answer to Question 2a

Source of information	Date	Summary of Relevant Results

2b. (If Question 2a has been answered previously): **Has the child shown *any* new skills or behaviors related to acquiring and using knowledge and skills since the last outcomes summary?** (Circle one number)

Yes	1 → Describe progress:
No	2

3. TAKING APPROPRIATE ACTION TO MEET NEEDS

To answer the questions below, think about the child's functioning in these and closely related areas (as indicated by assessments and based on observations from individuals in close contact with the child):

- Taking care of basic needs (e.g., showing hunger, dressing, feeding, toileting, etc.)
- Contributing to own health and safety (e.g., follows rules, assists with hand washing, avoids inedible objects) (if older than 24 months)
- Getting from place to place (mobility) and using tools (e.g., forks, strings attached to objects)

3a. To what extent does this child show age-appropriate functioning, across a variety of settings and situations, on this outcome? (Circle one number)

Not Yet		Emerging		Somewhat		Completely
1	2	3	4	5	6	7

Supporting evidence for answer to Question 3a

Source of information	Date	Summary of Relevant Results

3b. (If Question 3a has been answered previously): **Has the child shown *any* new skills or behaviors related to taking appropriate action to meet needs since the last outcomes summary?** (Circle one number)

Yes	1 → Describe progress:
No	2

