Universal Pre-kindergarten in Conjunction with Universal Screenings: An Antidote to Grade Retention

Philip J. Lazarus
Florida International University

Patricia Ortega
Miami-Dade County Public Schools

Abstract
The No Child Left Behind Act (NCLB) has ushered in an era of increased accountability and assumed universal proficiency at a time when there is significant variability in children's abilities as they enter kindergarten. Despite NCLB's emphasis on the use of evidence-based practices to improve students' achievement, it explicitly recommends grade retention as an intervention for low performing students, resulting in increased numbers of retained students in the past decade. Not only has the research on grade retention clearly established its ineffectiveness, it has also confirmed its harmfulness. Educators and policymakers have an obligation to develop a variety of alternatives to retention. Many alternatives have been developed and implemented throughout the years, but the true solution to this problem lies in prevention. The most effective way to prevent poor academic outcomes is to provide quality early intervention. High-quality, universal pre-kindergarten programs have been shown to provide children with developmentally appropriate instruction that serves to build pre-reading, pre-numeracy, and pre-writing skills necessary for future school success. This is especially important in order to level the playing field in a country where so many children live in poverty or who are English language learners. Two important facts have emerged in recent years from the research: children are cognitively ripe between the ages of zero and five and not all children are receiving the same quality of cognitive experiences during these years. If high academic achievement is expected, then all children should be afforded the opportunity to receive quality instruction at an early age. Policy makers need to reconsider their position on retention in favor of

more evidenced-based practices; namely, universal pre-kindergarten, which is both supported by research and associated with a plethora of positive outcomes. In addition, pre-kindergarten provides a convenient setting in which to implement universal screenings that serve to guide instruction and identify children who may need additional academic support. Research on measures such as Individual Growth Development Indicators (IGDI) that have been designed for use with preschoolers to identify academically at-risk children has shown promising results in terms of reliability and validity, as well as usefulness for modifying instruction in the pre-kindergarten classroom.

Introduction

Grade retention is an easy, but not necessarily effective, solution to the broad and complex problem of academic underachievement. Recent legislation in the United States has implicitly advocated for the use of grade retention as an intervention for low-performing students, as in the case of Clinton's call for an "end to social promotion." Most recently, the No Child Left Behind Act (NCLB) has explicitly recommended grade retention for students not reading by third grade. Interestingly, one of the cornerstone concepts behind the NCLB is the use of research-based practices to improve academic performance. NCLB, however, strongly emphasizes third grade retention as a response to students not meeting grade level expectations, despite little evidence of the effectiveness of this practice. The literature on grade retention has shown its ineffectiveness and harmfulness. As a result, schools have an obligation to develop a variety of alternatives to retention. Many alternatives have been developed and implemented throughout the years, but the true solution to this problem lies in prevention.

Universal pre-kindergarten is preschool education that is available and free to all children. By providing quality pre-kindergarten programs to all children, schools can ensure greater levels of kindergarten readiness which, in turn, lead to higher-achieving students. Pre-kindergarten programs also provide a convenient setting in which to conduct universal screenings designed to identify students whose pre-reading skills may require intervention. If early intervention takes place, many high-risk children could avoid grade retention in the future and those at lower risk could benefit from universal interventions.

A study of the demographics of students enrolled in early education programs between 1968 and 2000 by Bainbridge, Meyers, Tanaka, and Waldfogel (2005) showed that children who generally participated in pre-kindergarten programs were either in the highest income groups or the lowest. As a result, a large portion of the population has been left without access to early education. Universal pre-kindergarten programs would provide a quality education to all children, not only to those who can afford private preschools or those who participate in government programs for low income children. An increase in participation in pre-kindergarten programs may help avoid school failure and the negative outcomes associated with retention.

Grade Retention Research

Grade retention is a problem that affects a significant number of children in the public school system. In 2001, it was estimated that 7 million students would be retained at least once before they finished school (Smink, 2001). According to Jimerson (2001), over 3 million students are retained every year. Jimerson et al. (2006) call attention to the paradox of more children being "left behind" since the passing of the NCLB. The number of students retained every year has increased in the past decade, undoubtedly influenced by the recent emphasis on accountability and the passing of the NCLB Act (Jimerson et al., 2006).

The literature is replete with data that underscores the deleterious effects of grade retention as an intervention to help low-achieving students. Children and adolescents who are retained are at a much greater risk for dropping out of school and have much poorer occupational outcomes (Bowman, 2005). In fact, it has been found that grade retention is the one factor that most powerfully predicts dropping out (Jimerson, 2001). Once they reach adulthood, students who are retained are more likely to be unemployed, living on government assistance, or in prison compared to other adults who have never been retained in school (Jimerson, Pletcher, & Kerr, 2005).

Retention has also been found to have damaging effects on the socio-emotional adjustment of children and adolescents (Bowman, 2005; Hong & Raudenbush, 2005). Research has consistently shown that retention stigmatizes children, which can contribute to lower teacher, parent, and self-expectations (Jimerson, 2001). Furthermore, retained children display more

negative attitudes toward school, poorer attendance, more problems in social adjustment, and more problematic behaviors (Bowman, 2005).

One study found that when sixth grade students were asked to rank stressful life events, they rated grade retention as extremely stressful, behind only losing a parent and going blind (Yamamoto & Byrnes, 1987). In a replicate study by Anderson, Jimerson, and Whipple (2005), grade retention was also rated as the most stressful life event by sixth graders, equivalent to losing a parent or going blind. These findings provide strong evidence that the psychological impact and emotional toll of grade retention is significant and should be taken into account when developing policies or making administrative decisions for low-performing students—this is especially true because with effective interventions many children could avoid experiencing the psychological pain of being held back.

A natural consequence of the currently increasing numbers of retained students is that children are experiencing failure at a younger age with clear psychological implications. As noted in *Newsweek*, "some children are getting their first taste of failure before they learn to tie their shoes" (Tyre, 2006, p. 36). In a Miami-Dade County elementary school, where the second author (PO) of this article works, there is one entire class of students who have been retained in the third grade and another class made up entirely of retained second graders. Students were retained in the third grade because they failed the FCAT—the Florida high-stakes state assessment test, whereas students in the second grade were retained because school personnel believed that these youngsters would be unable to pass this same test in third grade if they were promoted.

Anecdotally, teachers are encountering more frustration, self-image problems, and hopelessness in their students. One teacher working with students retained in third grade in a Miami-Dade County school was shocked to hear one of her students declare "I don't want to live anymore." An eight-year-old so frustrated by failure that he has lost the will to live is a powerful indication that the educational system is considerably flawed. Policy makers and educators have a responsibility to ensure that all children receive adequate academic support and quality early intervention in order to prevent these students from becoming educational casualties.

In addition to the self-image costs, the financial costs of retention are also significant. Eide and Goldhaber (2005) reported that the average per

child expenditure in the United States per year is $7,500. Based on a 5% estimated annual retention rate, the U.S. is spending approximately $17.8 billion a year on the extra year of school provided to retained children. These funds could be allocated more effectively by using them to fund high quality pre-kindergarten programs that are available to all children. Jimerson (2001) proposes that a transactional perspective be taken when analyzing the effects of grade retention. Low academic achievement is often due to a converging of a variety of individual and experiential factors, such as low cognitive ability, lower socioeconomic status, and single-parent households. These factors should be taken into account when intervening with low-achieving students. Grade retention, Jimerson (2001) argues, is insufficient to address the multiple needs of students and to ensure long-term positive outcomes. The public educational system has failed these students, who are in need of intensive and pervasive interventions to counteract circumstances that lead to poorer educational outcomes. "The transactional model of development provides a conceptual framework to facilitate the interpretation of achievement, socio-emotional, and behavioral outcomes associated with grade retention and emphasizes the importance of considering alternative early intervention strategies" (Jimerson, 2001, p. 433). Universal pre-kindergarten could offset many of the factors associated with grade retention and would provide the early intervention necessary to help children achieve academically.

"We've Won the Battle but Lost the War"

Grade retention is a popular and relatively frequent intervention used in public education despite overwhelming evidence indicating that it does not necessarily improve academic performance (Dawson, 1998; Jimerson & Kaufman, 2003). Grade retention seems intuitively beneficial to administrators and others making educational decisions for low performing students. Merely repeating a grade, however, is insufficient in the long term to address the needs of these students (Silberglitt, Jimerson, Burns, & Appleton, 2006).

One explanation for the seemingly beneficial effects of retention is the fact that retained students make gains in the short term (Shepard & Smith, 1990). That is, in the year that these students repeat a grade they are exposed to the same curriculum and their achievement rises in comparison to the previous year. Yet many studies show that the gains in achievement that are

initially apparent decline two or three years after the retention (Jimerson et al., 2005). The long-term negative outcomes, however, associated with grade retention far outweigh the immediate gains made by students. In addition to the aforementioned increase in the drop out rate and the lowered self-image effects, students simply do not "catch-up" academically to their same-aged peers over time. In fact, some evidence suggests that low performing students who are retained learn less than low performing students who are promoted (Hong & Raudenbush, 2005).

For example, one study followed children for 21 years and compared retained students, low-achieving-but-promoted students, and a control group (Jimerson, 1999). This study found that students who were retained had lower levels of academic adjustment (i.e., a combination of achievement, behavior and attendance) at the end of grade 11 in comparison to low-achieving students. Furthermore, retained students were more likely to drop out of high school, were less likely to receive a diploma by age 20, were less likely to be enrolled in postsecondary programs, were paid less per hour, and received lower employment education status ratings in comparison to low-achieving students. In contrast, the low-achieving-but-promoted group was comparable to the control group on all employment outcomes at age 20.

Although social promotion is also insufficient in addressing the problems of academically underperforming students, grade retention appears to have more deleterious effects on students over time. These facts prompted the use of the expression "we've won the battle but lost the war" to describe the outcomes associated with grade retention (Dawson, 1998, p. 21).

Benefits of Pre-Kindergarten

In light of the recent increased emphasis on school achievement, providing high-quality pre-K programs to all four-year-olds is critical. In addition to the current educational climate, additional factors are also contributing to the demand for universal pre-K programs. According to the U.S. Department of Labor, Bureau of Labor Statistics (2006), 60% of mothers with children under the age of six were employed outside the home in 2005. Many of these children are being cared for in day care settings. State funded pre-kindergarten programs provide parents with affordable, beneficial and convenient alternatives to day care in terms of transportation and child care

(Andrews & Slate, 2001). According to Warner (2006), child care in the United States is substandard. As a result, families are in desperate need of affordable, quality child care, particularly those from the lower economic levels. Clearly, these children would benefit from rich educational experiences that can be provided by universal pre-kindergarten programs.

The importance of a child's early years for cognitive, emotional, and physical development has been well established in the literature (e.g., Gormley, Gayer, Phillips, & Dawson, 2005; U.S. Department of Education, 1999). This knowledge has permeated the public's consciousness and has created a demand for quality early education programs. Reaching children at a young age can help schools maximize and capitalize on students' cognitive potential. Universal pre-kindergarten should be one component in a school system's effort to provide early intervention, in addition to family outreach programs and zero to three educational programs.

According to Ackerman and Barnett (2006), school readiness refers to a child's ability to adjust to the demands of school. Once they enter kindergarten, children will be expected to follow directions, finish tasks, interact positively with others, and manage their emotions. In order to increase their chances for academic success in kindergarten, they will also need to possess basic skills in math and reading. High quality pre-kindergarten programs expose children to basic language and print concepts, improve listening skills, and develop additional skills that are precursors to learning to read and write. These skills will translate into more academic gains in the early years of elementary school. Traditionally, Kindergarten and 1st grade teachers spend a considerable amount of time attempting to prepare students to learn, as a great variability exists between students in their school readiness. As one teacher noted, "Some children arrived in August already reading, while others couldn't name the color of their shirt" (Isger, 2006, ¶ 4).

Preschool programs have been identified as an effective, empirically-based prevention strategy for retention (e.g., Gormley et al., 2005; Jimerson et al., 2006). The educational benefits of pre-kindergarten have been found to be pervasive and enduring (e.g., Andrews & Slate, 2001; Gormley et al.). High quality pre-kindergarten programs have been shown to improve pre-reading, pre-writing, and pre-numeracy skills in young children (Gormley et al.; Owings & Kaplan, 2001). Recent studies of state universal pre-kindergarten programs have shown very promising results. Gormley et al.'s study of

Oklahoma's universal pre-kindergarten found that children who participated in the program scored significantly higher on the Letter-Word Identification (effect size of .79) at kindergarten entry than children who did not participate in the program. This subtest of the Woodcock-Johnson Achievement Test is designed to assess pre-reading skills. Significantly higher results were also found in the Spelling and Applied Problems subtests (effect sizes of .64 and .38, respectively), indicating noteworthy differences between the kindergarten readiness of participating and non-participating children. Children from all racial and ethnic groups were found to benefit from participating in the program, with the greatest gains found in Hispanic children. Furthermore, positive outcomes were found for children of all socioeconomic levels, as measured by school lunch eligibility status.

In a study of state funded pre-kindergarten programs in five states, Barnett, Lamy, and Jung (2005) found that children who attended the programs showed 31% more gains in vocabulary compared to children who had not attended the programs. According to the authors, this finding is particularly significant because this measure is highly correlated with general cognitive abilities and future reading success.

Moreover, children who participated in state funded pre-kindergarten programs made an 85% growth in print awareness when compared to children who had not participated in the programs. These students were familiar with more letters, words, letter-sound associations, and book concepts. Barnett and colleagues (2005) also found that children who attended pre-kindergarten programs in these states made a 44% gain in math scores in comparison to children who did not attend. All of these findings were found across ethnicities and economic circumstances.

A study of the effects of the Michigan School Readiness Program (MSRP), a state-funded preschool program which targets at-risk children, found statistically and practically significant outcomes in several academic areas (Barnett et al, 2005). A 21% increase in average math scores on the Woodcock-Johnson-III Applied Problems subtest was found in children who had participated in MSRP. Therefore, students who had been exposed to the preschool program were more skilled in basic number concepts, simple addition and subtraction, telling time, and counting money than their same-aged peers who had not participated in the program.

The largest positive effects, however, were found in the area of print awareness. Children who had participated in MSRP showed scores on print awareness measures equivalent to one whole standard deviation above the mean, reflecting a clear difference in participating children's familiarity with letters, letter-sound associations, words, and book concepts, when compared to non-participating children. This finding is particularly significant because print awareness has been found to be an important precursor to successful reading (Cheyney & Cohen, 1999).

A review by Gormley et al. (2005) revealed that state-funded preschool programs in 13 states showed statistically significant positive outcomes in the areas of cognitive, language, and social development. Research on Georgia's universal pre-kindergarten program has shown that 82% of former students scored average or above in third-grade readiness, compared to national norms. Although this study failed to provide a comparison group who had not participated in pre-kindergarten, the findings are nevertheless notable. In addition, this study also showed that economically disadvantaged children from this program who began scoring below national norms in letter recognition actually began kindergarten scoring above national norms in this skill (Henry, Gordon, Mashburn, & Ponder, 2001).

The relationship between early reading skills and future academic success is well-established (e.g. Gormley et al., 2005, Owings & Kaplan, 2001). According to Owings and Kaplan (2001), "success in reading in the early grades does not guarantee later school success; but it does prevent the negative spiral of remediation, retention, and social promotion that reading failure brings" (p. 25). A goal of universal pre-kindergarten programs should be to minimize the Matthew effect. Stanovich (1986) coined the term "the Matthew effect" to describe the negative spiral caused by failure to read at an early age. Students who are slow in their acquisition of reading experience adverse cognitive, behavioral, and motivational consequences. Their early lack of success in acquiring the skill results in the students reading less and falling behind in most other subjects, in turn widening the gap between them and their same-aged peers. These students are more likely to have significant academic difficulties and drop out of school. Children who may be predisposed to difficulties in reading acquisition due to genetics and/or environment would benefit from additional time in a literacy rich setting such as a high quality pre-kindergarten program.

In addition to the academic gains made by children who participate in high quality pre-kindergarten programs, many long-term benefits related to improved quality of life have been associated with participation in such programs. A review of data on preschool outcomes by Barnett, Young, and Schweinhart (1998) supported a proposed causal model which outlines the mechanism through which preschool education impacts cognitive development and academic success. Specifically, Barnett et al. (1998) posit that preschool programs directly affect children's early cognitive abilities, which, in turn, influence later cognitive abilities. This is done through direct learning during preschool class and its indirect effects such as increased parental expectations, motivation, and improved social skills. Schulman (2005) succinctly states that preschool programs set children on a "positive lifetime trajectory" (p. 1). Increased academic success facilitated by quality early education experiences has been found to lead to better occupational outcomes and better choices related to lifestyle and health.

The High/Scope Perry Preschool Study investigated the effects of 123 low-income African American children enrolled in a high quality preschool program over the span of 40 years. This program included two-and-a-half hours of instruction five days a week and weekly home visits. All teachers were highly qualified and the program maintained a strict child-staff ratio of six to one (Barnett et al., 1998). Longitudinal data garnered by the Perry Preschool program shows significant positive outcomes associated with participation.

Children who participated in the preschool program were rated as being more motivated and possessing more potential than those children who were not involved by teachers from kindergarten through third grade (Shulman, 2005). A higher percentage of parents of participants reported that, at age 15, their children enjoyed talking about their activities at school. When data was gathered at age 19, participants of the Perry Preschool program were more likely to rate their experience in high school as being positive.

At age 27, only 5% of individuals who did not participate in the Perry Preschool program owned their own homes. In contrast, 27% of participating individuals were homeowners. Also by age 27, 54% of females who did not participate in the program were single mothers, while only 32% of females who had participated in the preschool program were (Schulman, 2005).

Also compelling was the finding that by age 27, female participants of the Perry Preschool program had an average of 1.0 birth out of wedlock, while non-participating females had an average of 1.7 births. In addition, a significantly smaller percentage of participating females (4%) had an abortion, compared to 23% of non-participating females (Schulman, 2005). Schulman (2005) postulates that high quality preschool programs can possibly shape the attitudes, values, and habits that impact social and emotional development. Moreover, there is also evidence of a spillover effect to the participants' own children. Although little difference was found between the children of participants and the children of non-participants in terms of reading habits, 85% of the participants' children used library cards regularly, compared to 53% of non-participants' children. A future focus for research should be the possible intergenerational effects of improved academic performance facilitated by preschool programs.

Characteristics of High Quality Pre-Kindergarten Programs

It is critical that pre-kindergarten programs be of superior quality in order to ensure positive academic outcomes. In fact, only high quality programs have been found to produce large enough gains to be significantly advantageous to children and worthwhile to taxpayers. Several specific features have been identified as contributing to the quality of a pre-kindergarten program.

Quality programs should provide sufficient time to teach readiness concepts meaningfully and effectively. Some preschool programs in the past have provided children with two and a half hours of instruction. Neuman (2003) argues that longer programs that are effectively paced will yield greater results. In a study by Robin, Frede, and Barnett (2006), children who participated in a half-day preschool program improved six to seven standard score points on assessments of vocabulary and math. In contrast, those children who participated in a full-day program increased their vocabulary and math scores by 11 to 12 standard score points. Neuman also argues that programs should provide age-appropriate activities that will stimulate developing minds. The National Institute for Early Education Research (NIEER) recommends that pre-kindergarten programs' curriculum include activities proven to be predictive of later school success (Ackerman & Barnett, 2006). Multiple and daily opportunities for language and reasoning should be afforded, as well as

ample exposure to science, math, block play, art and music.

Enriching activities should be provided frequently and knowledgeably executed. NIEER recommends that teachers be highly qualified and adequately compensated (Ackerman & Barnett, 2006). Both Oklahoma and Georgia require all pre-K teachers to have a college degree with a specialization in early childhood. In contrast, less than 30% of Head Start teachers possess a bachelor's degree (U.S. Department of Health and Human Services, 2002).

In addition, pre-kindergarten teachers in states such as Georgia and Oklahoma often are compensated at the same level as elementary and secondary school teachers. This facilitates proficiency in the pre-kindergarten classroom and also attracts a larger pool of capable teachers. Furthermore, requiring that all pre-kindergarten teachers have the same qualifications will help narrow the gap between economically disadvantaged children and their peers with more resources, as children who live in poverty are more likely to attend a preschool with less qualified teachers (Gormley et al., 2005).

Another important characteristic of superior pre-kindergarten programs is that teachers are afforded sufficient opportunities for professional development, equal to those provided for elementary and secondary school teachers. Pre-kindergarten teachers also should be appropriately supervised and evaluated periodically to ensure that standards are being met. In addition, classrooms should have low child/teacher ratios and small classroom sizes to guarantee quality and enriching interactions between students and teachers. In Oklahoma, for example, state law requires that child/teacher ratios do not surpass 10 to 1, with a limit of 20 students per class.

Teachers should have good communication with their students, frequently encouraging them to use reasoning and problem solving and modeling good listening skills (Ackerman & Barnett, 2006). NIEER also underscores the need for well-equipped facilities that are age appropriate and stocked with enriching toys, books, and materials.

Pre-kindergarten programs should be evaluated in the same rigorous manner as elementary and secondary schools in order to ensure that standards have been met. In fact, the current research on pre-kindergarten programs, including Head Start, indicates the extensive quality variations between existing programs (Gormley et al., 2005). Moreover, the effects these programs have on children are closely tied to the quality of the education they provide. According to Ackerman and Barnett (2006), the programs that have yielded

the greatest gains in student achievement are those that meet specific quality requirements, such as Oklahoma's universal pre-kindergarten program. It is vital that programs be closely monitored to ensure a return on taxpayers' investment in quality education that will improve the academic outcomes of children.

Universal Screeners at the Pre-Kindergarten Level

An important component of state funded pre-kindergarten programs should be the use of reading assessments to help guide classroom-based instruction and interventions. The preschool years have been recognized as a key time to identify children who may have difficulties with reading and other important cognitive skills in the future (Molfese, Modglin, Beswick, Neamon, Berg, Berg et al., 2006). Universal screenings are assessments that are given to all children and are designed to identify those youngsters that are at high-risk because they fall below expected standards. Based on the results of universal screenings, children who are lacking in specific pre-reading skills may be provided with early remediation in order to enter kindergarten ready to acquire grade level skills.

Denton and West (2002) reported on statistics drawn from a sample of 22,000 students in kindergarten through 5th grade. The numbers showed that at the beginning of kindergarten, 66% of students were able to identify upper case and lower case letters of the alphabet, 29% were able to recognize the beginning sounds of words, 17% could identify the ending sounds of words, and 1% to 2% could read sight words or words in context. Notably, the children who were able to identify letters of the alphabet at the beginning of kindergarten performed better academically at the end of kindergarten. However, only 5% of children who were not proficient in letter naming were found to score in the top 25%.

Letter naming has been found to be linked to phonological processing, a skill cluster that includes separating and manipulating phonemes, and identifying rhyming. Letter naming has been identified as powerful indicator of the presence of skills necessary for the development of reading (Molfese et al., 2006). In a study by Muter, Hulme, Snowling, and Stevenson (2004), the phonological skills of letter naming and phonemic awareness developed in the first two years of schooling were found to be highly predictive of

word recognition. Word recognition, in turn, becomes an integral part of the later skill of reading comprehension. By using assessments that tap into the letter naming and phonological skills of children at the pre-kindergarten level, educators can help identify those who need extra support as they enter kindergarten. This is especially important for students who may begin their schooling at a disadvantage.

Early exposure to the letters of the alphabet and other print concepts does not always occur in the home. Therefore, high quality pre-kindergarten programs have the opportunity to introduce critical pre-reading skills to children at a young age. Children who have been raised in poverty, have lacked reading exposure or other stimulating experiences, or who possess certain cognitive deficits are often found to be below average in letter naming and phonological skills (Molfese et al., 2006). Moreover, all children regardless of background or cognitive level could potentially benefit from interventions designed and implemented based on data obtained from universal assessments.

In recent years, the Dynamic Indicators for Basic Early Literacy Skills (DIBELS) has been adopted by most states to assess and monitor students' reading skills (Rouse & Fantuzzo, 2006). DIBELS was developed to assess the major areas of literacy identified by the National Reading Panel and National Research Council. This assessment consists of individually administered tests that have been designed to measure basic early literacy skills, including phonemic awareness and the alphabetic principle. DIBELS has been developed exclusively for grades kindergarten through 6th and has been shown to be valid and reliable assessments as well as highly predictive of later reading proficiency (Good & Kaminski, 2002).

Concurrent to the development of DIBELS, a parallel research project designed an assessment for children aged three to five based on the same early literacy principles as DIBELS (Good & Kaminski, 2002). Individual Growth and Development Indicators (IGDI) assess children in major development areas, namely the language, social, cognitive, motor, and adaptive domains. Within the cognitive domain, early reading skills are measured, as with DIBELS. In addition to being conceptually alike, DIBELS and IGDI also share a similar function in that they can both can be used as universal screeners and to identify those in need of intervention, and later, for progress monitoring. Although the literature on IGDI is not as extensive as DIBELS, existing data shows high levels of inter-observer, alternate-forms, and test-retest reliability,

in addition to high levels of criterion, social, and treatment validity (Early Childhood Research Institute on Measuring Growth and Development, 1998; McConnell, Priest, Davis, & McEvoy, 2002).

While it is clear that more data is needed to confirm the effectiveness and usefulness of IGDI and other measures, the potential for quality early screening methods exists. With assessments already available to help identify children who need additional academic support, pre-kindergarten programs can facilitate children's transition into kindergarten and begin the remediation process necessary to avoid future academic problems. This is especially true in light of the higher standards recently imposed for increasingly younger students; a fact that prompted *Newsweek* to declare kindergarten as "the new first grade" (Tyre, 2006, p. 37). "Thirty years ago," states Tyre (2006), "first grade was for learning how to read. Now reading lessons start in kindergarten and kids who don't crack the code by the middle of first grade get extra help" (p. 36). It is clear that, now more than ever, children entering kindergarten must be armed with the basic skills necessary to learn to read.

Arguments Against

Several arguments have been presented against the idea of universal pre-kindergarten. For example, some argue that targeting pre-kindergarteners may be too much, too soon. The reality, however, is that NCLB assumes universal proficiency at a time when there is significant variability in children's abilities as they enter kindergarten (Gormley, 2005). A growing number of children in the United States are Limited English Proficient and many others live in poverty. Research has shown that children from the lowest SES strata have been read to for an average of 25 hours prior to kindergarten, compared to 1,000 hours for children from high SES levels (Neuman, 2003). Children whose parents are professionals have been found to have vocabularies of about 1,100 words by age 3. In contrast, children of parents who are on welfare have been found to have vocabularies of 525 words (Tough, 2006). Furthermore, more than half the children in the United States have at least one socioeconomic or demographic risk factor for school failure such as low maternal education, living in poverty, living in a single parent family, and having non-English speaking parents. Fifteen percent have three or more risk factors (Neuman, 2003, U. S. Department of Education, 2001). Clearly, less

affluent children in the U.S. are in need of high quality early interventions to help level the playing field with their more affluent peers and ensure that all students can reach their highest academic potential.

Detractors of state funded pre-kindergarten programs also contend that the focus of these programs will become on school readiness rather than on developmentally-appropriate practices (Andrews & Slate, 2001). These concepts, however, are not mutually exclusive. Children can participate in age-appropriate activities that teach them a variety of skills necessary for school success, such as social skills, emotion management, listening skills, and basic academic skills that will serve as a foundation for later skills.

Many critics also argue that schools are placing too much emphasis on high stakes assessments and that four-year-olds should not be subjected to the pressures of standardized testing. Assessments developed for preschoolers, however, are brief and infrequent (Phaneuf & Silberglitt, 2003) and are used to guide instruction. In fact, it only takes two minutes to administer a subtest of the IGDI. High quality pre-kindergarten programs provide children with enriching and age-appropriate activities that lead to the development of skills that will serve as the foundation for higher level competencies such as reading. Assessments at this level are not used to make high-stake decisions regarding passing or failing. Instead, they are used to identify areas of strength and weakness in children in order to help instructors know what skills to emphasize. The use of standardized measures improves the quality of pre-kindergarten programs by enabling teachers to deliver more efficient instruction.

In addition, detractors argue that if early intervention is to occur and a significant investment is to be made, then a school's efforts should focus on children younger than four. Gormley (2005) argues that the presence of a universal pre-K program may facilitate a broadening of efforts to include younger children. For example, Head Start may be able to shift its focus to three-year-olds if pre-kindergarten programs serve all four-year-olds.

Other critics of universal pre-kindergarten argue that the financial cost of providing an additional year of schooling is too high for the American public school system. It may be best, however, to view the provision of high quality pre-kindergarten programs as an investment for society as a whole. It is estimated that for every dollar spent on universal pre-kindergarten programs, at least seven dollars are saved by society as a whole. Less money will ultimately be spent on special education programs, remediation, retention, and even

police, prosecution, and prison (Lawrence, 2005). According to Gilliam and Zigler (2001), retention rates are lower for children who attended high quality pre-kindergarten programs and these children are also less likely to be placed in special education programs, engage in high-risk behavior including criminal behavior, and drop out of school. The costs to society are greater when high quality preschool programs are not available to all children.

Conclusion

The NCLB Act was intended to counteract the "soft bigotry of low expectations," as phrased by President Bush, by expecting the country's minority and low-income students to achieve at the same level as their middle-class peers. This act, however, which assumes a level playing field at school entry, has provided little to no direction or aid to help schools reach this lofty goal. Tough (2006) states that "the evidence is now overwhelming that if you take an average low-income child and put him into an average American public school, he will almost certainly come out poorly educated" (2006, ¶ 57). The author suggests that the system itself is in need of an overhaul, requiring a restructuring of curriculum and inclusion of high-quality early-childhood education.

"High-quality pre-kindergarten has been documented to be the single best investment for improving achievement" (Neuman, 2003, p. 289). Increased standards and accountability have forced schools to evaluate how effectively they are teaching their students. The most effective way to prevent poor academic outcomes is to provide quality early intervention. Two important facts have emerged in recent years from the research: children are cognitively ripe between the ages of zero and five and not all children are receiving the same quality of cognitive experiences during these years. If high academic achievement is expected, then all children should be afforded the opportunity to receive quality instruction at an early age. Policy makers need to reconsider their position on retention in favor of more evidenced-based practices; namely, universal pre-kindergarten, which is both supported by research and associated with a plethora of positive outcomes. A goal of states should also be to help motivate parents to take advantage of this resource for their children, as it is presently offered on a strictly voluntary basis.

Universal pre-kindergarten in the United States in still in its infancy, but early results look very promising. As more states adopt universal pre-kindergarten, more data will become available that will reveal more about the short- and long-term outcomes associated with participation in these programs. More research is needed to shed light on how screening assessments can help maximize instruction time and contribute to the long-term outcomes of children.

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