

**NEW JERSEY PRESCHOOL EXPANSION
ASSESSMENT RESEARCH STUDY (PEARS)**



**Statewide Report
December, 2009**

Allison Friedman, Ed.M.
Ellen Frede, Ph.D.
Dale Epstein, Ph.D.
Rachel Sansanelli, M.A.
Debra Ackerman, Ed.D., and
Judi Stevenson-Boyd, Ed.M.

National Institute for Early Education Research
Graduate School of Education
Rutgers, The State University

**Submitted to the New Jersey Department of Education
Division of Early Childhood Education**

The research reported in this document was conducted under a Memorandum of Understanding with the New Jersey Department of Education (NJ DOE). The conclusions are those of the authors and do not necessarily represent the views of the funding agency. The authors would like to thank the advisory board (Please see Appendix A for a complete list.) and Dr. Ellen Wolock for assistance in designing the data collection and interpreting the results. Christopher Gilbert provided expert technological support.

We are grateful to the New Jersey Association of Child Care Resource and Referral Agencies for their expert assistance throughout the data collection process. We also wish to acknowledge the generous support of The Schumann Fund for New Jersey which funded our partnership on the first phase of this study with the New Jersey Association of Child Care Resource and Referral Agencies and helped make dissemination of this report possible.

THE PROMISE OF PRESCHOOL IN NEW JERSEY

Introduction: Why Is the State Investing in Preschool?

Nationally, over two million 3- and 4-year olds attend some form of publicly-funded preschool program, including state-funded preschool initiatives, special education, and Head Start (Barnett, Epstein, Friedman, Boyd, & Hustedt, 2008). During the 2007-2008 school year, 1,134,687 children attended a state-funded preschool program, and nearly one million children attended Head Start programs. Counting all forms of center-based services nationally, over 80 percent of 4-year-olds in the country attend some kind of program each year. However, the quality and purpose of these programs varies. Research shows that attending high quality preschool makes a difference, especially for children at risk of school difficulties due to poverty, having English as a second language, having teen parents or parents with low educational levels. However, the quality of preschool programs has a significant impact on future learning and benefits (Barnett, 2008). A large body of research has shown the following benefits to starting school in preschool:

- Improved achievement from kindergarten entry through high school;
- Reduced grade retention;
- Decrease in placement in special education;
- Greater rates of high school graduation;
- More college and post secondary school attendance;
- Fewer arrests and less criminal behavior;
- Increased participation in the work force as adults with greater tax contributions; and
- Less participation in welfare.

These benefits, taken together, result in large savings to society from reduced costs of education, increased taxes, decreased costs of social services, and lower justice system costs. This has lead economists to estimate a cost savings of between \$3 and \$18 for every dollar invested (Barnett, 2008).

Clearly, access to high-quality preschool programs can significantly reduce the gap at school entry for children at risk; however, school failure does not end at the poverty line and the majority of children who are placed in special education, retained in grade or who drop out of school are in the middle income bracket. In addition, the gap in readiness scores at kindergarten entry between children from middle income families and those from the wealthiest families is exactly equal to that of the gap between children in poverty and in the middle class (Barnett & Yarosz, 2007). Preschool can provide benefits to all children and result in savings in school related costs.

Acting on their understanding of this strong research base showing not only the long term educational benefits of preschool education but the economic benefits to society at large, the New Jersey legislature funded preschool in Early Childhood Program Aid districts in 1995 and the Supreme Court in the 1998 *Abbott v. Burke* decision mandated that the state establish high-quality preschool education for the highest-poverty school districts in the



state (the so-called Abbott districts). Since the Abbott Preschool Program began in the 1999-2000 school year, enrollment in the program has increased dramatically. In 2008-2009, the tenth year of implementation, the program served more than 43,000 3- and 4-year-old children in a mix of settings including public schools, private child care centers, and Head Start agencies.

What Are the Effects of Participation in New Jersey Preschool?

Considerable attention and resources have been invested in the Abbott Preschool Program. According to NIEER's annual report on state-funded preschool, the Abbott program ranks as one of the highest quality state preschool programs in the nation, as one of the highest in providing access to 3-year-olds, and as the most well-funded (Barnett, Epstein, Friedman, Boyd, & Hustedt, 2008). As such, there is a great deal of interest in whether it is effective in helping children enter kindergarten with the knowledge, skills and dispositions that will lead to success in school. The Abbott Preschool Program Longitudinal Effects Study (APPLES; Frede, Jung, Barnett, & Figueras, 2009) which is funded by the New Jersey Department of Education and the Pew Charitable Trusts to investigate the effects of the preschool program, shows clear evidence that by participating in a high-quality program children, whether in public schools, private child care or Head Start, are improving in language, literacy, and math. These results are detailed in the following excerpt from the executive summary of the most recent report.

**The APPLES Blossom Executive Summary: Abbott Preschool Program
Longitudinal Effects Study (APPLES) Preliminary Results through 2nd Grade
(Frede, Jung, Barnett & Figueras, 2009)**

- **Pre-K Effects on Oral Language and Conceptual Knowledge remain strong-** Oral language (as measured by the PPVT) forms not only the basis of social communication but reveals conceptual knowledge and is essential for both reading and writing acquisition. At the end of kindergarten, one year of Abbott Pre-K had an effect size of 0.18 ($p < .05$) and the two year effect size was 0.38 ($p < .01$). At the end of second grade, the benefits of Abbott Pre-K participation continued to be significant with results of 0.22 ($p < .05$) for one year of attendance and 0.40 ($p < .01$) for two years.
- **Reading Skills Differences Favor the Abbott Preschool Group and All Children Are Performing Well** - Most first and second grade tests of academic achievement tend to measure phonics and other discrete early literacy skills. These are important predictors of reading ability more broadly including reading comprehension. Differences in these literacy outcomes tended to favor children who had attended Abbott Pre-K, but generally did not reach statistical significance. The most prominent exception is passage comprehension on which the former pre-K attendees scored higher ($p < .05$, one-tailed test) with effect sizes of 0.16 for one year and 0.20 for two years.



- **Strong Mathematics Effects of Pre-K Persist** – As with literacy all results in mathematics favored the Abbott preschool attendees with two years having more impact than one. Math measures included applied problems, calculation, math fluency and broad math. The most consistently observed effects were for Applied Problems. In first grade, effect sizes were 0.18 ($p < .05$) for one year and 0.26 ($p < .05$) for two years. In second grade, effect sizes were 0.24 ($p < .05$) for one year and 0.44 ($p < .01$) for two years. Some significant effects also were found for Calculation and Broad Math in second grade.
- **Grade Retention Is Cut in Half** – Since study children have entered second grade we can investigate the effects of Pre-K on early grade retention. By second grade the effect on grade retention of two years of pre-K is statistically significant ($p < .05$) and twice as large as the effect of one year of pre-K. Grade repetition is 10.7% for children who did not attend pre-K, 7.2% for those who attended for one year, and 5.3% for those who attended two years. This reflects Pre-K's considerable effects on learning and ability and results in savings to taxpayers.

The estimated effects through second grade from two years of Abbott Pre-K are roughly comparable in size to the effects of the well-known Chicago Child Parent Centers, which also began at age three and returned \$10 for every dollar invested in the program. Given the trajectory of achievement and progression in grade found so far, we can expect that the future will reveal not only lasting benefits for the children who attended Abbott Pre-K but eventual pay-off to society in the reduction of school costs, decreases in delinquency and crime, and increased productivity in the workforce.

Can Preschool Be Effectively Provided in Settings Outside of the Public Schools?

The Abbott Preschool Program serves children in a mix of public school, child care and Head Start classrooms. This mixed delivery system was designed to take advantage of both expertise and space that was available in the existing private preschool programs. NIEER has reported previously that the quality of classrooms is uniformly high across these settings (Frede, Jung, Barnett, Lamy & Figueras, 2007). This is relevant because quality is a clear predictor of effects and it seems likely that expansion of preschool in New Jersey will require some collaboration between districts and private providers.

In 2006-2007, the Center for the Study of Child Care Employment conducted a study of center director's views of the mixed delivery system. *Partnering for Preschool: A Study of Center Directors in New Jersey's Mixed-Delivery Abbott Program* (Whitebook, Ryan, Kipnis, and Sakai, 2008) reports that, according to the center directors interviewed, participation by their center in the Abbott program resulted in:

- Access to more and better services for children,
- Stable and sufficient funding for materials and operations,
- Resources to offer comprehensive services, and
- Teachers motivated to pursue further education.



Thus, a mixed-delivery system not only allows for faster expansion and support of existing private programs in each community, it provides effective and efficient choices for families.

The School Funding Reform Act of 2008 and Preschool Expansion

Recognizing these benefits for children and society, New Jersey's new school funding formula includes significant expansion of preschool throughout the state. In January 2008, the Senate and General Assembly of the State of New Jersey enacted the School Funding Reform Act of 2008. Under this new law, all at-risk 3- and 4-year-olds in the state will be eligible to attend high quality (Abbott-like) preschool programs during their two years before kindergarten by 2013.

All school districts in the state are designated as either universal or targeted districts for preschool expansion. Universal districts will be required to offer high-quality state-funded preschool to all 3- and 4-year-olds residing in the district, regardless of the families' income level. Universal districts include all District Factor Group (DFG) "A" and "B" school districts and DFG "CD" school districts with 40 percent or greater low-income students. This group includes all current Abbott districts as well as most other ECPA districts. Low-income is defined as students who are eligible for free or reduced price lunch (185 percent of the federal poverty level). Targeted districts will be required only to offer a high-quality state funded preschool program to 3- and 4-year-olds who qualify for free or reduced price lunch. Targeted districts are all other districts in the state except those that do not serve elementary school children. (Please see Appendix B for a list of all universal and targeted districts)

Preschool expansion in New Jersey will be gradually implemented over a six year period, with the goal of serving an additional 30,000 children by 2013 for a total of 70,000 three- and four-year-olds. It is anticipated that funding for preschool will also increase by \$300 million, bringing the total funding for state-funded preschool in New Jersey to \$850 million. The original preschool expansion roll-out plan allowed for districts to apply for funding beginning in the 2008-2009 school year. Only five districts (Fairfield in Cumberland County, Woodbine, Red Bank, Little Egg Harbor, and Pemberton Boro) received funding to begin preschool expansion during the 2008-2009 school year. Districts will have five years to expand and serve their eligible populations of three- and four-year-olds. In the original preschool expansion plan, districts were recommended to serve at least 20 percent of their universe during the 2009-2010 school year with the expectation that they serve 90 percent of their eligible population by the 2013-2014 school year. However, due to the current economic situation the proposed roll out of preschool expansion has been delayed, and with the exception of those five districts that received funding in 08-09 to begin expansion, it is unclear when expansion will be funded.

The School Funding Reform Act of 2008 requires districts to implement a high-quality, Abbott-like preschool program. Under preschool expansion, preschool class sizes will be limited to 15 children with one teacher and one assistant teacher. Lead preschool



teachers will be required to have at least a bachelor's degree and be licensed to teach preschool. Assistant preschool teachers will be required to meet district requirements and be appropriately trained. In most districts assistant preschool teachers will be required to have a high school diploma. However in schools receiving Title I funding, assistant preschool teachers will have to meet the more stringent Title I requirements. Districts will also be required to have a master teacher and other consultants to provide coaching and mentoring to preschool teachers in curriculum implementation, improving services for children with disabilities and challenging behaviors, working with English language learners and other teaching strategies. In addition, district must choose one of the five state recommended curricula for preschool or submit their curriculum to the state for approval. These curricula are *Bank Street Developmental Interaction Approach* (Nager & Shapiro, E., 2000); *The Creative Curriculum*, (Dodge, Bickart, Heroman, & Boyle, 2009), *Curiosity Corner* (Chambers, 2009), *HighScope Preschool Curriculum* (Epstein, & Schweinhart, 2009), and *Tools of the Mind Project* (Bodrova, & Leong, 2009). Programs will also be required to develop and implement plans for the following: Serving ELL children, increasing provision of services for special education children in regular education classrooms, ensuring a coherent and articulated approach preschool through grade 3, and integrated parent involvement.

Districts must also form an Early Childhood Advisory Council made up of important stakeholders and experts in early childhood care and education, possibly including kindergarten teachers, district administrators, child care and Head Start representatives, pediatricians, local community leaders, municipal employees and higher education, among others. Districts are encouraged to serve their eligible population of three- and four-year-olds using a mixed delivery system of in-district classrooms and classrooms in child care providers or Head Start agencies. Districts can also form collaborations with other nearby districts to offer preschool. Models for collaboration will be discussed later in this report.

THE PRESCHOOL EXPANSION NEEDS ASSESSMENT

To better prepare for the preschool expansion required by the School Funding Reform Act of 2008, the New Jersey Department of Education (NJDOE) – Division of Early Childhood Education entered into a Memorandum of Understanding with the National Institute for Early Education Research (NIEER) in the spring of 2008 to conduct a needs assessment of preschool programs and school districts throughout New Jersey. The results of this needs assessment will be used to inform the NJDOE about the resources, circumstances, and needs relevant to preschool quality and expansion of school districts and private preschool providers throughout the state.

The purpose of the New Jersey Preschool Expansion Assessment Research Study is to assess the capacity and quality of child care centers, Head Start programs, and school district preschool programs across the state that are not currently funded through Abbott districts' budgets by the state. In order to accomplish this goal, information was collected on the school district, school/center, classroom, and teacher level.



The following questions were used to focus our data collection:

- How many 3- and 4-year-old children can be offered a high quality preschool education in existing public schools, private child care centers and Head Start programs within the identified districts?
- What is the basic environmental quality of these classrooms, as measured by the Basic Classroom Climate and Materials Checklist (NIEER, 2008)?
- What are the educational backgrounds, credentials and experience levels of the current child care, Head Start and public school preschool teaching workforce in these settings?
- What are common issues that need to be addressed to improve the quality of current pre-k classrooms?
- What, if any, early childhood education experience do administrators and center directors have?
- What are the district's plans for preschool expansion, including plans for overcoming perceived barriers and plans for collaboration?

Three methods of data collection were used in the study: surveys, interviews, and observations. District, child care and Head Start administrators were interviewed regarding a wide variety of issues related to expansion and current service provision. In districts that will be expected to serve all or large numbers of their preschool population we also conducted direct classroom and facility observations. Similar observations were also conducted in child care centers and Head Start programs. The needs assessment was conducted in phases, with more intensive data collection and larger samples used in districts with larger percentages of eligible population. This study built on a previous study conducted in collaboration with New Jersey Association of Child Care Resource and Referral Agencies (NJACCRA), which collected information via phone interview and written work force surveys from licensed child care and Head Start programs located in the state's non-Abbott districts with larger proportions of low income families (Ackerman and Sansanelli, 2008. See Appendix C for the full report).

Below we present selected results for each of the major research questions. A full description of all of the methods, procedures, results and instruments follow in the full technical report.

Selected Results for the Preschool Expansion Assessment Research Study (PEARS)

How many 3- and 4-year-old children can be offered a high quality preschool education in existing public schools, private child care centers and Head Start programs within the identified districts?

We estimated the number of preschoolers that could be served in district preschool programs, child care centers, and Head Start centers that were visited during this needs assessment, as well as those that were not. Please note that this estimate includes classrooms regardless of whether they meet DOE facilities standards (e.g. in-class bathroom, 950 square feet, etc).



Overall, the total estimated capacity of all child care centers serving preschool age children, not located in Abbott districts was estimated to be 157,023. The capacity of child care centers visited was estimated by assuming that each classroom in the center could serve 15 preschoolers. All classrooms, including classrooms that were currently serving infants and toddlers were included. Child care centers that were visited have the capacity to serve 71,055 preschoolers. The capacity of child care centers not visited (and not located in an Abbott district) was estimated by multiplying the number of centers not visited by the average number of classrooms per center visited (4.8), and assuming that each classroom could serve 15 children. Child care centers not visited have the capacity to serve 85,968 preschoolers.

In total, the Head Start centers in non-Abbott districts have the capacity to serve 4,524 preschoolers, assuming a class size of 15. The capacity of Head Start centers was estimated in a similar manner to the child care centers. Head Start centers visited as part of this needs assessment have the capacity to serve 3,390 preschoolers. The average number of classrooms in the Head Start centers visited during this needs assessment was 3.6. Head Start centers not visited (and not located in Abbott districts) have the capacity to serve 1,134 preschoolers.

Overall, the non-Abbott districts' preschool programs have an estimated capacity to serve 21,197 preschoolers. Assuming 15 preschooler per classroom, district preschool programs that participated in this needs assessment have the capacity to serve 19,665 children. The capacity of district preschool programs that did not participate to serve preschoolers was estimated based on the statewide ASSA count. Based on the ASSA count, non-Abbott districts who did not participate in this needs assessment served 1,532 preschoolers. This estimation is likely an underestimation of the capacity of these districts to provide preschool because many of the districts serve fewer than 15 children per classroom. Therefore, they could increase their capacity by enrolling additional children without exceeding the 15 child class size limit. Conversely, this may also overestimate the capacity of the districts to provide preschool under preschool expansion if some classrooms serve more than 15 children.

Based on these estimations, district preschool programs, child care centers, and Head Start programs in non-Abbott districts have a capacity to serve 182,744 preschoolers. According to the July 2008 census, there are 223,137 three- and four-year-olds living in New Jersey and 51,732 of these preschool-age children reside in Abbott districts. Therefore, there are 171,495 preschool age children who are not yet eligible for high-quality state-funded preschool in New Jersey. Not all of these children will qualify for preschool under the state's new school funding formula. However, based on our estimations described above, there are more than enough spaces available among the child care centers, Head Start centers, and district preschool programs to serve all the children who will be eligible for preschool under preschool expansion.

There are several potential problems with our estimation that could result in either an over or underestimation of the state's capacity. Most of the centers/schools and



classrooms included do not meet the state's facilities regulations for preschool expansion. This will be more of an issue for contracted sites than in-district sites. Child care centers will be required to have at least 6 classrooms in order to be eligible to contract with a district to provide preschool under preschool expansion. Since the average number of classrooms per child care center was 4.8, the majority of centers that have fewer than 6 classrooms. Additionally, all classrooms will be required to be at least 950 square feet and have a child-sized bathroom. The overwhelming majority of classrooms did not meet this requirement. In an effort to be expansive, our estimations also assume that all self-contained classrooms would be converted to inclusion classrooms and that all infant and toddler and school age child care center classrooms would be converted to preschool classrooms. It is not the state's intention or our assumption that classrooms used for other age groups should be converted. In fact, there are strong reasons to expand offerings for infant and toddler care but we felt it was important to determine how tempting it might be for centers to convert their space. Given the adequacy of licensed capacity, the use of this space is not necessary to meet the preschool demands. Therefore, the estimated capacity of child care centers and Head Start centers to provide preschool under preschool expansion is an over-estimation and should just be used to determine whether facility standards should be relaxed during the initial phases of expansion. While district programs are exempt from the requirements to have at least 6 preschool classrooms and can request a waiver for the 950 square feet requirement, these classrooms must still be large enough to serve 15 preschool students.

What, if any, early childhood education experience do administrators and center directors have?

In general, child care and Head Start administrators are much more likely than school administrators to have specialized experience or qualifications in early childhood education with almost all Head Start administrators and well over half of child care administrators having a college degree related to ECE. However less than one quarter of district principals who supervise preschool classrooms and not even 10% of district administrators in charge of preschool planning having similar specialization. This information is critical to the effectiveness of a preschool program. Research has consistently shown that without expert supervision the promise of preschool is unlikely to be met (Frede, 1998). Administrators in child care centers are not required to hold bachelors degree; however, close to 90% have completed at least an undergraduate degree.

What are the educational backgrounds, credentials and experience levels of the current child care, Head Start and public school preschool teaching workforce in these settings?

Under the existing Abbott, ECPA, and ELLI programs, lead district preschool teachers in New Jersey are required to have at least a bachelor's degree. They are also required to have teaching certification in early childhood education. Under the preschool expansion, teacher degree and certification requirements will be the same. Lead teachers will be required to have a bachelor's degree and a preschool through grade three certification,



with some specific exceptions. Preschool teachers in child care or Head start programs contracting with a district in its first year of implementing the preschool program have until September 2012 to obtain a bachelor's degree and approved certification.

We conducted surveys to determine how many current teachers meet the teaching qualifications that will be required. Across all settings, almost two thirds (65%) of lead preschool teachers had a bachelors degree or higher. As expected, all district lead preschool teachers had earned at least a bachelor's degree (with one single exception where an emergency waiver had been obtained). New Jersey child care licensing does not require lead preschool teachers to have a minimum degree. Therefore, it is not surprising that a lower percentage of child care center lead preschool teachers have a bachelor's degree or higher. The findings from child care were somewhat surprising with almost half (47.4%) of the teachers reporting holding at least a bachelor's degree and almost 8% of the teachers currently enrolled in a program to earn a bachelor's degree. This finding is surprising in light previous reports on child care teachers' qualifications when the Abbott program was first implemented. At that time only 35% of the child care center teachers in those districts held undergraduate degrees (Barnett, Tarr, & Frede, 1999). In addition, national data shows much lower rates of college degrees for child care teachers (Herzenberg, Price, & Bradley, 2005).

These results vary, however, by region of the state with more than half of the child care center teachers in northern districts meeting the requirement. In the central region this drops to just under half and in the south barely one third of the child care teachers have at least a bachelor's degree. More resources will thus be needed in the southern region to ensure that child care centers are able to contract with districts to provide preschool, especially in light of the fact that access to higher education programs in ECE is less available in that area.

Because the Head Start Reauthorization Act of 2007 (P.L. 110-134) requires that by September 20, 2013, at least 50% of Head Start lead teachers must have a BA or higher, we expected to find a larger percentage of those teachers having the qualification. Indeed, 58.6% of the Head Start lead preschool teachers had earned at least a bachelor's degree and an additional 16% of the lead Head Start preschool teachers are enrolled in a program to earn a bachelor's degree.

Although all district lead preschool teachers should be appropriately certified in early childhood education, we found that only 86% have preschool certification or the equivalent. This is likely due to lack of understanding in some districts that the former Nursery through Grade 8 license does not qualify teachers for preschool unless they majored in early childhood education or have taught for two years in a preschool classroom. This percentage of qualified teachers still exceeds that of child care and Head Start lead preschool teachers which was expected. Slightly less than 20% of all child care center lead preschool teachers have preschool certification or the equivalent. Of the child care center lead preschool teachers who have a bachelor's degree or higher, 38.3 percent have a preschool certification or the equivalent. Almost 30% of Head Start lead preschool teachers have preschool certification or the equivalent. Of the Head Start lead preschool



teachers who have a bachelor's degree or higher, almost 50% have a preschool certification or the equivalent.

What is the basic environmental quality of these classrooms, as measured by the Basic Classroom Climate and Materials Checklist (NIEER, 2008)?

We developed the Basic Classroom Climate and Materials Checklist (NIEER, 2008), a classroom observation checklist that assesses minimal standards for classroom quality and environment. The new instrument was based on minimal standards in existing research instruments. Previous research on the Abbott preschool program shows that with increased resources and technical assistance, the quality of classroom practices can be improved dramatically (Frede, et al., 2007). Although actual physical plant deficiencies may be insurmountable or extremely costly, this research shows that materials and equipment inadequacies can be addressed as can poor quality teaching. Our purpose here was to help gauge the difficulties across settings in ensuring that programs have the basics upon which to build. This information can provide a baseline for determining the need for technical assistance, professional development and materials costs. Data from the classroom direct observation sites are collected in four areas; furniture and room arrangement, health and safety, teacher and peer interaction, and daily schedule.

We found that in general classrooms are adequately supervised and that teacher and peer interactions are warm and respectful. This is a good basis upon which to build an educational intervention. Although most classrooms are conveniently equipped for routine care, in general child care classrooms are somewhat less likely to be organized to foster basic learning; e.g. materials or areas of the classroom might be less well-organized. Child care and Head Start classrooms were more often found to have at least one safety hazard. These hazards could include poorly maintained equipment or lack of adequate supervision by staff. These are remediable conditions that could be corrected with financial resources and professional development. All classrooms provided some consistency in their daily routine; however, Head Start and child care classrooms were more likely to give children time to play outside daily. A consistent daily routine with an opportunity to play outside daily is a basic element of quality in preschool programs. Only district classrooms were equipped with bathrooms and running water. Without initiatives to enhance facilities, then about one third of Head Start classrooms and one half of child care classrooms will not be able to meet state regulations for this criterion.

Adequacy of preschool classroom materials and related costs

We also examined the cost of fully furnishing and supplying preschool classrooms in district preschool programs, child care centers, and Head Start agencies. Using the New Jersey Department of Education Division of Early Childhood Education's Abbott Preschool Classroom recommended materials list, we developed furnishing and materials checklists that include materials from nine domains: art, sand/water, blocks, technology, woodworking, dramatic play, books, manipulatives, and music/movement. These checklists inventory furniture and materials that are important and appropriate for high



quality preschool programs. Prices were assigned to items in the checklists based on internet searches for the items from typical suppliers.

The total cost to fully furnish and equip a preschool classroom with all of the furniture and items on the DOE list would be over \$18,300. However, existing classrooms bring resources with them, and, indeed we estimate based on our data, that on average the cost to fully furnish and equip the classrooms is just over \$7600. The need for supplemental furnishing and materials varies considerably by auspice, however. For every category except woodworking, child care center classrooms, on average, require the most money to be fully furnished and equipped, approaching \$9000. District preschool and Head Start classrooms are closer to each other with district classrooms on average needing \$5800 and Head Start classrooms, being better equipped than district classrooms and requiring just over \$5000. Many district preschool programs are only a few years old, whereas many Head Start programs have been in operation for many years. These programs would have had more training in early childhood education which would lead to more appropriate purchases, as well as more time to amass durable furniture and materials. Clearly, contracting with Head Start and child care classrooms could result in considerable savings in start up costs compared to equipping new classrooms in school district buildings. On an individual classroom level the savings would range between \$10,700 and \$13,300.

Across all settings, the most money will need to be spent on purchasing furniture, which is the most expensive category of supplies. An average of \$3,011 will need to be expended on furniture which means that current classrooms could contribute 65.3 per cent of the total furniture cost of \$8,673. Looking across categories of materials, the areas most lacking across all auspices are sand and water table materials (necessary for physical science and math learning), blocks (necessary for science and math learning), woodworking (necessary for science and math learning), small manipulatives and puzzles (necessary for physical science and math learning) dramatic play (necessary for all areas of learning but particularly needed for self-regulation and language development), and books (necessary for conceptual development, language and literacy). However, the remaining materials categories are still underequipped with no category being above 2/3 complete on average.

What are common issues that need to be addressed to improve the quality of current pre-k classrooms?

Research on the effectiveness of preschool education has established that certain elements are critical to success. In addition to qualified teachers with specialized knowledge of young children, these elements include but are not limited to, the following:

- Small class sizes with low teacher to child ratios;
- A well-designed curriculum that intentionally focuses on all domains of learning and development;
- A system of classroom support based on a continuous improvement model;



- Education of children with disabilities in regular classrooms unless it has been shown that the child cannot thrive there;
- Specific attention and explicit plans for meeting the needs of emergent bilingual children; and
- Provision of programs to enhance family engagement (Frede, 1998).

With knowledge of this research, the New Jersey Department of Education has promulgated regulations that detail program standards in each of these areas and require districts to provide evidence that plans are in place to meet the requirements. We investigated the readiness to meet these standards of the districts and their potential partners in child care and Head Start.

Class size

Interestingly, across all settings, preschool class size just exceeds the mandate of 15 children per classroom with an average enrolled class size of 15.1. In district schools, 53 percent of classrooms served no more than 15 children. Thirty percent of classrooms enrolled between 16 and 20 children and 13 percent enrolled more than 21 children. In the 2007-2008 school year, ECPA-funded district preschool programs were allowed to enroll up to 25 children per classroom. This requirement changed for the 2008-2009 school year and ECPA-funded district preschool programs could only enroll up to 18 children per classroom. Data collectors visited ECPA preschool classes in the spring of 2008 when the classroom size requirement was 25 and in the fall of 2008 when the classroom size requirement was 18. Therefore, many of the classrooms that enrolled 16-20 or more than 21 children per classroom could have been following the current state requirements. Similarly, districts receiving ELLI funding may enroll up to 20 children per classroom.

In child care centers, 70 percent of classrooms served no more than 15 children. These classrooms would meet the preschool expansion class size requirement. Seventeen percent of child care center classrooms enrolled 16-20 children and 7 percent enrolled more than 21 children. In Head Start centers, only 42 percent of classrooms served no more than 15 children. However, 54 percent of classrooms served between 16 and 20 children. Less than 3 percent of Head Start classrooms have more than 21 children enrolled. Head Start performance standards require a class size of up to 20 children for 4-year-old classes and up to 17 children for 3-year-old classes. This requirement could explain why a greater percentage of classrooms in Head Start settings enroll more than 15 children. However, if these Head Start programs partner with school districts for preschool expansion, they will have to decrease the number of children enrolled per classroom.

DOE regulations also require that contracting child care centers have at least 6 classrooms per site. The purpose of this regulation is to keep the site level administrative costs lower by spreading them across more classrooms. Across all classrooms, 278 of the child care centers (27%) that were visited during this needs assessment have at least 6 classrooms. The average number of total classrooms including all ages in child care



centers was close to 5. Thus, most centers come very close to the requirement and may well qualify for a waiver.

Implementation of State Recommended Curriculum Models

NJ DOE regulations on preschool provision require that districts “implement a comprehensive, evidence-based preschool curriculum in order to meet the preschool standards” (p. 6 New Jersey Preschool Teaching and Learning Standards of Quality, 2009). As part of the preschool expansion plan, each district must choose one of the five state recommended curricula for preschool. These curricula are *Bank Street Developmental Interaction Approach* (Nager & Shapiro, E., 2000); *The Creative Curriculum*, (Dodge, Bickart, Heroman, & Boyle, 2009), *Curiosity Corner* (Chambers, 2009), *HighScope Preschool Curriculum* (Epstein, & Schweinhart, 2009), and *Tools of the Mind Project* (Bodrova, & Leong, 2009).. Thus, to determine how ready districts and their potential private partners are for preschool expansion, district and private provider administrators were asked what types of curricula are being used in their preschool classes. Please note, we did not attempt to measure actual fidelity of implementation of the curriculum, nor did we collect information on the extent of teacher training in the model. Thus, these results should not be interpreted to mean that the curricula are necessarily well-implemented.

Almost 60% of the districts report implementing one of the recommended curricula. However, 24 of the 339 districts mention using more than one curriculum. This finding may indicate less than adequate fidelity of implementation of the approved curriculum model since none of the approved models can easily be combined with another approach and still be implemented with fidelity. In some of these cases, districts may use different curricula in different schools or in preschool special education vs. their general education classrooms. This approach is likely more costly and more difficult to supervise effectively.

Child care and Head Start directors were also asked about the curriculum used in their centers. Virtually all Head Start programs use one of the recommended curriculum models but in contrast almost none of the child care centers do. This is not surprising given that the cost of professional development to implement these models would be prohibitive for a small agency. Approximately 50% of child care centers report using a center or teacher designed curriculum instead. Some child care centers even report “making the curriculum up as they go along”. This finding indicates that centers are not using a curriculum that has been researched and validated and may not be developmentally appropriate for preschool-aged children. Aligning curriculum across district and private partners will be a major effort for expansion.

Classroom Support through Teacher Coaching and Technical Assistance

Current research on effective professional development is fairly clear that in-class support is critical for improving teaching (Klein and Gomby, 2009). Information was collected on whether or not the districts provided any type of coaching or technical



assistance to teachers in preschool classrooms. Of the districts asked this question, more than half provide some type of assistance or coaching. The majority of districts (64.3%) provide ongoing, regular assistance, while 6.3% report providing assistance only 1-5 times a year. The majority of the support to teachers came either from special education staff (54.1%) or district administrators (33.3%) and, not surprisingly, the topics of support varied widely but the most common topic was curriculum support followed by behavior and classroom management and special education/inclusion.

Preschool Children with Disabilities in District Preschool Programs

Serving children with disabilities in general education classrooms with their age-appropriate peers whenever possible is required by federal and state law and regulation. “To the maximum extent appropriate, preschool children eligible for special education will be enrolled in general education preschool programs with their non-disabled peers” (p. 19 New Jersey Preschool Program Implementation Guidelines). Respondents from districts, child care centers and Head Start agencies were asked about their experiences working with and serving children with special needs. Fifty-eight percent (58%) of the 375 districts in our sample provide services for at least some of their preschool children with disabilities in inclusive settings. Across all classrooms, including preschool disabled classes, the mean number of children with special needs in each classroom was 5.5. However, it should be noted that in some cases the number of children with special needs reported per classroom might include children in both morning and afternoon sessions resulting in larger numbers. Almost two thirds of child care centers and virtually all Head Start centers reported having experience serving children with special needs. The mean for child care and Head Start was considerably lower than for districts at under 2 children with disabilities per classroom which is not surprising given that only districts are likely to have self-contained special education classes. Thus, all of the child care and Head Start classrooms that serve children with disabilities do so in the regular classroom environment.

Preschool English Language Learners in District Preschool Programs

The number of young children in this country who come to school speaking a language other than English is rising dramatically (Garcia and Frede, in press). Preschool is an effective time to provide supports for these children. However, few programs offer appropriate programs for English Language Learners (ELL). Districts were asked questions related to the ELL population in their districts, and what, if any, programs and support services are offered. The percentage ranged from 0 to 43% of the preschool population being considered English Language Learners. The average number of ELL per classroom is three. Districts that were most likely to serve preschool children and who reported serving ELLs were asked whether they had a specific program for English Language Learners (ELL) and if they support the maintenance of home language in their schools and prekindergarten programs; 56.7% said that they do not have an ELL program and 73.2% said they do not have any programs in place to support the maintenance of home language. Over three quarters (76%) of child care center directors, on the other hand, reported experience serving ELL children with 37.4 percent having established methods for promoting maintenance of children’s home language. Almost all Head Start



centers (98.5 %) reported having experience serving ELLs, and 84.8 percent reported that they have established methods for promoting maintenance of children’s home language.

Supports for Preschool Teachers of English Language Learners. Administrators who served preschool English Language Learners were asked about the kinds of supports provided to preschool teachers with students who are ELLs. Thirty-two percent of districts responded that they had English as Second Language (ESL) teachers for their preschool students and 33% responded that they had ESL teachers, coordinators or supervisors that supported preschool teachers who had ELL students. Approximately 26% of districts reported other types of ELL programs offered to preschool students such as classroom aides, translated materials such as books provided in the classroom, tutoring, or parent assistance.

Provision of Family Engagement Programs

Mutual and supportive partnerships with families in preschool programs can be important for the overall well-being and success of a child. As part of the preschool expansion, districts are required to have a “wide range of family involvement and educational opportunities” (p. 10 NJ Preschool Teaching and Learning Standards of Quality, 2009) including involving parents in the governance of the program, creating workshops, classes and structured activities to enhance parents knowledge of the program and parenting skills, and creating policies to encourage more parent participation in the preschool program (New Jersey Preschool Teaching and Learning Standards of Quality, 2009).

Over 95% of all district preschool, Head Start and child care programs offer opportunities for family involvement. However, while the overwhelming majority of pre-K programs provide parents with administrative information about the program and hold conferences between parents and staff, fewer pre-K programs have parents regularly volunteer in the classroom. Only 68% of district preschool programs and child care centers have parents regularly volunteer whereas 86% of Head Start programs have parent volunteers in the classroom. The Head Start program is designed to offer comprehensive services to children and families and child care is obviously mostly used by families where parents are working and thus this finding is not surprising.

What are the district’s plans for preschool expansion, including plans for collaboration and plans for overcoming perceived barriers?

In the current, highly successful Abbott Preschool Program over 65% of the children are served in private non-profit and for-profit child care centers and Head Start agencies. Given the lack of space and ECE expertise in the expansion districts described elsewhere in this report, and in order to take advantage of the early childhood expertise, facilities, and human resources available in other districts and early care and education programs, districts should consider collaborations with neighboring districts and local private ECE providers. Districts that already have experience with collaborations and contracts with other agencies will likely be more willing to collaborate. Thus we asked districts about



their current collaborations such as before and after school care, providing special education and bilingual services, and sharing professional development.

The vast majority of school districts do not currently collaborate with other entities for before and after care programs with 7% collaborating with other districts and 25% with other non-profit entities such as YWCAs, Boys and Girls Clubs, child care centers, and other non-profit and for-profit agencies. However, school districts are fairly likely to collaborate in providing/receiving special education services with 66.6% of those interviewed having already established relationships for services. Similarly, 50.8% of the districts share student transportation. Over 70% of the districts are also sharing professional development opportunities. Few districts work together or with other agencies to share ELL/Bilingual resources as only 12% report collaboration.

At the time of the interviews, most districts reported being at an early stage of planning for preschool expansion. Many reported that they needed to develop solutions to their specific difficulties for providing preschool. Few districts responded that they are considering collaboration as one of the solutions for lack of space. Slightly more than 20% plan to subcontract with a local child care agency, only 9% plan to subcontract with Head Start and slightly less than 17% will collaborate with a nearby district. Less than one percent is planning to use temporary classroom units (trailers).

The districts reported a variety of barriers to parent participation and to expansion generally. More than 50% of the district administrators reported lack of space and concern for a lack of funding as their primary concerns regarding preschool expansion. Funding concerns included the uncertainty of the state providing funding at all or adequate funding; cost effectiveness for small numbers of eligible children; and the lack of adequate funding to expand special education classes by half to full day or to create more integrated classrooms. Other concerns were more specific to certain groups of districts such as still providing half-day kindergarten programs, particular facility requirements, lack of experience with preschool, and board of education approval.

District officials speculated that there might be a number of barriers for parent participation in the preschool program. The most frequent concern was that the program's hours would not be compatible with parents' work schedules. The second most noted concern was the perception that parents want their young children at home with them. District administrators also believe that parents might think that 3 years old (and for some even 4) is too young for school. Transportation to school and the cost of tuition were also expressed as possible problems. On the other hand, for some a concern was the possibility that parents would think a full school day was too many hours for preschoolers. A small number of districts responded that parents may already have an existing relationship with a child care center and therefore not choose the public school program but these same districts did not plan to collaborate with child care agencies. However, 13 percent of interviewees reported that they were not aware of any reasons that parents wouldn't want their children to participate in preschool.



RECOMMENDATIONS

Recommendation 1: The state should proceed with funding preschool expansion. For the most part, districts and their potential partners are prepared and willing to serve 3 and 4 year olds in high quality preschool. Based on research we would predict that this investment will lead to improved achievement, reduction in school failure and savings to society.

Recommendation 2: Incentives should be provided to districts to contract and work collaboratively with child care centers and Head Start agencies to provide services. These private providers bring facilities and human resources to the collaboration. In particular, child care and Head Start administrators are much more likely to have formal qualifications and experience with preschool than do their district counterparts.

Recommendation 3: Construction funding for new and upgraded facilities is clearly needed if schools and their private partners are to meet facility standards. During the first few years of expansion it will be necessary to relax facility standards and provide waivers for the 950 square feet requirement on a case-by-case basis. Districts and private partners should be required to submit plans for how and when they will meet the requirements and no new facilities should be approved that do not meet the standards.

Recommendation 4: The Division of Early Childhood Education in the Department of Education is already active in providing early childhood professional development for leaders in districts and other agencies. Given the responses to our interviews, some specific areas of continued focus are recommended:

- Choosing and implementing state-recommended, effective preschool curriculum models.
- Providing in-class support to teachers using a continuous improvement cycle.
- Equipping classrooms with appropriate learning materials.
- Serving children with disabilities in regular education classes.
- Identifying and providing appropriate instructional support to young children who speak a language other than English at home.
- Implementing appropriate child assessments that inform instruction.
- Advantages of and methods for collaborating with other districts, child care agencies and Head Start centers