

Boston Public Schools K1 and K2 Programs Needs Assessment



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WELLESLEY CENTERS FOR WOMEN

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Preface

The Boston Public Schools Department of Early Childhood commissioned a needs assessment of current kindergarten (K2) and preschool (K1) programs [1] to inform the BPS Department of Early Childhood about professional development needs to improve the quality of existing K1 and K2 programs, and [2] to inform the Department of additional classroom resources necessary to expand the K1 program to provide universal access for Boston 4 year olds to accredited, full day programs.

This needs assessment was conducted by a team of researchers, led by Dr. Nancy Marshall and Dr. Joanne Roberts, Work, Families and Children program at the Wellesley Centers for Women. We wish to thank the principals, teachers and school staff who welcomed us into their schools and classrooms, and the many BPS families who participated in this needs assessment. We also wish to thank our research staff and colleagues who brought their skills and experience in classrooms to this needs assessment. The research team worked in collaboration with the Department of Early Childhood in the conduct of this needs assessment. However, the findings of this report and the views and opinions expressed herein do not necessarily state or reflect those of the Department of Early Childhood or of the Boston Public Schools. Any errors are the sole responsibility of the authors.

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Executive Summary

The No Child Left Behind Act (NCLB) brought national attention to the achievement gap that exists for children from economically disadvantaged families, different race and ethnic groups and linguistic minority families. The Boston Public Schools (BPS) is committed to closing the achievement gap that exists among students of various races and ethnicities, educational programs (regular education, special education and programs for English Language Learners), socio-economic backgrounds and genders.¹ The National Governors Association Center for Best Practices recommended that education policies address early childhood education as one way to close the achievement gap.²

Early Childhood Education and Closing the Achievement Gap. Recent scientific research on brain development, coupled with rising concerns about school achievement, has prompted considerable interest in the ways in which early childhood education can contribute to young children's school success. The existing research from multiple disciplines clearly indicates that early childhood is a critical time for children to develop the foundations that they need, so that all children enter first grade ready to learn.³ The Boston Public Schools have developed *Citywide Learning Standards* for Kindergarten that provide guidance for high quality programs in both K1 and K2 classrooms.

The BPS *Citywide Learning Standards* for Kindergarten are consistent with the National Association for the Education of Young Children (NAEYC) *Early Childhood Program Standards*, which provide detailed guidelines for kindergarten and preschool programs on curriculum, teaching, physical environment and other key program components.⁴ The *BPS Citywide Learning Standards: Kindergarten* and the *NAEYC Early Childhood Program Standards* provide the context for this present BPS Early Childhood Needs Assessment, and for our recommendations for ways to improve BPS programs to help to close the achievement gap.

The BPS Needs Assessment

This report is based on data collected from 43 K1 classrooms and 85 K2 classrooms in 67 different BPS schools in the 2005-2006 school year. Integrated classrooms were included in the sample, as were SEI and bilingual classrooms. The BPS Needs Assessment consisted of classroom observations, surveys of classroom teachers and school principals, as well as surveys completed by 844 families with children in the selected classrooms.

Recommendations

1. Bring all K1 and K2 programs up to the NAEYC Early Childhood Program Standards and the BPS Citywide Learning Standards for Kindergarten.

The BPS Needs Assessment assessed the quality of K1 and K2 classrooms on a set of indices based on the NAEYC Early Childhood Program Standards. More than one-quarter of BPS K1 and K2 classrooms meet the Good Benchmark on the Curriculum and Instructional Supports Indices. To close the achievement gap, BPS should ensure that all K1 and K2 classrooms meet the NAEYC Early Childhood Program Standards.

2. Ensure that all classrooms meet the National Association for the Education of Young Children (NAEYC) Early Childhood Program Standards for health and safety.

The NAEYC Standards require fencing or natural barriers for outdoor play areas. The BPS Needs Assessment rated the outdoor space used by 47% of K1 and K2 classrooms as very dangerous, primarily because it lacked adequate fencing around the outdoor play space, giving children access to parking lots and busy city streets. The NAEYC Standards also require that toilets, drinking water and hand-washing facilities be in the classroom or within 40 feet of the classroom. However, only about half of the observed classrooms had access to a sink with running water. In addition, in over one-third of the classrooms we visited, the bathrooms were not located in or near the classroom.

3. Provide all K1 and K2 classrooms with the equipment and materials needed to provide a high-quality early childhood program for all students.

Three-quarters of K1 teachers and 82% of K2 teachers reported that they needed more classroom materials. More than half of K1 and K2 teachers reported needing additional children's books to support literacy, as well as materials for art, dramatic play, fine motor activities, science and other curriculum areas. More than half of teachers also reported needing more storage cabinets, and greater access to gross motor equipment and space.

4. Ensure that all K1 and K2 classrooms have a paraprofessional present for the entire day and that class sizes meet NAEYC Early Childhood Program Standards of no more than 10 children per teacher (and paraprofessional) in K1, and no more than 12 children per teacher (and paraprofessional) in K2.

During the morning observation visits, there were no paraprofessionals present in 25% of the classrooms, and in another 43% of classrooms, the paraprofessional was in the classroom only part of the morning. Classrooms with more time from a paraprofessional received higher scores on the Curriculum Quality Index and on the Health and Safety Index. Eighty-five percent of principals, 81% of K1 teachers and 88% of K2 teachers reported that the early childhood program needed increased availability of paraprofessionals.

The majority of teachers and principals reported that smaller class sizes would be helpful. Enrollment in the K1 classrooms ranged from 10 to 25 students (average of 19 students); the average enrollment in the K2 classrooms was 20 students (a range of 12 to 25 students). The impact of class size on quality is affected by the number of qualified adults present in the classroom, that is, the ratio of children to qualified adults ("qualified adults" includes teachers and teacher aides, assistant teachers or paraprofessionals).

The NAEYC *Early Childhood Program Standards* recommend a ratio of no more than 12 children per qualified adult in kindergarten (K2) classes and a ratio of no more than 10 children per qualified adult in preschool (K1) classes of 4- and 5-year olds. We found that paraprofessionals are particularly important in classes with more than 12 children. BPS classrooms with more than 12 children and only one teacher were less likely to meet the Good Benchmark on the Curriculum Index and on the Health and Safety Index than were similar classes with a paraprofessional present throughout the day, or classes with 12 or fewer children.

5. Provide additional professional development opportunities for BPS Early Childhood teachers, paraprofessionals and principals.

One key factor that is essential to children's school success and to closing the achievement gap is teacher quality.⁵ Teachers with formal education in early childhood education and training or

professional development in early childhood curricula or practices are more likely to provide a higher quality education for young children.⁶

All BPS Early Childhood teachers have participated in professional development activities in the past three years. However, 47% of teachers reported that past professional development opportunities had not addressed topics relevant to kindergarten classrooms. The majority of teachers and principals reported that more professional development opportunities were needed for teachers in early childhood education.

The majority of teachers have received training on early math development, early literacy development, early language and communication development and second language acquisition in young children. All teachers who have not already received training in these areas would be interested in such training (approximately 20%-50% of teachers). About half of teachers have received training in behavior or classroom management; the remaining teachers would also be interested in such training. Over one-third of teachers were also interested in training in health and safety practices in early childhood, using technology for young children, gross motor play, play development, curriculum development in early childhood education, working with students with disabilities, working with parents of young children.

Principals are also interested in professional development for themselves on curriculum development in early childhood education, early childhood child assessment, classroom assessment, how to use data for early childhood classrooms, second language acquisition in young children, early math development and working with children with special needs.

Finally, 86% of K1 teachers and 94% of K2 teachers reported that more training for paraprofessionals is needed.

6. Boston currently has a system of mixed delivery of early childhood education, including the BPS Early Childhood programs, Head Starts and community centers. Planning efforts and programs of BPS Early Childhood should identify ways to strengthen this mixed delivery system to ensure all children enter school ready to learn.

Boston currently has a system of mixed delivery of early childhood education, including the BPS Early Childhood programs, Head Starts and community centers. The majority of K1 and K2 teachers reported that children with prior experience were more prepared for BPS; most of this preparation comes from community child care centers and Head Start programs. For example, over half of BPS K1 students had attended a community child care center or Head Start program the previous year. In addition, over half of BPS K2 students had attended a community child care center or Head Start program the previous year. The teachers' reports suggest that children entering K1 or K2 from community centers or Head Starts have received important preparation. Boston's children will benefit most from a system of early childhood education in which all components work together to support children's learning and their transitions to formal schooling. Planning efforts and programs of BPS Early Childhood should identify ways to strengthen this mixed delivery system to ensure all children enter school ready to learn.

7. Improve school bus transportation for K1 and K2 children.

Families whose K1 or K2 child rode the school bus, rather than walked or were driven to school, were less happy with their child's transportation to school. Families reported that 16% of children who rode the bus took longer than 20 minutes to reach school; these families were less happy with the transportation. These longer bus rides were problematic for some children, citing

fatigue for the children and physical discomfort. We recommend priority be given to scheduling shorter bus rides for K1 and K2 students.

Families also expressed concerns about the safety of school buses for young children. Families whose K1 and K2 children rode the bus talked about older students hurting or intimidating the younger children. Others were concerned about the rowdiness and noise level, and its effects on the bus driver's concentration. Among families who used other means of transportation, several commented that they would not use the school buses because of safety concerns. We second families' recommendation that all buses carrying K1 and K2 students have monitors.

8. Provide before and after school programs in the schools.

In 75% of families, the only parent or both parents are employed or in school or a training program. Over half of families report that all adults work full-time, while in a quarter of families, one parent works full-time and the other works part-time. For these working families, school schedules are not always compatible with their work schedules.

Working families made a variety of arrangements for the time between when they left for work and their child left for school, but only 4% relied on a BPS before school program. More than one-third of families said they would definitely use a before school program at their child's school, and another third said they might use such a program.

One-in-five families (20%) already use a formal after school program, including programs at BPS and in the community. Among families not already using a formal program, 49% of families would use an after school program at their child's school; an additional 32% said they might use such a program.

9. Expand cooperation between schools and families through additional supports for family-school communication.

Direct communication between families and teachers supports both the child's experience in the classroom, and the families' knowledge of and trust in the school. Effective communication allows families and teachers to each provide the child with an environment that supports learning and growth. Schools use a variety of strategies to communicate with families; in over 90% of classrooms, parents were given written information about the K1/K2 program, parents and teachers shared child-related information and parents were welcome to participate in classroom activities.

Most principals report that families at their schools are involved in their children's schooling. For example, 75% of families read to their K1 or K2 child every day or almost every day. Teachers and principals reported that the greatest challenge in family-school communication is getting families to schools, citing parents' work and family responsibilities and the fact that most parents do not bring their children to school (children are bussed or carpooled).

Given the difficulties families face in getting to school, telephone calls are another communication option. However, both principals and teachers cited the mismatch of schedules and constraints of parents' other commitments, as well as the fact that parents do not always have phone numbers where they can be reached directly and teachers do not have access to a phone and space for calling parents from school. We asked both parents and teachers how often they talked to each other. Half of families reported that they talked to their child's teacher at least once a week. However, 29% talked to their child's teacher only once or twice a month,

and 19% talked to the teacher only a few times a year.

Finally, written communication is an option, but one third of teachers and principals noted that one obstacle is the fact that some parents have difficulty reading English. Interestingly, teachers and principals experienced less difficulty from language barriers between parents and school staff, suggesting that spoken communication is less of an issue. In addition, only 6% of principals felt that cultural differences between parents and schools were a serious obstacle.

Closing the Achievement Gap in the Boston Public Schools

The No Child Left Behind Act (NCLB) brought national attention to the achievement gap that exists for children from economically disadvantaged families, different race and ethnic groups and linguistic minority families. The Boston Public Schools (BPS) is committed to closing the achievement gap that exists among students of various races and ethnicities, educational programs (regular education, special education and programs for English Language Learners), socio-economic backgrounds and genders.⁷ The BPS Whole School Improvement Effort is designed to close the achievement gap through six essentials, including effective instructional practices, assessment of student progress towards proficiency, professional development, shared leadership, resources to support instructional improvement and improved student learning and a partnership with families and community to support student learning.⁸ The National Governors Association Center for Best Practices recommended that education policies address early childhood education as one way to close the achievement gap.⁹

Early Childhood Education and Closing the Achievement Gap. Recent scientific research on brain development, coupled with rising concerns about school achievement, has prompted considerable interest in the ways in which early childhood education can contribute to young children's school success. The existing research from multiple disciplines clearly indicates that early childhood is a critical time for children to develop the foundations that they need, so that all children enter first grade ready to learn.¹⁰ High quality early childhood programs are related to children's cognitive and school outcomes, especially for children from low-income families.^{11,12,13} High-quality early childhood education has been found to produce lasting gains on achievement tests, and reduced rates of grade retention or placement in special education services.¹⁴

What constitutes high-quality early childhood education? The Boston Public Schools have developed the *Citywide Learning Standards: Kindergarten* that provide guidance for high quality programs in both K1 and K2 classrooms. The *Boston Public Schools Citywide Learning Standards: Kindergarten* are designed to "produce *independent learners* who are encouraged to

- Think, question, and communicate;
- Gain and apply knowledge;
- Work and contribute in meaningful, purposeful ways."

The *BPS Citywide Learning Standards: Kindergarten* provide expectations for children's learning and development in several areas, including English Language Arts, History and Social Studies, Math, and Science and Technology. The Learning Standards provide extensive information on the skills children will develop in each of these areas while in kindergarten. For example, in English Language Arts, children will develop skills in speaking and listening, language use, beginning reading, responding to literature, writing and the media. In Math, children will develop skills in data analysis (sorting a collection of objects; representing data using concrete materials, pictures, labels or words, and numbers; count and compare the quantities of two different data sets), geometry (e.g., put 3-D shapes together to make other shapes), measurement, and number sense and operations (e.g., describe and compare amounts using words like more, most, same, equal). In History and Social Studies, children will develop an understanding of "families and communities near and far, now and long ago," including their own families, their school and community, their country and the world, as well as the celebrations of different groups, nations and individuals, and an understanding of time. The guidelines for History and Social Studies emphasize both knowledge acquisition and

development of perspectives. For example, one of the guidelines states “Students will recognize their school is a community in which they are equals, and in which all must be considerate of others for the school to be a good place to work, learn and play; learn and practice school rules that include respect for others, respect for property, cooperation with others, shared responsibility, diligence and honesty.” The area of Science and Technology focuses on scientific inquiry – asking questions, conducting simple experiments and observing the outcome, describing and representing observations. In K1, children learn about living things – plants and animals – and in K2, children learn about living things in their environment.

How do children develop the skills described in the BPS Citywide Learning Standards?

The *BPS Citywide Learning Standards: Kindergarten* advocate the *workshop* approach to teaching and learning. As the Learning Standards state:

The workshop approach helps teachers organize their classrooms and instructional time to teach effective reading, writing, and learning strategies and to help students put them into practice. The most important goal of this approach is the development of independent learners who are equipped with the skills and knowledge they will need for a lifetime of learning.

The workshop approach derives from the insight that people learn best by doing and that teachers often need to provide students with more time to read, write, and use effective learning strategies to explore and understand the content they are studying. The approach also derives from the insight that students need to share in the ownership of the curriculum to increase their investment, engagement, and motivation. Students need to participate in the selection of “just right” books for independent and small group reading and writing activities, and they need to explore, read, and write about topics and ideas of importance to them (as well as the curriculum).

The workshop approach uses a mixture of whole-class, small group, partner, and one-on-one instruction that centers on conversations about content, strategies, and work routines. Each of these varied approaches to teaching and learning is essential to students’ development as independent readers, writers, and learners.

The *Learning Standards* also advocate the development of habits of mind and work that enable effective learning and are essential to students’ success in school, including Curiosity and Critical Thinking, Respect for Diversity, Consideration and Compassion, Collaboration, Self-Direction, Perseverance, Initiative, Courage and Responsibility.

The *BPS Citywide Learning Standards: Kindergarten* are consistent with the National Association for the Education of Young Children (NAEYC) *Early Childhood Program Standards*, which provide detailed guidelines for kindergarten and preschool programs on curriculum, teaching, physical environment and other key program components.¹⁵ The *BPS Citywide Learning Standards: Kindergarten* and the *NAEYC Early Childhood Program Standards* provide the context for this present BPS Early Childhood Needs Assessment, and for our recommendations for ways to improve BPS programs to help to close the achievement gap.

Methods

This report is based on data collected from 43 K1 classrooms in 85 K2 classrooms in 67 different BPS schools in the 2005-2006 school year. All K1 classrooms with a minimum of 10 children enrolled in the fall of 2005 were invited to participate, along with a random sample of K2 classrooms with a minimum of 10 children enrolled. Integrated classrooms were included in the sample, but substantially separate classrooms were not included. SEI or bilingual classrooms were also included in the sample.

The schools were randomly selected from all BPS schools with one or more K1 or K2 classrooms; 67 schools, or 88% of selected schools, agreed to participate and were visited within the study period. All K1 classrooms were invited to participate; 43 K1 classrooms, or 80% of K1 classrooms, agreed to participate. The sample of K2 classrooms was randomly selected across all schools; 85 K2 classrooms, or 92% of the K2 sample, agreed to participate.¹

For each classroom, we collected three types of data: [1] observations of the classroom on a typical morning; [2] professional development and classroom needs assessments completed by teachers and principals; [3] family needs assessments completed by families of the children in the classroom. Each of these is described below.

Classroom Observations

The goal of the classroom observation was to assess classroom practices using standardized measures that would provide a picture of the strengths of each classroom, as well as areas needing improvement. The classroom observations used three assessment tools developed specifically for use in preschool classrooms, the Early Childhood Environment Rating Scale-Revised (ECERS-R); the Classroom Assessment Scoring System (CLASS) and Supports for Early Literacy Assessment (SELA). These assessments are described briefly below and in detail in the Appendix.

Classroom observers received extensive training on all measures. Visits were scheduled at times that were not disruptive and on days that were typical of the usual environment for that classroom (i.e., not on a day when a field trip was planned, nor when half the class, or the regular teacher, was out sick). Each observation took 3-4 hours and followed a standardized administration procedure designed to minimize disruption to students, teachers, and other school staff.

Early Childhood Environment Rating Scale (ECERS).¹⁶ The ECERS has been widely used for a number of years in the assessment of early childhood education environments. This 37-item scale is a rating of the resources available in an early childhood program, the teachers' use of these resources, and the teachers' interactions with the children. It is comprised of seven sub-scales that include Space & Furnishings, Personal Care Routines, Language-Reasoning, Activities, Interaction, Program Structure and Parents & Staff.

ECERS Curriculum and ECERS Health & Safety Indices. For this report, the ECERS sub-scales

¹ At the time of the study, there were 190 K2 classrooms with at least 10 children enrolled. The sample in this study of 85 K2 classrooms is, therefore, 45% of all K2 classrooms, and 92% of the random sample of K2 classrooms selected for the study. As such, this results of this study can be applied to all K2 classrooms in BPS with at least 10 children enrolled.

were grouped into two overall measures, based on exploratory factor analysis. The ECERS Curriculum Index includes measures of the availability of resources as well as the teacher's behavior. ECERS Curriculum is an average of the subscale scores for Space & Furnishings, Language-Reasoning, Program Structure and Activities, as well as the Interaction scale without the two supervision items.

The ECERS Health & Safety Index is an average of the health items from the ECERS Personal Care Routines scale (meals/snacks, naps, toileting, health behaviors) and the average of the two supervision items from the interactions scale.

Benchmarks. The findings on the ECERS Curriculum and ECERS Health & Safety Indices are reported in terms of benchmarks. In this report, classrooms are said to meet the Inadequate Benchmark if they score below a "3" on an ECERS Index, that is, the classrooms were judged to be inadequate on one or more of the ECERS components. Classrooms that meet the Adequate Benchmark have scored between a 3 and a 4.5, indicating classrooms that meet or exceed minimal standards on one or more of the ECERS components. Classrooms that meet the Good Benchmark on the ECERS Curriculum Index have earned an average score of 4.5 or higher on the ECERS domains, indicating classrooms that provide a curriculum that meets professional standards for children's growth and development. Classrooms that meet the Good Benchmark on the Health & Safety Index have earned an average score of 4.5 or higher on the ECERS items, indicating classrooms that meet professional standards for protecting children's health and safety.

The ***Classroom Assessment Scoring System*** (CLASS)¹⁷ is an observational instrument developed to assess classroom quality in preschool through third grade classrooms. The CLASS scores are based solely on *interactions* between teachers and children. The presence of materials and the physical environment are not considered in scoring.

The CLASS looks specifically at the emotional and instructional tone of the classroom using nine dimensions – Positive Climate (reflects enthusiasm, enjoyment and respect between teachers and children); Negative Climate (degree to which the classroom has a negative emotional tone as indicated by anger or harshness); Teacher Sensitivity (the degree to which teachers offer support and comfort to children); Regard for the Student Perspective (the degree to which teachers' interactions and classroom activities consider students' interests, motivations, and points of view); Behavior Management (considers teachers' abilities to prevent and redirect negative behavior); Productivity (examines teachers' abilities to use instructional time and routines as learning opportunities); Concept Development (explores the strategies used to promote reasoning skills and creativity through problem-solving and classroom instruction); Instructional Learning Format (extent to which available activities, presentations, groupings and range of materials encourages children's engagement); and Quality Of Feedback (focuses on the quality of verbal feedback offered to children regarding their interactions, comment and ideas).

CLASS Emotional and Social Support and Instructional Support Indices. Based on the guidelines of the developers of the CLASS, we created two indices: Emotional and Social Support and Instructional Support. CLASS dimensions included in the Emotional and Social Support Index are Positive Climate, Negative Climate, Teacher Sensitivity, Regard For The Student Perspective And Behavior Management. CLASS dimensions included in the Instructional Support Index are Productivity, Instructional Learning Formats, Concept Development, Quality Of Feedback And Language Modeling. The Student Engagement dimension is considered to be a student outcome measure.¹⁸

Benchmarks. The findings on the CLASS Emotional and Social Support and Instructional Support Indices are also reported in benchmarks. In this report, classrooms are said to meet the Inadequate Benchmark on the CLASS composites if they score below a “3” on a CLASS Index, that is, there are few, if any, indicators in the classroom of a positive emotional climate or positive instructional supports. Classrooms that meet the Adequate Benchmark have scored between a 3 and a 5, indicating there are some indicators of a positive emotional climate or positive instructional supports. Classrooms that meet the Good Benchmark have earned an average score of 5 or higher on the CLASS, indicating that there are many indicators of a positive emotional climate or positive instructional supports.

The ***Supports for Early Literacy Assessment (SELA)***¹⁹ was designed to assess early childhood classroom practices related to the development of literacy skills. The scale is comprised of 19 items on 6 dimensions: the literate environment, language development, knowledge of print/book concepts, phonological awareness, letters and words, parent involvement and developmentally appropriate practices. Two additional items address strategies used for bilingual and non-English speaking children and are scored if at least 20 percent of the children in the classroom speak a language other than English in their home.

SELA Literacy Index. For this report, we created a composite of five of the SELA scales, The Literate Environment, Language Development, Knowledge of Print/Book Concepts, Phonological Awareness and Letters & Words.

Benchmarks. The findings on the SELA Literacy Index are also reported in benchmarks. In this report, classrooms are said to meet the Inadequate Benchmark on the SELA Literacy Index if they score below a “2.5” on the SELA Literacy Index, that is, the classroom does not consistently provide at least some evidence of literacy support on all five of the SELA domains. Classrooms that meet the Adequate Benchmark have scored between a 2.5 and a 4, on average, indicating consistent evidence of some use of literacy supports in each domain. Classrooms that meet the Good Benchmark have earned an average score of 4 or higher on the SELA Index, indicating strong evidence of literacy supports on at least half of the domains.

Comparing Quality Measures. These measures have in common their relation to children’s learning and development. However, they differ in their focus. The CLASS scores are based solely on *interactions* between teachers and children. The presence of materials, the physical environment or the safety of the space are not considered in scoring the CLASS. The SELA is designed to assess early childhood classroom practices related to the development of literacy skills, but does not address other domains. The ECERS is designed to assess multiple domains of quality that have been linked to student success, but it does not assess specific domains in as much detail as do the SELA or the CLASS. Together, these measures provide a comprehensive, in-depth assessment of the quality of BPS K1 and K2 classrooms. In addition, each of the composite measures (except Health & Safety) is significantly correlated with the CLASS Student Engagement measure, indicating that, in higher quality classrooms, students are more engaged in the classroom, participating and attending to classroom activities.

Needs Assessment Surveys

We distributed needs assessment surveys to all teachers in the classrooms we observed, as well as to principals in those schools. In addition, we distributed surveys to families of the children in those schools.

Professional Development Needs Assessments were distributed at the time of the visit and returned by mail to the research team. These Needs Assessments asked about teachers' education and training, and about teachers' and principals' perceptions of the need for specific professional development opportunities. We received completed needs assessments from 25 K1 teachers, 52 K2 teachers and 32 principals by June 1, 2006. This represents response rates of 58%, 61% and 48%, respectively.

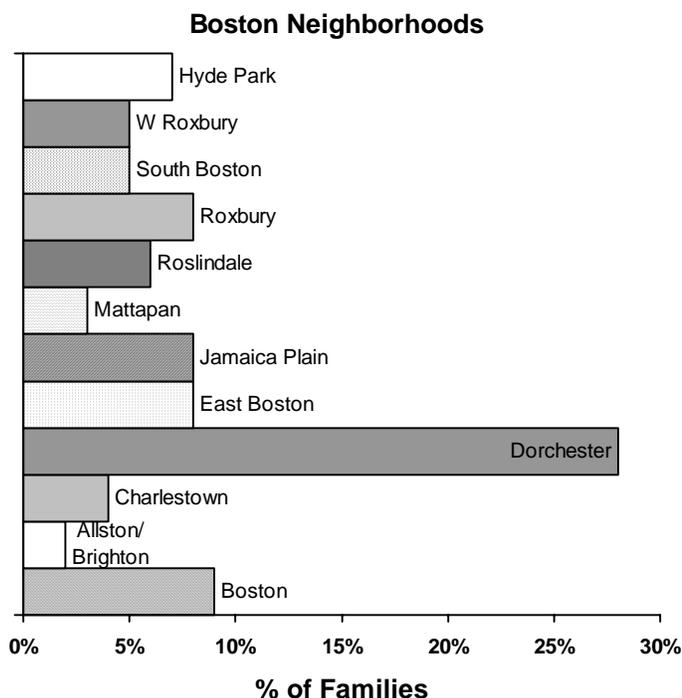
Classroom Needs Assessments were distributed with the Professional Development Needs Assessments. These Needs Assessments asked about teachers' and principals' perceptions of the need for additional materials and other resources for classrooms and schools.

Family Needs Assessments were sent home with the children and returned in sealed envelopes to a collection site at the school. The family needs assessments were available in English, Spanish and all other languages spoken by families enrolled in BPS K1 or K2 classrooms. The needs assessments asked families about their satisfaction with their child's K1 or K2 classroom, their reasons for choosing BPS, family characteristics and their child's experiences prior to BPS. We received completed needs assessments from 844 families by June 1, 2006 – over one-third of all families with a child in one of the observed classrooms. These responses included 275 families of a K1 student and 551 families of a K2 student (18 families did not indicate if their child was in K1 or K2). In addition, over 150 families wrote additional comments on their needs assessment surveys.

Description of Classrooms, Teachers and Families

The schools were located in all neighborhoods of Boston, as were the families who responded to the family needs assessment. The neighborhood distribution of participating families is shown in the graph to the right; the neighborhood distribution of participating classrooms was almost identical.

Classroom Enrollment. There were 128 classrooms included in the needs assessment: 42 K1 classrooms, 85 K2 classrooms and one K1/K2 classroom. The enrollment in the K1 classrooms ranged from 10 to 25 students, with an average enrollment of 19 students. The average enrollment in the K2 classrooms was 20 students, ranging from 12 to 25 students. On the day of the observation, there were an average of 17 children present in the observed classrooms, ranging from 8 to 23 children.



Paraprofessionals. The classrooms varied with respect to the presence of a paraprofessional on the morning of the observation visit. Paraprofessionals were present for the entire visit (three to four hours) in 32% of the observations. Paraprofessionals were present for part, but not all, of the observation in 43% of the classrooms. In 25% percent of the classrooms, paraprofessionals were not present while the observation was taking place.

Curriculum. Teachers were asked which curriculum they are currently using in their classroom. The majority of K2 teachers are using Readers and Writers Workshop and/or TERK Investigations. The two most commonly used curricula in K1 are the OWL curriculum and Building Blocks Math. About one-in-five K1 and K2 teachers are using Harcourt Trophies Reading First curriculum, and as many use a self-developed curriculum based on best practices in the field.

Curricula Used in K1 and K2		
	K1	K2
Harcourt Trophies / Reading First	20%	27%
OWL	60%	4%
Readers and Writers Workshop	8%	83%
Building Blocks Math	40%	2%
TERK Investigations	12%	88%
Self-developed curriculum based on best practices in the field	20%	17%
Other	-	13%

ELC classrooms in the study were more likely to be using OWL than were neighborhood school classrooms (46% vs. 17%); classrooms in neighborhood schools in the study were more likely to be using Reading First (29% vs. none of the ELC

classrooms in the sample) and Building Blocks Math (17% vs. none of the ELC classrooms in the sample).

Teacher characteristics. K1 and K2 teachers vary in their teaching experience; some are in their first year of teaching, while others have been teaching for over 25 years. On average, K1 teachers have been teaching K1 for 9 years, and K2 teachers have been teaching K2 for 10 years. Teachers have been at their current school for an average of 6 years for K1 teachers and 8 years for K2 teachers; teachers have been at BPS slightly longer – an average of 8 years for K1 teachers and 11 years for K2 teachers. All teachers hold a bachelors degree; 85% of K2 teachers and 56% of K1 teachers also hold a masters degree.

More than half of the BPS Early Childhood teachers participating in the needs assessment were non-Hispanic white, 11% of teachers were Hispanic or Latino, 10% were African American or black, 8% were Asian and 6% described themselves as biracial or multiracial. While almost all teachers spoke English, more than one-quarter (29%) also spoke Spanish, about one-in-ten spoke French, and between 1% and 5% spoke Cantonese, Mandarin, Vietnamese, Arabic, Italian, Greek or another language.

Family and Child Characteristics. The families reported that 69% of the children were eligible for, and received, free or reduced price lunches at school.

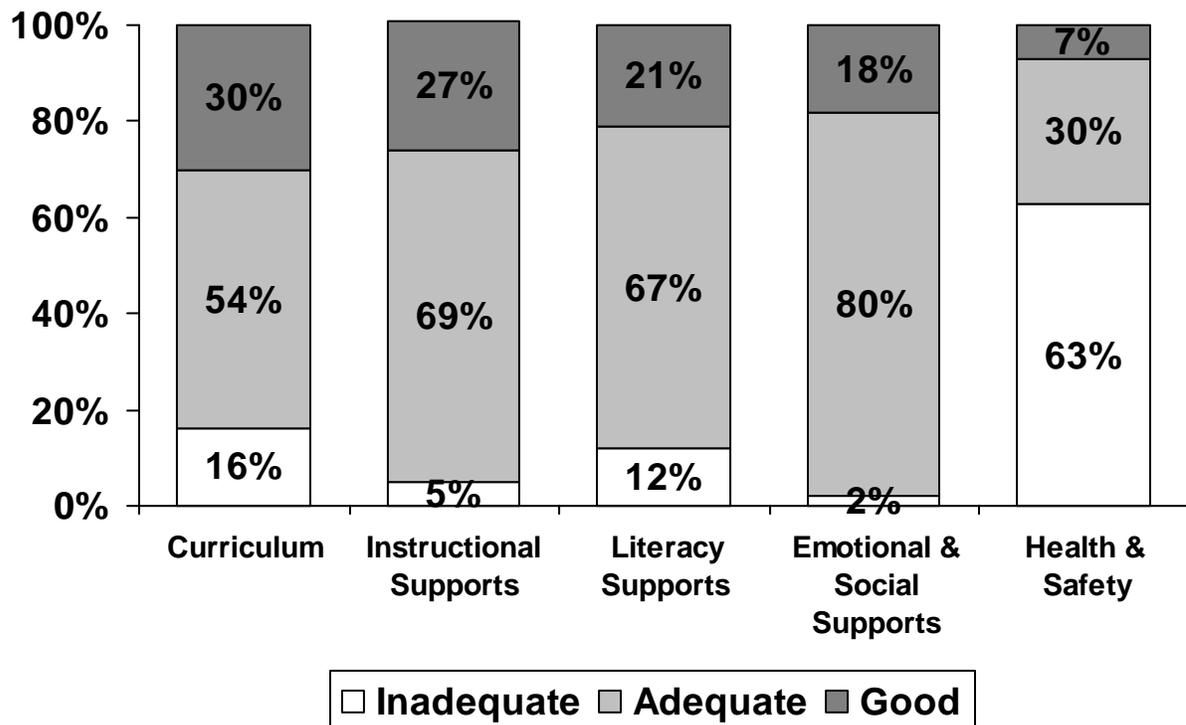
The families and children represented the racial and ethnic diversity of Boston; over one-third were Hispanic or Latino, one-in-three were African American or black, 17% were white, about one-in-ten were Asian, and more than one-in-twenty were biracial or multiracial.² The families and children were equally diverse linguistically, with two-in-five (40%) speaking a language other than English at home. One-quarter of families and children spoke Spanish in the home, and between 1% and 5% spoke Cantonese, Mandarin, Vietnamese, Haitian, Cape Verdean Creole, Portuguese, Arabic, French or other languages.

² The families reported their race/ethnicity in the family needs assessment; teachers reported the race/ethnic backgrounds of their classrooms, but did not identify individual students.

The Quality of BPS K1 and K2 Classrooms

The BPS Early Childhood Needs Assessment provides a picture of the current quality of K1 and K2 classrooms, offering evidence of both areas of strength and areas needing improvement to meet the challenge of closing the achievement gap in K1 and K2 classrooms. Between 18% and 30% of BPS classrooms meet the Good Benchmark on the Curriculum, Instructional Supports, Literacy Supports and Emotional and Social Supports Indices. In addition, most BPS K1 and K2 classrooms meet or exceed the Adequate Benchmark on the Indices, with the exception of the Health and Safety Index. Classrooms that meet the Adequate Benchmark but not the Good Benchmark would benefit from professional development opportunities and/or additional classroom resources. We discuss the findings for each of the Indices in turn.

Benchmarks on Quality Indices



ECERS Curriculum Index

The ECERS Curriculum Index is a comprehensive assessment of the curriculum materials, furnishings and space available to each classroom, and of the teacher's ability to use these resources to meet the developmental and educational needs of young children. More than a quarter of classrooms (30%) met or exceeded the Good Benchmark on the ECERS Curriculum Index. However, one-in-six classrooms (16%) were rated as Inadequate. The majority of BPS classrooms were rated as Adequate, but did not meet the Good Benchmark.

There were no differences between K1 and K2 classrooms, or between Early Learning Centers

and neighborhood schools, on the ECERS Curriculum Index. However, classrooms that had a paraprofessional in the classroom for the entire three to four hour observation were more likely to meet the Good Benchmark than classrooms that had no paraprofessional or in which the paraprofessional was present for only part of the morning (49% vs. 22% and 18%, respectively; $X^2 = 14.47, p < .01$).

In addition, the ratio of children to qualified adults was associated with scores on the ECERS Curriculum Index (“qualified adults” includes teachers and teacher aides, assistant teachers or paraprofessionals). The NAEYC *Early Childhood Program Standards* recommend a ratio of no more than 12 children per qualified adult in kindergarten (K2) classes and a ratio of no more than 10 children per qualified adult in preschool (K1) classes of 4- and 5-year olds. We found that BPS classrooms with child: adult ratios higher than 12:1 were less likely to meet the Good Benchmark on the Curriculum Index than were classes with ratios lower than 12:1 (39% vs. 17% met the Good Benchmark; $X^2 = 6.95, p < .01$).

Space and Furnishings. The NAEYC Early Childhood Program Standards requires facilities, equipment, and materials to facilitate learning and development, arguing that:

Well-organized, equipped, and maintained environments support program quality by fostering the learning, comfort, health, and safety of those who use the program. Program quality is enhanced by also creating a welcoming and accessible setting for children, families, and staff.

Over two-thirds of BPS classrooms were large enough to allow children and adults to move around freely, and the vast majority offered good ventilation and natural lighting. There was enough furniture for the children in the room and the furniture was child-sized and in good repair.

The NAEYC Standards also require that the classroom be designed and arranged to accommodate children individually, in small groups, and in a large group. To support children’s activities in small groups or alone, the classroom should provide semiprivate areas where children can play or work alone or with a friend. The classroom should be divided into interest areas or centers that are supplied with materials that support children’s play and learning.

Most BPS K1 and K2 classrooms have at least two interest centers, 75% of classrooms have three or more interest centers, and more than a third of classrooms have at least five interest centers and are consistent with the NAEYC Standards. However, the majority of classrooms do not meet other guidelines in this area. While most classrooms allow children to find or create private space to work alone or with another child, and 46% of teachers do set up activities designed for one or two children, 61% of classrooms do not have regular space set aside for activities for one or two children. In the majority of classrooms, the materials in interest areas are not organized to promote children’s independent use, such as using labeled shelves or containers for storage of materials.

Curriculum Activities. The NAEYC Standards require that programs provide a variety of age-appropriate materials and equipment throughout the day, including materials that support curriculum goals in literacy, math, science, technology, social studies, creative expression and the arts. In addition, the NAEYC Standards require that teachers select materials in all content areas to stimulate exploration, experimentation, discovery and conceptual learning.

Language and literacy are central content areas for preschool and kindergarten children. Most BPS classrooms have some books accessible to the children for at least 45 minutes a day, and all classrooms have a teacher-led language activity, such as reading books to the children, and more than 80% have a reading center and include some other language materials daily. However, in only half of classrooms do teachers read books to children informally, such as to a small group during free play, or as an extension of another activity; only 55% of the classrooms have books available to children for at least two hours a day. Similarly, fewer than half of classrooms incorporate materials that support literacy into interest areas, such as puppets in the book area or dramatic play materials to encourage story-telling.

Young children learn about the natural, material and social world through direct exploration. To support this learning, the NAEYC Standards require the availability of materials such as sand, water, art materials, play dough and blocks which allow children to experiment with quantity, size and shape, measurement, comparing, the use of simple tools, and other key concepts in the natural and material world. Dramatic play materials and activities allow children to explore their social world, acting out family and community roles.

The majority of BPS classrooms (60%-75%) have blocks, fine motor materials such as small building blocks, beads for stringing or puzzles, art materials and science materials and activities, such as collections of natural objects, age-appropriate science books or simple experiments, that are available to children for at least 45 minutes a day. Most classrooms (85%-93%) have math/number and dramatic play materials available at least 45 minutes a day. However, fewer than one-quarter of classrooms meet the Good Benchmark standard of making a variety and quantity of these materials available for longer periods of time each day. In addition, while the majority of classrooms (62%) have a sand/water table in the classroom, only 38% of classrooms make the sand or water table available to the children for at least 45 minutes each day.

Gross-motor activities are important to young children's development of specific gross-motor skills, as well as sensory-motor integration and controlled movement (balance, strength, coordination). Gross-motor activities are also an opportunity to learn physical games with rules and structure and to develop important "habits of the mind" recommended by the BPS Learning Standards, such as courage, perseverance, collaboration and initiative. To support this, the NAEYC Standards require that children have varied opportunities for gross-motor activities and access to gross-motor equipment for activities such as "pulling up, walking, climbing in, on, and over, moving through, around, and under, pushing, pulling and riding."

Fewer than one-third of BPS classrooms (29%) include at least 45 minutes of gross-motor activity each day and only 11% have gross-motor equipment available to children for at least 45 minutes a day. For example, only 5% of classrooms have tricycles for children to use.

CLASS Instructional Supports Index

The NAEYC Standards require that teachers use a variety of teaching strategies, ask questions that stimulate children's thinking, join children in learning centers to extend and deepen children's learning, and promote children's engagement and learning by responding to their need for and interest in practicing emerging skills, by guiding them in acquiring specific skills and by explicitly teaching those skills.

The CLASS Instructional Supports Index assesses teachers' abilities to use instructional time and routines as learning opportunities, the strategies teachers use to promote reasoning skills

and creativity through problem-solving and classroom instruction, the extent to which available activities, presentations, groupings and range of materials encourages children's engagement and the quality of verbal feedback teachers offer to children regarding their interactions, comments and ideas.

One-in-four teachers (27%) met or exceeded the Good Benchmark on the CLASS Instructional Supports Index. Only 5% of teachers were rated as Inadequate. The majority of BPS Early Childhood teachers met the Adequate Benchmark, but did not meet the Good Benchmark.

In the best BPS classrooms (27% of classrooms), teachers consistently and effectively use multiple methods, materials and modalities to promote children's learning. Teachers focus children's attention on the process of learning rather than emphasizing getting the right answer. Activities focus on developing concepts and teachers use strategies to encourage analysis, reasoning, sequencing and problem solving. Teachers consistently connect concepts to the real world and classroom activities. Teachers also promote children's prediction, experimentation and brainstorming. Teachers frequently engage in feedback loops and conversations with children; praise offers specific information and hints for students struggling with an answer. Teachers have many extended conversations with children, asking many open-ended questions and using rich language with children. Teachers repeat and extend children's responses and encourage children to have extended conversations with one another.

In classrooms that met the Adequate Benchmark, teachers sometimes use these instructional supports, but they are not consistent in their support for children's learning or do not use all of the strategies found in 'best practices' classrooms. Teachers in classrooms meeting the Adequate Benchmark would benefit from opportunities for interactions with master teachers and for professional development.

There were no differences between K1 and K2 classrooms, or between Early Learning Centers and neighborhood schools on the CLASS Instructional Supports Index.

SELA Literacy Index

During the first five years of life, children's experiences with language and literacy form the foundation for later reading success. Diverse experiences with printed and spoken language, beginning in infancy, strongly affect children's future reading and school success.^{20,21} Children who are at risk for reading difficulties are those who begin elementary school with fewer verbal skills, less phonological awareness, less letter knowledge, and less familiarity with the basic purposes and mechanisms of reading.²² Research has identified strategies for structuring environments and interactions with adults and peers that are effective in promoting children's learning and development in that early childhood settings can do much to prevent future reading difficulties through the provision of literacy-enriched environments.^{23,24} Optimum occasions for language and cognitive development occur when adults' interactions are responsive to children's interests, sensitive to children's signals, and rich in verbal content.^{25, 26,27,28}

The NAEYC Standards for Early Literacy require that children have multiple and varied opportunities to become familiar with print, to write or dictate their ideas daily, and to develop phonological awareness. The NAEYC Standards also require that children learn to identify the parts of books, are read to at least twice a day -- including in small groups or individually -- are given the opportunity to explore a variety of books on their own in quiet areas and to re-tell or act out stories, have writing incorporated into other interest areas such as art or dramatic play, and are given the opportunity to learn and recognize letters and, for kindergarteners, to learn to

read familiar words, sentences, and simple books.

The development of the Supports for Early Literacy Assessment (SELA) was informed by the NAEYC publication, *Learning to Read and Write*.²⁹ The SELA Literacy Index focuses on best practices in teachers' support of young children's development of literacy skills, including the literate environment, language development, knowledge of print/book concepts, phonological awareness and recognition of letters and words.

While over a quarter of teachers met the Good Benchmark on the more general CLASS Instructional Supports Index, only one-fifth of teachers met the Good Benchmark on the SELA Literacy Index. More teachers failed to meet the Adequate Benchmark on the SELA Literacy Index than on the CLASS Instructional Supports Index (12% vs. 5% respectively). This suggests that, while most BPS early childhood teachers provide adequate supports for children's learning, and one-quarter meet the best practice standards, fewer teachers excel in the promotion of specific literacy skills.

K2 classrooms were significantly more likely to meet the Good Benchmark on the SELA Literacy Index than were K1 classrooms (24% vs. 16% of classrooms, respectively). K1 classrooms were more likely than K2 classrooms to score as Inadequate (28% vs. 4% respectively) ($X^2 = 16.44, p < .001$). A greater proportion of K2 teachers than K1 teachers have been using a literacy curriculum (83% of K2 teachers are using Readers and Writers Workshops vs. 20% of K1s using the Reading First curriculum), and this difference on the SELA Literacy Index between K2s and K1s may reflect that fact. BPS has introduced a new literacy curriculum in K1 classrooms – Opening the World of Learning (OWL). Sixty percent of K1 teachers have been trained on the OWL and have started using it in their classrooms, but 2005-06 was the first year of this program, and classroom practices may not yet reflect the potential benefits of this new curriculum. There were no differences between Early Learning Centers and neighborhood schools on the SELA Literacy Index.

Overall, BPS classrooms were more likely to meet the Good Benchmark on three indicators on the SELA Literacy Index – knowledge of print/book concepts, phonological awareness and recognition of letters and words – than on the two multi-item indicators, language development and the literate environment.

Knowledge of Print/Book Concepts. In half of the BPS classrooms, teachers called attention to the functions and features of print daily in a variety of ways, including showing children how to read print (from left to right), identifying the parts of a book, calling attention to and labeling words and letters in the course of daily activities, and using activities to help children recognize and write their own names and others' names. In 10% of classrooms, teachers did not call attention to the functions and features of print; in 40% of classrooms, teachers sometimes promoted children's knowledge of print and book concepts.

Phonological Awareness. Teachers in 41% of BPS classrooms used a variety of activities to draw children's attention to the sounds that they hear in words such as using rhymes and poems, creating word lists and emphasizing the first letters and sounds of words. However, teachers in almost one in five classrooms (18%) did not use activities to call attention to sounds in words; in 41% of classrooms, teachers sometimes used activities to support phonological awareness.

Letters and Words. Teachers in 46% of BPS classrooms used a variety of methods everyday in multiple situations to help children learn to recognize letters, such as reading alphabet books,

helping children write their names, playing letter games, and pointing out letters during dictation. Teachers in these classrooms also used a variety of methods to encourage children's interest in writing, including taking dictation of a child's story or description of a picture. In 10% of BPS classrooms, teachers did not help children recognize letters or promote children's interest in writing; in 49% of classrooms, teachers sometimes helped children with letters and words.

The Literate Environment. Most BPS classrooms (87%) had paper and writing materials available at least three times a week, for children to use as they choose; almost half of BPS classrooms made paper and writing materials available every day, and included writing materials in other interest areas, such as dramatic play.

However, only 11% of BPS classrooms met the Good Benchmark on the literate environment, reflecting the fact that one-fifth to one-third of classrooms were lacking important elements of a literate environment. Some classrooms (22 %) had only one or two types of books available, and 28% of classrooms had only three categories of books, with a particular absence of science, factual and culturally-diverse books. one-third of classrooms (35%) did not have a defined and inviting place to look at books. In addition, although many classrooms had many printed materials, 20% of classrooms lacked print for a *purpose*. Print for a purpose is print that is actually used by children in daily routines such as job charts, sign up sheets and instructional print. Finally, the majority of classrooms (61%) lacked at least three types of literacy props in the dramatic play area.

Language Development. Only 23% of classrooms met the Good Benchmark on language development. While up to 40% of classrooms offered one or more supports for language development, only 23% of classrooms offered all of the language development supports required to meet the Good Benchmark, including frequently encouraging children's conversations, extending children's oral language by adding new words or concepts and elaborating on the child's idea or description, and daily reading to children in a lively, engaging way that invites children's involvement, both in large groups and individually or in small groups.

In addition, only one-third of teachers frequently used language that contains rich vocabulary – including some words likely to be new to children, adverbs and adjectives, and explanations of objects, actions or concepts – and complex language structures. In 16% of classrooms, teachers do not read daily, and in 7% of classrooms teachers language is predominantly commands or instructions, teachers rarely take time to talk to individual children and usually do not encourage their talk.

SELA Parent Involvement in Literacy Activities. While not included in the SELA Literacy Index, the SELA includes an assessment of the efforts of the teachers and the schools to involve parents in supporting their children's literacy development.

Forty-one percent (41%) of classrooms met the Good Benchmark on Parent Involvement in Literacy Activities. Classrooms that met the Good Benchmark used a range of strategies to promote parent involvement in children's literacy, such as weekly communication between teachers and parents regarding home-based literacy activities that parents can do with their children, encouraging parents to observe and participate in classroom activities, sharing information with parents regarding their children's individual interests and skills and make personally tailored recommendations for activities, offering a variety of parent programs throughout the year to provide parents with information regarding children's literacy development and ways to promote it, and providing parents with information about literacy supports in the community and the public library.

SELA Bilingual and Non-English Speaking Subscale (English as a Second Language).

The SELA also includes an assessment of supports for English language learners; this scale was not included in the SELA Literacy Index, because it applies to only a subset of classrooms. The SELA Bi-lingual and Non-English Speaking Subscale (English as a Second Language) is completed for classrooms in which 25% or more of the children in the classroom come from homes in which the primary language spoken is a language other than English. The subscale is based on best practice ideas from the book *One Child, Two Languages*. The scale emphasizes the promotion of both children's native language (language spoken at home) and English.

One-fifth of classrooms (20%) met Good Benchmark on the SELA Bilingual and Non-English Speaking Subscale. These were classrooms in which the teacher used multiple strategies to facilitate children's understanding of English. This included combining words and gestures, emphasizing important words, using visual aids and repetition of key words. These teachers also organized small-group shared reading sessions using predictable text to help children learn English. In addition, they used and repeated songs and engaged in movement with language activities to help children become familiar with English words and phrases. These teachers also used strategies to promote and maintain the development of the children's native language such as incorporating print in multiple languages, singing songs in multiple languages and offering books in multiple languages. Teachers in these classrooms also celebrated children's cultural and linguistic backgrounds.

Half of classrooms met the Adequate Benchmark on the Bi-lingual and Non-English Speaking Subscale; these are classrooms in which teachers used some strategies to support children's language development in both English and their native language.

CLASS Emotional and Social Support Index

Social interaction is necessary for children's linguistic and cognitive development, and social development is a key to children's success in learning both in school and in later life.^{30,31} Positive warm and nurturing relationships with teachers are associated with a desire to learn to read and provide the foundation for school success.^{32,33}

Interactions with adults in early childhood programs can also foster the development of social skills.^{34,35} The social development of young children can be supported through warm and positive interactions; the quality and stability of children's relationships with adults in early childhood programs appears to be particularly important to children's social and emotional growth.^{36,37} Emotion regulation in children is also fostered by the support of adults in early childhood programs.³⁸

The NAEYC Standards require that the program promote "positive relationships among all children and adults to encourage each child's sense of individual worth and belonging as part of a community and to foster each child's ability to contribute as a responsible community member."

The CLASS Emotional and Social Support Index assesses the extent to which teachers provide the emotional and social support that is essential to children's school success. This includes creating a positive emotional climate that reflects enthusiasm, enjoyment and respect between teachers and children, avoiding a negative emotional tone as indicated by anger or harshness, teachers' sensitivity to children's needs for support and comfort, consideration of students' interests, motivations, and points of view in interactions and activities, and effective behavior management, with greater emphasis on preventing and redirecting students' negative behavior.

One-in-five teachers met or exceeded the Good Benchmark on the CLASS Emotional and Social Support Index. Only 2% of teachers were rated as Inadequate. The majority of BPS Early Childhood teachers were rated as Adequate, but did not meet the Good Benchmark. While about half of the teachers received high marks on sensitivity, behavior management and establishing a positive emotional climate, fewer teachers received high scores for facilitating the development of student autonomy during both structured and unstructured class time, offering activities that were consistent with student interests and motivations, and providing multiple opportunities for children to talk and interact with one another.

In addition, about half of the teachers were rated as only *sometimes* demonstrating warm and supportive relations with their students, through praise, social conversations, and showing an interest in what the children were saying. About half of the teachers were not consistently responsive to students, did not consistently notice when students needed extra guidance with an activity, and only sometimes offered activities that were appropriate for children's abilities and needs, and addressed children's questions, concerns and problems effectively. There were no differences between K1 and K2 classrooms, or between Early Learning Centers and neighborhood schools on the CLASS Emotional and Social Support Index.

Health & Safety Index

Basic standards of health and safety are important to children's learning environments. Because young children are still developing their own health and safety behaviors, early childhood classrooms face additional requirements when protecting the health and safety of young children. The NAEYC Early Childhood Program Standards require that the program promote the nutrition and health of children and protect children and staff from illness and injury.

Almost two-thirds of BPS K1 and K2 classrooms failed to meet the Adequate Benchmark on the Health & Safety Index. There were no differences between K1 and K2 classrooms on the Health & Safety Index. However, classrooms in Early Learning Centers were more likely than classrooms in neighborhood schools to meet the Good Benchmark on the Health & Safety Index (15% vs. 6% respectively) ($X^2 = 6.04, p < .05$). In fact, 60% of classrooms in Early Learning Centers met the Adequate Benchmark, compared to one-third (32%) of classrooms in neighborhood schools.

The presence of paraprofessionals was also important. Classrooms with a paraprofessional present for the entire morning of the observation visit were more likely to meet the Adequate Benchmark, compared to classrooms with a paraprofessional present part of the morning, or no paraprofessional (51% vs. 34% and 22%, respectively, met the Adequate Benchmark; $X^2 = 7.18, p < .05$).

In addition, the ratio of children to qualified adults was associated with scores on the ECERS Curriculum Index ("qualified adults" includes teachers and teacher aides, assistant teachers or paraprofessionals). The NAEYC *Early Childhood Program Standards* recommend a ratio of no more than 12 children per qualified adult in kindergarten (K2) classes and a ratio of no more than 10 children per qualified adult in preschool (K1) classes of 4- and 5-year olds. We found that BPS classrooms with child: adult ratios higher than 12:1 were less likely to meet the Good Benchmark on the Health & Safety Index than were classes with ratios lower than 12:1 (48% vs. 17% met the Good Benchmark; $X^2 = 12.64, p < .001$).

Health Practices. The NAEYC Standards require specific health practices to protect the health of children, including nutritional meals, hand-washing by children and adults after toileting and before meals or snacks, routine cleaning and sanitizing of tables and food preparation areas, and clean bedding for each child for naps. In addition, NAEYC Standards require that nap mats be spaced at least three-feet apart or be separated by a solid barrier, such as shelving.

Almost all classrooms provided nutritional snacks or meals. However, ninety-five percent of classrooms did not consistently follow health guidelines for hand-washing and cleaning of tables during snacks or meals. In addition, in 53% of the classrooms, children's hand-washing after toileting was often neglected.

About half (49%) of classrooms offered naps for children. None of the classrooms met the NAEYC standard and ECERS Good Benchmark of placing mats three feet apart; only 15% of classrooms met the Adequate Benchmark of 18 inches between mats and clean bedding that is stored separately for each child to prevent the spread of germs. In addition, in one-third of classrooms where children napped, children were not helped to relax (with soft music, soft toys, or back rubs) and supervision was punitive.

Location of bathrooms and sinks. To facilitate health and safety, the NAEYC Standards require that toilets, drinking water and hand-washing facilities be in the classroom or within 40 feet of the classroom. However, only about half of the classrooms that were visited had access to a sink with running water. In addition, in over one-third of the classrooms we visited (39%), the bathrooms were not located in or near the classroom.

Safety Practices. NAEYC Standards require specific safety practices, including adult supervision of children for children's safety in the classroom and outdoors, fencing or natural barriers for outdoor space to prevent access to streets and to avoid other dangers.

Indoor supervision was adequate with one exception. When bathrooms were not located near classrooms, teachers sometimes allowed children to go to the bathroom on their own or used class time to take the children to the bathroom as a group. As a result, children were either unsupervised (in about one-third of classrooms) or were hurried through bathroom routines. Consequently, the supervision of bathroom routines was inadequate or punitive in nature in 37% of classrooms.

The outdoor space used by 47% of classrooms was rated as very dangerous, primarily because it lacked adequate fencing around the outdoor play space, giving children access to parking lots and busy city streets.

Professional Development Needs Assessment Findings

One key factor that is essential to children’s school success and to closing the achievement gap is teacher quality.³⁹ Teachers with formal education in early childhood education and who have completed training or professional development in early childhood curricula or practices are more likely to provide a higher quality education for young children.⁴⁰ The NAEYC Standards for teacher preparation require that “The program employs and supports a teaching staff that has the educational qualifications, knowledge, and professional commitment necessary to promote children’s learning and development and to support families’ diverse needs and interests.”

Current Education Of Teachers And Principals

NAEYC Standards require that at least 75% of teachers in an early childhood program have a minimum of a baccalaureate degree in early childhood education or a related field (This requirement is phased in between 2006 and 2020).

All BPS Early Childhood teachers hold a bachelor’s degree and more than half of teachers have a master’s degree.³ However, K2 teachers are more likely than K1 teachers to have a master’s degree. There are no differences between teachers in ELCs and in neighborhood schools.

Highest Level Of Education Completed, By K1/K2, And By Type Of School				
	K1 teachers	K2 teachers	ELC teachers	Neighborhood School teachers
Bachelors degree	44%	15%	25%	23%
Masters degree	56%	85%	75%	77%

All but 2 teachers were educated in Massachusetts schools. 46 were educated at private Massachusetts colleges; 24 were educated at public Massachusetts colleges. 13 of the teachers attended Lesley University; 10 attended UMass (Boston or Lowell); 8 attended Wheelock College; 6 attended Boston College; 6 attended Cambridge College; 5 attended Fitchburg State.

Professional Development and Training

In every classroom that we visited, we assessed the opportunities for professional growth using items from the ECERS-R. Almost all teachers (98%) reported that they participated in in-service training at least once a year; 93% participated in in-service training at least twice a year. Almost all schools provided professional resources, such as materials on child development or classroom activities, on-site.

However, other supports for professional development were not as widespread. More than one-third of teachers (38%) reported that staff meetings were held less than once a month or that staff meetings did not include professional development activities. In addition, 49% of teachers reported that orientations for new staff did not cover interactions with children and families and appropriate classroom activities, as required by NAEYC Standards. Similarly, 47% of teachers

³ The survey did not ask whether these degrees were in early childhood education or a related field. However, given the schools the teachers attended, it is likely that many of the teachers have a degree in the field.

reported that teachers wishing to attend courses, conferences or workshops did not have access to such supports as release time, travel costs or conference fees.

In the Needs Assessment surveys, all teachers reported that they have participated in professional development opportunities in the past three years. Almost all of the teachers had taken workshops at their own school or another BPS school. More than one-third of teachers have taken graduate-level courses in Early Childhood Education in the past three years, and one-in-five have taken college-level courses in Early Childhood Education. Similar numbers have taken workshops in the community or at professional meetings, or have taken Center for Leadership Development courses. Within the past 12 months, K1 teachers have participated in an average of 37 hours of early childhood education training and K2 teachers have participated in an average of 31 hours of training.

Percent Of Teachers Receiving Specific Types of Training In Past Three Years		
	K1	K2
Workshops at your school	100%	98%
Workshops at another BPS school	76%	80%
Workshops in the community or at professional meetings	36%	27%
Graduate-level courses in Early Childhood Education	36%	46%
Center of Leadership Development Courses	32%	27%
Other college-level courses in Early Childhood Education	20%	21%
Conferences or workshops sponsored by the NAEYC/BAEYC	16%	17%
Community Partnerships (CPC) funded workshops	12%	10%
Courses in Early Childhood Education at a community college	8%	8%
Center for Peaceful Schools at Lesley University Courses	4%	4%

While all teachers have participated in professional development in the past three years, K1 and K2 teachers, as well as principals, reported that more professional development opportunities for teachers in early childhood education would be very helpful.

The NAEYC Standards also require that assistant teachers, teacher aides and paraprofessionals have a high school diploma or GED *and* have a Child Development Associate Credential (CDA) or equivalent or are enrolled in a program leading to such a credential. Over half of teachers (52%) in the observed classrooms reported that staff with less than an Associates degree in Early Childhood Education were not required to continue formal education. In the needs assessment surveys, K1 and K2 teachers, as well as principals, reported that more training for paraprofessionals would be very helpful.

Need for Professional Development Opportunities <i>(Percent Reporting It would be Considerably or Extremely Helpful)</i>			
	K1	K2	Principals
More professional development opportunities for teachers in early childhood education	70%	73%	69%
More training for paraprofessionals	86%	94%	79%
More professional development opportunities for your principal in early education	48%	71%	42%
More opportunities to attend professional development workshops with principal	39%	42%	66%

Training in Curricula. The NAEYC Standards require that all teachers, assistant teachers and teacher aides have specialized college-level course work and/or professional development training in the program's curriculum. Many teachers have participated in training on specific curricula. The vast majority of K2 teachers have participated in training on Readers and Writers Workshops, as have 60% of K1 teachers. Over half of K1 teachers have taken Building Block Math Workshops and as many have received training on the OWL curriculum, while the majority of K2 teachers have taken TERC Investigations Training.

Percent Of Teachers Receiving Training In Specific Curricula in Past Three Years		
	K1	K2
Readers and Writers Workshops	60%	87%
Building Block Math Workshops	56%	13%
OWL training	52%	6%
TERC Investigations Training	40%	87%
BPS Technology/software training	32%	41%
Reading First/Harcourt Trophies	28%	31%
Making Connections via Boston Children's Museum	20%	46%

Training Content. The NAEYC Standards require that all teaching staff have specialized college-level course work and/or professional development training that prepares them to work with children and families of diverse races, cultures, and languages, and that prepares them to work with children who have special needs. In addition, the NAEYC Standards require that all teachers, assistant teachers and teacher aides have specialized college-level course work and/or professional development training [1] in communication and collaboration skills that prepare them to participate as a member of a team, [2] in knowledge and skills relevant to the specific age(s) or the special circumstances/specific needs of the children they teach, and [3] in how to accurately use the program's assessment procedures for assessment of child progress and program quality (assessment is used to adapt classroom practices and curriculum activities).

Teachers were asked whether they had received training on specific topics after completing requirements for licensure, and whether they would like training on these topics. The majority of teachers have received training on early math development, early literacy development, early language and communication development and second language acquisition in young children. All teachers who have not already received training in these areas would be interested in such training (approximately 20%-50% of teachers). About half of teachers have received training in behavior or classroom management; the remaining teachers would also be interested in such training.

Percent of Teachers With Training on the Following Topics (after completing requirements for licensure) and Percent of Teachers Interested in Training				
Topic	Already Received		Interested in Training	
	K1	K2	K1	K2
Early math development	78%	67%	29%	23%
Early literacy development	75%	88%	38%	17%
Early language & communication development	54%	62%	46%	23%
Second language acquisition in young children	42%	62%	50%	33%

Percent of Teachers With Training on the Following Topics (after completing requirements for licensure) and Percent of Teachers Interested in Training

Topic	Already Received		Interested in Training	
	K1	K2	K1	K2
Classroom set-up and arrangement	58%	52%	29%	29%
Health and safety practices in early childhood	33%	19%	38%	33%
Using technology for young children	63%	29%	13%	52%
Gross motor play	38%	15%	33%	35%
Play development	29%	37%	42%	29%
Curriculum development in early childhood education	63%	44%	29%	33%
Behavioral/classroom management	58%	46%	42%	33%
Developmentally appropriate practices in early childhood	58%	56%	29%	23%
Working with students with disabilities	42%	33%	38%	40%
Working with parents of young children	42%	31%	33%	35%

Problems With Professional Development. The most common problems teachers reported was that the topics were not relevant to kindergarten/K2 and that the training was scheduled at times that did not work with their schedule.

Percent Of Teachers Reporting The Following Problems With Training Or College Courses

Topics are not relevant to kindergarten / K-2	47%
Training is scheduled at times that do not work with your schedule	41%
Trainings are too expensive	35%
You don't have time for additional training	29%
There are no monetary or other incentives for training	24%
Not enough courses or workshops offered	19%
Quality is poor	18%
Topics are not relevant to Pre-K / K-1	17%
It is hard to travel to trainings	15%
Do not need training at this time	13%
You do not have easy access to on-line courses	6%
On-line courses are difficult to understand	3%

Principals Needs Assessment. Principals reported that their early childhood teachers would benefit most from training in working with students with disabilities, second language acquisition in young children, early math development, early literacy development, early language and communication development, curriculum development in early childhood education and using technology for young children.

Principals were also interested in training for themselves, especially in how to use data for early childhood classrooms, early childhood assessment, Second language acquisition in young children and Curriculum development in early childhood education.

Principals' Interest in Training for Teachers and for Principals (*percent interested*)

Topic	Helpful for Teachers⁴	Helpful for Principals
<i>Children's Development</i>		
General early childhood development	Not asked	27%
Second language acquisition in young children	69%	60%
Early math development	66%	51%
Early literacy development	63%	45%
Early language & communication development	63%	45%
Play development	26%	Not asked
Gross motor play	24%	18%
<i>Early Childhood Practice</i>		
Working with students with disabilities/special needs	78%	54%
Using technology for young children	60%	42%
Curriculum development in early childhood education	60%	60%
Developmentally appropriate practices in early childhood	43%	54%
Classroom set-up and arrangement	30%	30%
Behavioral/classroom management	51%	45%
Working with parents of young children	51%	36%
Health and safety practices in early childhood	33%	27%
<i>Assessment and Administration</i>		
Classroom assessment/How to assess quality in early childhood	73%	54%
Early Childhood Child assessment	73%	63%
Supervising early childhood teachers	Not asked	23%
Strategies for evaluating teachers	Not asked	36%
Early childhood policies at the state and federal levels	Not asked	35%
How to use data for early childhood classrooms	Not asked	66%

Best Training Schedules. Principals reported that, on average, they could realistically participate in 12 hours of training a year. The majority of principals preferred either self-scheduled, online training or training during the school year, either during regular school hours or in the evenings. However, about half of principals would sometimes be available for training on weekends or during the summer months.

Best Training Schedules, Given Principals' Schedules

Training scheduled:	Sometimes Available	Usually Available	Always Available with Prior Notice
During summer months	55%	12%	9%
During school vacation days	28%	9%	9%
On weekends	44%	13%	-
In the evenings, after regular school hours	31%	34%	19%
On Weekdays, during regular school hours	36%	18%	21%
Online at your own convenience	10%	45%	34%

⁴ Principals were asked how helpful training in each area would be for their K1 and K2 teachers. Table reports the percent of principals who said training would be considerably or extremely helpful.

Classroom Needs Assessment Findings

Teachers and principals need institutional supports, equipment and materials to be able to provide the quality education that Boston’s children deserve. Teachers and principals were asked about specific needs in these areas.

Institutional Support Needed

At the top of the list for teachers was smaller class size – almost nine out of 10 teachers reported that smaller class sizes would be considerably or extremely helpful to them as teachers – and 60% of principals agreed. Equally important, to both teachers and principals, is the increased availability of paraprofessionals.

Percent Of Teachers And Principals Reporting The Following Supports Would Be Considerably Or Extremely Helpful.

	K1 Teachers	K2 Teachers	Principals
Smaller class size	87%	86%	60%
Increased availability of paraprofessionals	81%	88%	85%
More opportunities for teachers to visit K1/K2 classrooms in other schools	77%	74%	79%
Opportunities for administrators to visit K1/K2 classrooms in other schools ¹			51%
More classroom materials	74%	82%	45%
School sponsored programs for parents	73%	70%	66%
Teachers included in K1/K2 decision-making processes	73%	86%	53%
More principals involvement in BPS decision making ¹			69%
Access to Extended day/ after school programs ²	64%	62%	71%
Additional curriculum development	61%	58%	54%
More classroom space	59%	62%	48%
Repaired classroom space	55%	65%	39%
Facilitated communication among teachers at your school	46%	41%	33%
Facilitated communication among teachers in the BPS System	59%	66%	54%
Facilitated communication among principals in the Boston Public Schools ¹			39%
Increased access to educational coordinators for K1/ K2	45%	47%	53%
Better teacher lounges and break space	45%	55%	36%
Computer access in the classroom	45%	56%	45%
Increased access to educational coaches	36%	42%	59%
Greater access to principal BPS programs for parents ¹	29%	29%	17%
			66%

¹ Not asked of teachers

² 16 principals left this item blank

Equipment and Materials Needed

Teachers were also asked about specific equipment and materials needed for their classrooms. More than half of teachers requested the language and literacy resources and other curriculum materials that were found to be in short supply during the classroom observations.

Teacher ratings of percent of classrooms with a considerable or extreme need for the following resources		
	K1	K2
Language and Literacy Resources		
Books in languages other than English	63%	48%
Factual Books	59%	57%
Rhyming books	58%	55%
Alphabet/phonemic awareness materials	54%	48%
Writing materials (e.g., paper, markers)	50%	54%
Children's story books	50%	38%
Letter/Alphabet books	46%	41%
Other Curriculum Materials		
Art materials (e.g., play dough, paint)	65%	70%
Dress-up clothes	62%	63%
Multicultural materials (e.g., dolls, books)	58%	76%
Fine motor materials (e.g. puzzles, small building objects)	54%	64%
Science materials (e.g., magnets, scales, natural materials)	50%	61%
Soft toys (e.g., stuffed animals, dolls)	42%	58%
Dramatic play furniture	38%	49%
Math and number sense-related curriculum support materials	38%	27%
Sensory materials (e.g., sand, water)	35%	56%
Blocks	8%	36%
Furniture and Equipment		
Storage/filing cabinets	54%	43%
A computer	29%	46%
Wall displays and bulletin boards	21%	26%
Chairs and tables	9%	26%
Staffing and Building Needs		
Additional staffing by paraprofessionals	62%	67%
Access to gross motor equipment/space	46%	56%
Better access to bathrooms and/or sinks	38%	45%

More than half of K1 and K2 teachers reported needing additional children's books to support literacy, as well as materials for art, dramatic play, fine motor activities, science and other curriculum areas. More than half of teachers also reported needing more storage cabinets, and greater access to gross motor equipment and space.

Other materials needed by some or most classrooms⁵:

- Additional storage for classroom materials. One-third of classrooms did not have sufficient

⁵ Based on assessments made by the research team during classroom visits.

storage for the books in the classroom. Over half of classrooms did not have adequate storage for the blocks they had or for other curriculum materials.

- A variety of racially and culturally diverse books, pictures and materials and some culturally diverse props in the dramatic play area.
- Gross motor equipment that supports a variety of skills for children; enough gross motor equipment to accommodate the number of children in the classroom.

Family Needs Assessment Findings

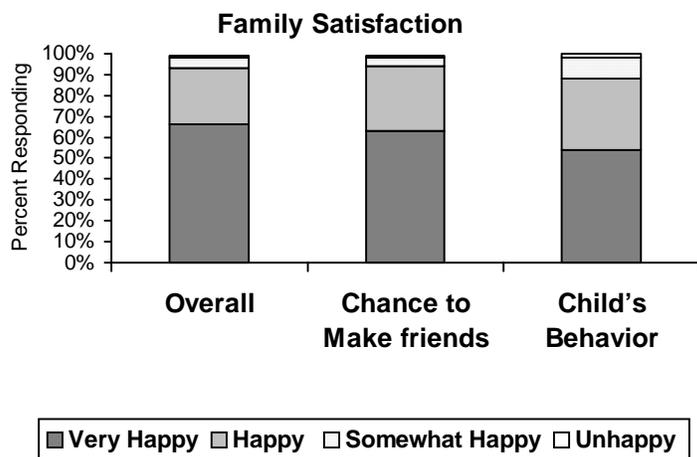
The family needs assessment offered families an opportunity to rate and comment on their child's current experiences, as well as provide information about children's experiences at home or before coming to BPS.

Satisfaction with Kindergarten Program

When asked how happy they were with their child's experience in kindergarten this year, almost two-thirds of parents (66%) reported that they were very happy and another quarter (27%) said they were happy with their child's experience. However, 6% of families were only somewhat happy or were unhappy. When we compared the answers to this question from parents with

children attending Early Learning Centers and those attending neighborhood schools, we found significant differences – families 80% of parent respondents with children at Early Learning Centers were much more likely to report that they were very happy with their experience (80%) than were families with children at neighborhood schools (65%). There were no significant differences in overall satisfaction between families with children in K1 programs and K2 programs. Families were equally positive about children's opportunities to make friends in kindergarten, but were less

happy with their child's behavior in kindergarten.



I think my child's teachers are great. I think they like the children, and love what they do.

So far very happy and satisfied with BPS programs, schools, teacher, staff, etc. Keep up great work.

The teacher is excellent, dedicated and respectful to all the kids. She's exceeded my expectations. It's been a great experience.

We've experienced many schools and this one is superlative! My daughter reads, adds and subtracts already!

When asked how much they thought their child is learning in kindergarten, about four out of five (79%) families felt their children were learning a lot. However, one in five families (21%) felt their child was only learning some or a little, or they were not sure how much their child was learning. Families with a child in a neighborhood school were more likely than families

with a child in an Early Learning Center to report that their children were only learning a little or some in kindergarten – 23% of families in neighborhood schools did not rate their children as “learning a lot” compared to only 7% of families in Early Learning Centers. There were no differences between families with children in K1 programs and K2 programs.

When asked what they would change about their child's current experience, many of the comments were about the learning opportunities. While one parent wanted more homework and another wanted daily attention to letters and numbers, the overwhelming response was a call for a more comprehensive program that included regular exercise and opportunities for “climbing, and things that encourage speed, endurance, balance, confidence, flexibility”, more time

outside, more tactile activities such as playing with clay, more exposure to the arts, music and second languages.⁶

Families also felt that the class sizes were a problem. Some simply said that classes should be smaller or that there should be more adults in the K1 classrooms, while others commented on the consequences of the current class sizes for kindergarten children or that teachers could not always manage the behavior of some of the children. Sample comments include:

Smaller classrooms with more one on one attention for each child.

The class is out of control and half the time a child gets hurt.

Increased monitoring of the children's conversations.

I would change the current 4 or 5 children in class that have very strong behavior problems that border on violent. My child speaks of it every day. Her opinion on her day is always based on what these children did. Why is this acceptable for the remaining 15 or 16 children?

Eliminate bullies in the classroom.

Families also commented on the need for greater supervision outside:

I must say though, I DO NOT like at all the way those children are left unattended with no adult in the morning when they have been dropped off! It makes me as a parent very uncomfortable.

More supervision in the schoolyard after lunch.

Be more careful and pay more attention and have more teachers outside.

Sample responses to "What would you change about your child's current experiences?"

There is not enough exercise at school for the kids! Test scores are not everything.

I am upset over no school library and no school gymnasium!

More time for exploration and less structure.

Homework that would give me a basic idea of what exactly they are doing.

Include more subjects, topics. The whole world isn't just math and spelling!

Teacher/Child Relationship

When asked about the relationship between their child and his/her teacher, almost two-thirds of families (63%) reported that it is very close and loving; another 27% reported that the relationship was positive, though not really close. Forty-one families, or 5%, reported that their child's relationship with his/her teacher was not positive at all, and 4% reported they did not know. We found no differences in responses between families with a child in K1 compared to families with a child in K2, nor did we find differences between families at neighborhood schools compared to Early Learning Centers.

When we asked families whether their child's teacher seemed happy to have their child in the

⁶ In addition to answering specific questions on their overall feelings about child's K1/K2 experience/program, parents were also asked to answer one opened ended question regarding what they would change about their child's current experience. Comments from parent surveys varied, and many responses fell into areas such as curriculum, school choice, communication, supervision, class size, schedule, and positive experiences among other things. A selection of these comments is presented by area.

class, 85% said the teacher seemed very happy, 13% said the teacher seemed positive but not overly happy, 6 families (1%) said the teacher didn't seem to care and 7 families (1%) said the teacher did not seem happy to have their child in the class. Overall, children's relationships with their teachers seem positive, and this is reflected in families' comments about the relationship. However, some families commented on teacher burnout and its effect on the teacher's behavior.

I think my child's teachers are great. I think they like the children, and love what they do.

So far, very happy and satisfied with BPS programs, schools, teacher, staff, etc. Keep up great work.

The teacher is excellent, dedicated and respectful to all the kids. She's exceeded my expectations. It's been a great experience.

His teacher seems tired of teaching. Always yelling, constant nagging-not enough positive reinforcement.

Teacher is good, very competent and nice, but somewhat burned out and uncreative.

Before BPS

The Boston Public Schools Department of Early Childhood was interested in children's readiness for school prior to entering BPS, and in families' reasons for selecting BPS. We asked families about their child's experiences prior to BPS. In addition, we asked teachers and principals to evaluate how ready children were for school upon entry into BPS.

Overall, 52% of K1 students had attended a preschool classroom in the prior year (at BPS, in a child care center or in Head Start) and another 15% had experienced non-parental home-based care (family child care or relative/friend care). For K2 students, 73% had attended a preschool classroom in the prior year and another 8% had experienced non-parental home-based care. Specifically, one third of K1 and K2 students had attended a private preschool or child care center in the previous year. Other K1 students had been at home (26%), in family child care (11%) or at a relative's or friend's home (4%), or in a Head Start program (11%). Among K2 students, 19% had attended BPS in the previous year; others at attended Head Start (22%).

Percent Of Teachers/Principals Reporting:	K1 Teachers	K2 Teachers	Principals
Their students were considerably or very ready upon entering kindergarten	36%	22%	22%
Students with prior preschool were considerably or significantly more prepared for kindergarten than other students	60%	52%	Not asked
Students in their school are considerably or very ready for first grade after completing kindergarten	96%	98%	91%

Children's preschool experience prior to BPS provided important preparation for kindergarten. More than half of teachers reported that their students with prior preschool were considerably or significantly more prepared for kindergarten than other students. Overall, only one third of K1 teachers, and one-fifth of K2 teachers and principals felt that their students were considerably or very ready upon entering kindergarten, although almost all agreed that students were ready for first grade after completing kindergarten.

Principals were asked about the specific challenges they face for students as they enter the K1/K2 program at their school.

More than half of principals found challenging students' limited English skills and lack of social skills. Almost as many found students lacked letter and literacy skills or had emotional or behavioral problems. About a third of principals found challenging students' lack of basic knowledge and the lack of number awareness. Finally, more than a quarter reported that students had poor health or nutrition.

Percent of Principals Who Find Challenging the Following Issues for Students Beginning the K1/K2 Program at Their School.¹

Students lack social skills	54%
Students have limited English skills	54%
Students lack letter and literacy skills	48%
Students have emotional/behavioral problems	45%
Children lack basic knowledge	39%
Students lack number awareness	36%
Students have poor health/nutrition	27%

¹ Percent of principals who reported these issues were a considerable or extreme challenge.

Deciding to Attend Kindergarten

When asked why they wanted their child to attend a kindergarten program, the overwhelming majority (95%) of families surveyed reported that it was to help prepare them for elementary school. Families also reported other benefits, including having other children to play with (35%), needing care while the adults were at work or school (20%) or time away from the child (3%), or needing services for a child with special needs (4%).

Families reported that they learned about the BPS kindergarten program most often (38%) through a friend, neighbor or other parent, and next most often through Countdown to Kindergarten (30%). Another 24% of families learned about the BPS kindergarten program through BPS materials, website or Family Resource Center, and 16% learned about it from their child's child care center.

Others learned about it from their family child care provider (5%), in the newspaper (5%) or at the Housing or Transitional Assistance Office (3%).

When asked why they chose the BPS Kindergarten program instead of another, over one-half of parent respondents (56%) indicated it was because the BPS program is free of charge,

and 40% said that BPS would prepare their child for school. One quarter of families also chose BPS because other programs cost too much and because BPS has better quality.

Reasons for Choosing BPS¹	Percent of families
BPS is free	56%
BPS will prepare my child for school	40%
Other programs cost too much	26%
BPS has better quality	25%
BPS programs are safe	18%
You trust BPS more than other programs	16%
To get my child in the school I want next year	13%
BPS has special needs services	10%
Other programs don't provide transportation	7%
No spaces available in other programs	6%
Other	12%

¹ Families could check more than one reason

Families were also asked whether their child was attending one of their top three choices – 81% reported that their child got into one of their top three school choices for BPS Kindergarten.

However, some families commented they would have preferred a school closer to home:

It's a shame you can't send your child to a neighborhood school.

Would have preferred a school closer to home.

I would have preferred a neighborhood school in our walk zone instead of one that he was bussed to.

Proximity of school to home and students from the neighborhood was a very important factor for selecting this school.

Neighborhood schools are the answer to many BPS issues. This pragmatic approach enables parent/BPS partnership.

Transportation to Kindergarten

Two out of five children are driven to school, and almost as many take the school bus. Fewer than one in five walk to school, and only 22 children (3%) get to school on the T. Slightly more children walk to neighborhood schools than to Early Learning Centers (19% compared to 12%), and slightly more children are driven to Early Learning Centers than to neighborhood schools (47% compared to 40%) (these differences are not statistically significant). There were no significant differences in transportation between children in K1 and K2 classes.

Time to Get to School:	Method of Travel			
	Walk	Car	School Bus	T
Under 5 minutes	45%	29%	3%	5%
6-10 minutes	38%	43%	18%	-
11-15 minutes	9%	19%	23%	36%
16-20 minutes	6%	7%	41%	14%
Longer than 20 min	1%	2%	16%	45%
Number of children	143	341	312	22

The amount of time it takes for children to get to school varied with the type of transportation. Most (83%) walkers were within 10 minutes of school. Most (72%) children who were driven to school also got to school within 10 minutes. Most (64%) children who took the school bus to school arrived between 11 and 20 minutes after leaving home; 21% arrived within 10 minutes, but 16% took more than 20 minutes to get to school on the school bus.

The bus takes too long to get to school.

It takes me 7 minutes to drive to school, and about 30-40 minutes for the bus to get there. Seems like built in wasted time.

She stays longer than usual in the bus and gets tired.

The ride on the bus is too long for a 4 year old.

The journey is too long. My child is very uncomfortable at times when he has to urinate while in the bus to and from school-worse when there is traffic.

Satisfaction with Transportation to Kindergarten.

How happy families were with transportation depended on how long it took their children and on the type of transportation. Not surprisingly, the longer it took children to get to school, the less happy families were with the transportation. Some families commented on the effects of longer rides on the school bus:

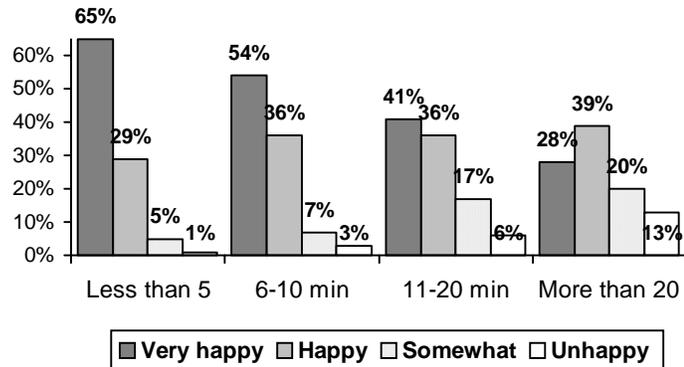
While only 16% of families using the school bus reported that it took longer than 20 minutes for their child to reach school, it is clear that these long bus rides are difficult

for the four- and five-year-olds attending K1 and K2 programs.

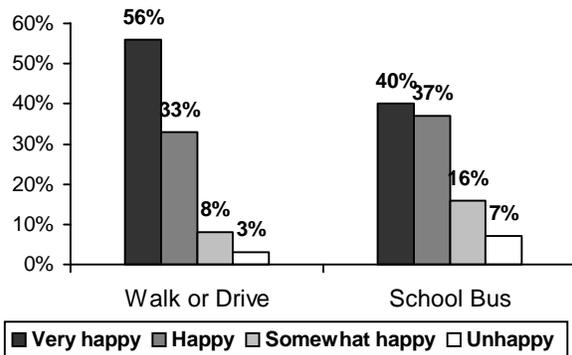
The method of transportation also mattered. While 40% of families whose children took the school bus were very happy with the transportation, families whose child walked to school or were driven to school were more likely than families whose children took the school bus to report that they were very happy with the transportation (56% compared to 40% were very happy).

The family needs assessment also asked families to comment on their experiences with transportation. The largest portion of the comments received were about school bus safety concerns. Other areas families commented on included timeliness of the bus, length of bus ride and other experiences getting their child to school. A selection of family comments are presented below.

Family Satisfaction with Transportation, by Travel Time



Family Satisfaction, by Type of Transportation



School bus safety concerns

My child does not like taking the school bus any more because he says the bigger kids hit him and say bad words.

I will not allow my child on the bus especially at his age. They do not seem safe to me- i.e. drive too fast, no seat belts enforced.

The bus is very loud and rough.

It has felt worse than worrisome, even treacherous to have our K2 child on the bus. No monitors. One

alert driver, one oblivious driver. Several incidents where older kids have roughed up, manipulated or been unkind toward our eager-to-please Kindergartener.

Overcrowded bus; no monitor; rude drivers. Have called Court St. numerous times to no avail; no seatbelts on bus.

One day my child was beaten up by older kids-the driver can't watch.

It has worked out for us to car pool. I would NEVER put my kid on a BPS school bus.

The bus ride is horrible and unsafe. My 5 year old son went from extremely excited to traumatized. He's been negatively affected by the fights, profanity and two hour bus ride. His demeanor has changed.

The bus system is an impossible dilemma. I have witnessed 2 fist fights on morning BPS buses in the past two months while driving. I will never put my

*children onto a BPS school bus given the violence I have seen.
Strongly believe that school buses should have monitors.
I will not put my child on a BPS bus unless the monitors are re-instated.
Bus would be easier, but without monitors it's not safe, especially for a K student.*

Families had other concerns about the school buses, including the timeliness of the school bus:

*The BPS bus system needs revamping to ensure that the children arrive ON TIME to school. My child is consistently late due to late bus pick up.
The bus leaves very early for school and arrives 1.5 hours before class begins!
The bus is never on time for the pick ups or drop offs. Also the policy of leaving kindergarteners at the curb with no parent needs to change.
The bus is never on time it is always dirty.*

Some families were not able to use the school buses:

*I wish it wasn't so hard about getting transportation to and from school. I think that if you want your child to be in a school that you think is excellent it should not be hard to get your child bus to and from school.
We live exactly 1 mile from school and no school transportation is made available to us.*

Others were fortunate enough to be able to walk or drive their child to school:

*I love that she walks! That was an important factor in our decision.
This is the time we do the "walking story."
All children should have a school within walking distance.
I walk my son to school that gives us time to talk about a lot of things.
Dropping my child off allows me to see students, parents and teachers often.
At first I was upset my children didn't get picked to ride the school bus. Now I realize that was the best thing ever we talk more, share more, we love more each day.*

The Need for Before and After School Programs

In 75% of families, the only parent or both parents are employed or in school or a training program. Over half of families (51%) report that all adults work full-time; in another quarter of families (24%), one parent worked full-time and the other worked part-time. For these working families, school schedules are not always compatible with their work schedules, as several parents commented:

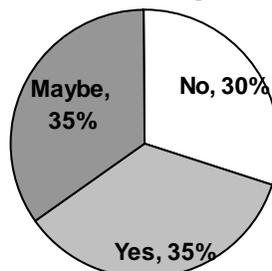
*Starting at 9:20 is late, as we both work.
School starts at 9:20, which is extremely difficult to accommodate since both parents work full time and our child is too young for both before and after school programs.*

The school schedule is not good. I would like the school to start early rather than late in the morning-the school should start at 7:30 or 8 am.

The school hours make it necessary to enroll in the before school program at the YMCA. I'm not satisfied with that program.

Before School. A large majority of families (89%) surveyed reported that a parent, guardian or relative cared for their child at home before school in the morning; some of these families also used other arrangements. Only 4% used a BPS before school program. Other families took their child to someone else's home (6%), or relied on an older sibling to watch their K1 or K2 child (2%).

Families Likely to Use BPS Before School Program



When asked if they would use an affordable before school program at their child's school, 260 families, (35%) said they would, another 263 families (35%) said they might use it, and 222 families (30%) said they would not.⁷

After School. Three-quarters of families (74%) reported that a parent, guardian or relative cared for their child at home after school; some of these families also used other arrangements. One in five families had formal after school arrangements for the child (9% in a BPS program, 6% in a community program, 4% with a family child care provider). Other families relied on an older sibling (3%), a relative in the relative's home (3%), or a friend or neighbor in their home (3%). Several family comments addressed the need for more after school programs at BPS:

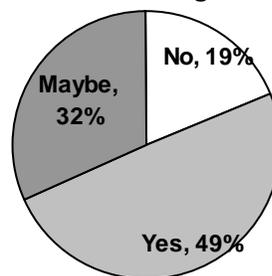
I am very disappointed to know that there are no programs in place for 4 year olds in BPS that need after school services in their own schools.

Improving the after school program.

Had horrible experience with after school program this year - had to go outside of the school and look for a program. It was very disorganized and inadequate.

When asked if they would use an affordable after school program at their child's school, 344 families, (49%) said they would, another 222 families (32%) said they might use it, and 131 families (19%) said they would not.⁸

Families Likely to Use BPS After School Program



Family Involvement

⁷ Percents based on 745 families who answered this question and were not already using a BPS after school program. 64 families already use a BPS or community before school program and 35 families did not answer this question.

⁸ Percents based on 697 families who answered this question and were not already using a BPS after school program. 125 families already use a BPS or community after school program and 22 families did not answer this question.

Families are children’s first teachers; research consistently shows that a home environment that encourages learning is more important to student achievement in school than income, education level or cultural background. High levels of family involvement in schools and in children’s learning are associated with improved student achievement, reduced absenteeism, improved behavior, and restored confidence among families in their children’s schooling. The earlier that family involvement begins in a child’s educational process, the more powerful the effects. When families are involved in school, children go farther in school — and the schools they go to are better.

Families are the Child’s First Teachers. One way in which families can be involved in their child’s learning is by reading with the young child. Three-quarters of families reported that they read to their kindergarten child every day or almost every day. However, other families read only once or twice a week (18%), less than once a week (5%) or report that they don’t have time to read (2%).

The Transition to kindergarten. Family involvement and family-school communications are important to the child’s transition into kindergarten. Principals were asked about the strategies their schools used to facilitate children’s transition into kindergarten, and how effective they felt each of these strategies was.

Strategies used to facilitate children’s transition and principals’ effectiveness ratings.

Strategy	Use This Strategy	Considerably or Extremely Effective
School open house/parent night	100%	65%
Parents visit school prior to school starting	97%	76%
Children visit school prior to school starting	94%	75%
Parents invited to school for classroom activities	94%	63%
Parents visit classroom at the beginning of school year	94%	64%
Parent newsletter offered to keep parents aware of school activities	88%	64%
Parent handbook with information about program	67%	39%
Parent board used to inform administration	58%	50%
Other	88%	89%

The most commonly used strategies were a school open house or parent night, visits by the parents and the children prior to the start of school, parental visit to the classroom at the beginning of the school year and invitations to school for classroom activities. The most effective of these strategies are parent and child visits to the school prior to the start of the school year.

Family-School Communications. Once children are at school, family-school communication fosters family involvement, which is important to children’s learning. During classroom visits, we evaluated the supports available to families, using items from the ECERS-R. In the vast majority of classrooms (over 90%), parents were provided with written information about the BPS program, parents and teachers shared child related information and parents were allowed to participate in classroom activities. Two-thirds of classrooms (66%) offered parents a variety of alternatives to encourage classroom participation.

On the Needs Assessment surveys, the majority of principals (85%) reported that families at their schools are involved in their children’s schooling. However, principals identified several challenges to family-school communication. One-third of principals (33%) reported that parents are too busy with work and family, and 42% reported that it is hard for parents to get to school.

Obstacles to family-school communication¹

	Teachers	Principals
Most parents do not bring their children to school	66%	19%
Parents are too busy with work and family	48%	33%
It is hard for parents to get to the school	38%	42%
Parents have difficulties reading English	32%	33%
Language barriers between parents and teachers or school staff	21%	15%
Parents do not have phone numbers where they can be reached directly	47%	21%
Teachers do not have time to call parents during regular school hours	49%	Not asked
Teachers lack access to a phone and space for calling parents	44%	Not asked
Parents can only be reached in the evenings, after school hours	24%	15%
School staff do not have time to work with parents	Not asked	21%
Cultural differences between parents and school philosophies	Not asked	6%

¹ Percent of teachers and principals who reported that each item was a considerable or extreme obstacle.

Teachers reported that the biggest obstacle was the fact that most parents do not bring their children to school (children are bussed or carpooled). Informal communication between families and teachers often happens at drop-off and pick-up times, but this is not an option for all BPS families. Almost half of teachers also felt that parents’ work and family responsibilities were a challenge and more than a third agreed that it is hard for parents to get to school.

Given the difficulties families face in getting to school, telephone calls are another option. However, both principals and teachers cited the mismatch of schedules and constraints of parents’ other commitments – parents are at work during regular school hours, teachers don’t have time to call parents during school hours – as well as the fact that parents do not always have phone numbers where they can be reached directly and teachers do not have access to a phone and space for calling parents from school.

Finally, written communication is an option, but one third of teachers and principals noted that one obstacle is the fact that some parents have difficulty reading English. Interestingly, teachers and principals experienced less difficulty from language barriers, suggesting that spoken communication is less of an issue. In addition, only 6% of principals felt that cultural differences between parents and schools were a serious obstacle.

Communication with Child’s Teacher. Direct communication between families and teachers supports both the child’s experience in the classroom, and the families’ knowledge of and trust in the school. Effective communication allows families and teachers to each provide the child with an environment that supports learning and growth. We asked both parents and teachers

how often they talked to each other. Half of families reported that they talked to their child's teacher at least once a week. However, 29% talked to their child's teacher only once or twice a month, and 19% talked to the teacher only a few times a year.

Teachers also report regular communications – 72% of K1 teachers report communicating with families at least once a week⁹, compared to 51% of K2 teachers.

The higher rates of communication for K1 teachers compared to K2 teachers may reflect the perceived needs of four-year-olds vs. five-year-olds. Importantly, almost all teachers communicate directly with families at least once a month.

Communication Between Families and Teachers			
	Families	K1 Teachers	K2 Teachers
Almost every day	25%	24%	14%
Once or twice a week	25%	48%	37%
Once or twice a month	29%	16%	43%
Few times a year	19%	12%	6%
Have never talked with teacher	2%	-	-
Note: there were no differences between families of K1 and K2 children in their report of communication frequency.			

While half of families reported talking to their child's teacher at least once a week, some families commented on suggested improvements in communication:

More parent/children events to meet parents and to help children with more opportunities to make friends.

More communication. I felt in the dark about a lot of activities-not a lot of feedback or info from teacher or from school.

More feedback on child's progress-academic and social.

Overall experience with BPS has not been what I expected-very negative in fact-find principal very overwhelmed and issues, concerns of parents totally ignored.

Principal and teachers not willing to go extra mile and communication amongst teachers and parents is horrible.

Encourage parent involvement.

Services for Children with Special Needs

In addition to family-school communication, family involvement in children's learning is fostered when families receive services from other professionals as appropriate. The family needs assessment asked families about their children's special needs and their satisfaction with the services received.

Almost one in ten (77 families) of the families who responded to the family needs assessment reported that they had a child with special needs with an IEP in place. The majority of these families (68 families, 89% of families with a special needs child) reported that they felt that their child's classroom was the best place for their child; five families (7%) reported that it was not.

⁹ The difference between teachers report and families report may not be meaningful, since we haven't matched specific families with specific teachers.

When asked how satisfied they were with the services their child received as a part of the IEP, 84% of families said they were happy or very happy with the services; 11% were somewhat happy, and 5% were unhappy with the services.

One family commented:

Although we had to battle with BPS in order for our daughter to be mainstreamed and for her to receive the services she has been provided, once they were in place we have been very happy with what my daughter receives, but BPS needs to do a better job of insuring the services without parents having to fight the system for what their child clearly needs.

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