

# **PROFESSIONAL ENRICHMENT FOR EARLY CHILDHOOD EDUCATORS: YEAR ONE EVALUATION FINDINGS**

HEAD START RESEARCH CONFERENCE PAPER PRESENTATION

Action for Boston Community Development, Inc.  
in collaboration with Urban College of Boston and  
Lesley University

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## **Introduction: Evaluation of a Tiered Professional Development Model**

The link between teacher education/professional development and the quality of early childhood environments is well documented. (Barnett, 2003; Gallagher, & Clifford, 2000). However, limited research has been available about the impact of a tiered professional development initiative on teacher practice, classroom quality, or children's school readiness. While research on Head Start demonstrates a correlation between teacher reported beliefs and the actual quality of early childhood classroom, limited studies have systematically examined the correlation between tiered education, training and professional development and teacher attitudes, classroom quality, and children's school readiness (U.S. Department of Health and Human Services, 2003). To address the need for research-based tiered professional development, the U.S. Department of Education provided a grant to support the Professional Enrichment for Early Childhood Educators (PEECE) project and a rigorous evaluation of the initiative.

PEECE is designed to provide targeted and tiered professional development to early childhood educators (e.g., Head Start and child care teaching staff) in the Boston area. As such, it requires linkages among a large community action agency that houses a Head Start and a Child Care Resource and Referral Agency, a two-year community college, and a private four-year university. In addition, the project supports a rigorous external evaluation, which is designed to collect and report data about the nature of PEECE and the relationship between participation in PEECE and desired outcomes.

## **Literature Review**

Research shows a relationship between the level of education/professional development of early childhood teachers and the quality of early care and education services children receive (Phillips, 2001). For example, one study that examined the impact of an early childhood intervention on child outcomes found that the significant increases in knowledge and skills were obtained for children in the classrooms of teachers with two years of college education or less, stronger gains were obtained by children in classrooms where teachers had at least a four-year degree. Children whose teachers had at least a bachelor's degree showed greater gains in mathematics, phonological awareness, and other complex pre-academic tasks regardless of whether teachers had participated in the professional development for one year or two (U.S. Department of Health and Human Services, 2003).

While education is correlated with higher quality, in many parts of the country the education levels of child care workers is insufficient. A study of child care workers suggests that there has been a decline in the educational background and training of child care staff over the past decade (National Institute for Child Health and Development, 1996). This decline could be related to the generally low wages in the child care field. National data show that child care teachers average between 13,125 and 18,988 dollars for full-week, full-year employment and assistant teachers average only 6 to 7 dollars per hour. It is therefore not surprising that national studies have shown high turnover, with 20 percent of centers losing half or more of their staff in the course of a year (Whitebook, Howes, & Phillips, 1990).

Research suggests that partnerships among child care and Head Start providers can lead to improvements in professional development for early care and education teachers. A three-year study of child care/Head Start partnerships collected survey data from teachers working in child care centers partnering with Head Start and comparison teachers working in non-partnering child care centers. This study found that teachers at partnering centers received more hours of professional development and easier access to off-site professional development workshops than comparison teachers (Schilder, Chauncey, Broadstone, Miller, Smith, & Skiffington, 2005). Moreover, teachers at partnering centers were more likely than their peers to report that the professional development received was effective (Schilder, Chauncey et al). Standards for child care teacher professional development and education differ from those mandated by the Head Start program performance standards in most states. Studies suggest that partnerships can lead not only to better alignment of qualifications, but actual improvements in the professional development experiences of child care teachers (Schilder, Kiron, & Elliott, 2003; Chauncey & Schilder, 2006).

As such, the federal government is supporting a number of initiatives to enhance the quality of early care and education and improve coordination among early care and education services. The federal *Good Start, Grow Smart* (GSGS) initiative supports alignment of early childhood services with K-12 standards through encouraging states to develop early learning standards (White House, 2003). In addition, GSGS supports professional development interventions so that child care providers can obtain the knowledge and skills needed to stimulate young children's development. In addition to GSGS, federal and state governments set aside a portion of CCDF funds for quality initiatives (U.S. Government Accountability Office, 2002). States support a range of activities with these dollars including supporting teacher professional development.

To address the need for tiered professional development, the U.S. Department of Education provided grant funding to a collaboration consisting of Action for Boston Community Development (ABCD), Urban College of Boston, and Lesley University. These stakeholders have been supporting a two-year tiered professional development project called the Professional Enrichment in Early Childhood Education (PEECE). As part of this project, researchers at the Program Evaluation and Research Group (PERG) at Lesley University have been conducting a two-year formative and summative evaluation.

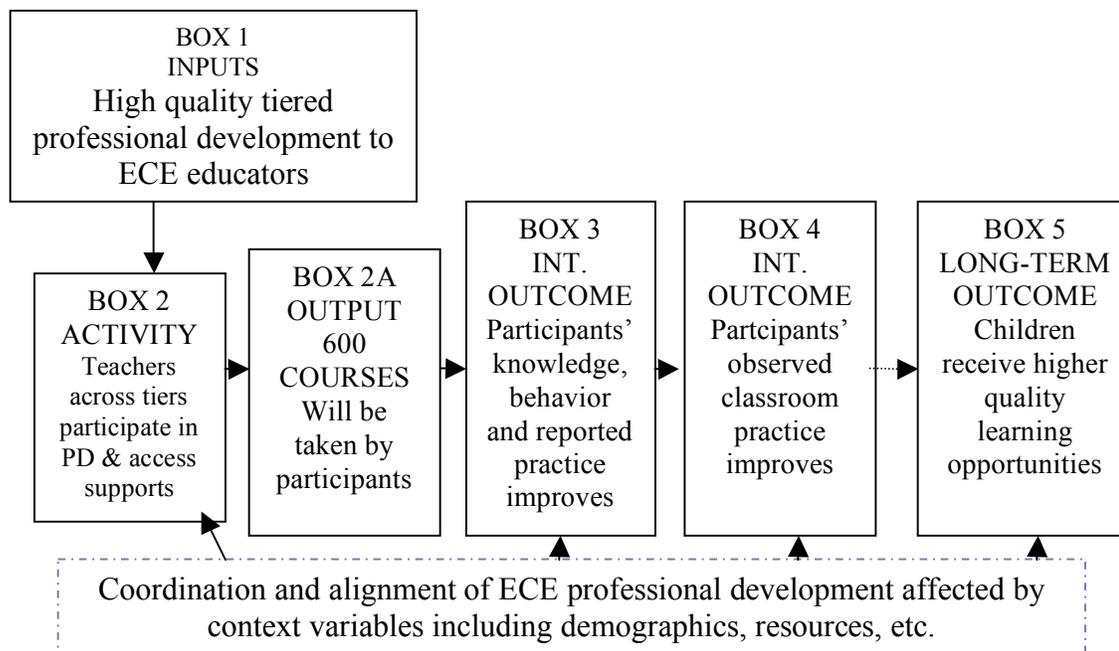
## **Methods**

Evaluators from PERG have been engaged in a participatory evaluation approach to systematically examine the nature of the PEECE initiative and to determine whether PEECE is achieving desired goals (Cousins, & Earl, 1992). The first step in the evaluation was to develop a project logic model, illustrating the relationship between the project inputs, outputs, short-term outcomes, and longer-term outcomes.

Graphic 1 below illustrates the conceptual theory that by offering high-quality tiered professional development opportunities (Box 1. Inputs) teachers will participate in the different tiers (Box 2. Activity). Their participation will lead to improvements in knowledge, behavior and reported practice (Box 3. Interim Outcome) regardless of the tier in which they entered the project.

Furthermore, these improvements lead to improved classroom practices (Box 4, Interim Outcome) and ultimately improved school readiness (Box 5, Long-Term Outcome).

### Graphic 1. PEECE Logic Model



Next, in collaboration with the project stakeholders, the evaluators articulated performance measures for each component of the logic model.

To examine progress toward each component of the logic model, the project evaluators have been collecting data from each of the teaching staff who have taken courses through the projects and from a sample of the classrooms in which these individuals teach. The PEECE participants teach in predominantly low-income classrooms and are racially and ethnically diverse with 32 percent African American, 23 percent Latino, 24 percent White, and 7 percent Asian. The educational levels of the staff demonstrate a need for additional education and professional development. For example, only 8 percent of lead teachers have bachelors degrees, with 55 percent holding associates degrees and 34 percent holding CDAs. The education and professional development of the teachers is especially critical as these teachers serve primarily children who live below the federal poverty line.

Researchers have been collecting data to examine changes over time and progress toward desired targets. Data are being collected using multiple methods:

- Data from each participant was collected at the inception of the project and at regular intervals throughout the intervention using a survey that was adapted from items in the Family and Child Experiences Survey (FACES) developmentally appropriate practices scale (U.S. Department of Health and Human Services, 2003). This survey is designed to assess participants' self-reported attitudes, knowledge, and practices in the early childhood classrooms. Evaluators created new survey items and composites to assess teachers'

attitudes, knowledge, and practices in areas specific to the courses offered through the PEECE project. For example, new items related to teachers' language and literacy attitudes and practices were added, as PEECE supported English and writing courses to enhance teachers' ability to incorporate research-based language and literacy practices in their classrooms.

- Classroom observations were conducted at the inception of the project and at a mid-point, and researchers plan to collect data at the conclusion of the intervention. The Early Childhood Environment Rating Scale-Revised is being used to systematically collect data from a sample of 30 classrooms in which multiple early childhood professionals are participating in the project, 30 classrooms in which one teacher is participating in the project, and 30 classrooms in which no teachers are participating (Harms, Clifford, & Cryer, 1998).
- Observations using the Early Language and Literacy Classroom Observation (ELLCO) toolkit and interviews using structured interview guides have been conducted from a sub-sample of participants to describe the literacy environments and the teachers experiences (Smith, Dickenson, Sangeorge, & Anastasopoulos, 2002).

For this paper, authors performed descriptive statistical analyses and performed t-tests to assess differences between scores on composites prior to participation in the project and after one year of participation. At the conclusion of the project, evaluators will use growth modeling to analyze survey data collected at three points in time to examine growth in teachers' self-reported attitudes, knowledge, and practices over time.

## **Results: PEECE Met Most Year One Targets**

Analysis of year-one evaluation data reveals that the PEECE project met most of the targets articulated in the proposal and refined by stakeholders during the initial months of the project. Moreover, the project has demonstrated substantial progress toward the overall project goals and objectives. Details about the findings are presented below.

### **PEECE Increased the Quality Professional Development Opportunities Available to Early Childhood Educators**

During the first year of the PEECE project, stakeholders engaged in a variety of activities to increase the number of hours of high-quality professional development offered to early childhood educators and to increase the number of educators participating in these opportunities. Reviews of administrative, survey, and qualitative data reveal that participants across tiers believe the project successfully increased the professional development opportunities available to them. Moreover, the project funded courses and professional development activities for participants across the tiers.

In the fall 2004, PEECE leaders engaged in activities to ensure that tiered professional development opportunities would be available to early childhood educators working with low-income children in the Boston area. Leaders created action steps to ensure that beginning in January 2005 courses would be offered through ABCD's Child Development Associate (CDA)

program, Urban College of Boston (UCB), and Lesley University. The courses were designed to address the educational needs of early childhood educators in tiers 2 through 6.

Analyses of administrative data reveal that PEECE leaders met their first year goal of offering high-quality early childhood courses and related courses that early childhood educators need to acquire certificates and degrees. During the first year of the project, PEECE funded 28,335 hours of early childhood coursework, workshops and professional development opportunities to early childhood educators in Boston. Table 2 illustrates that during the first year of the project PEECE supported coursework for participants across all tiers except in tier 1, as leaders were planning the tier 1 curriculum during year one of the grant.

**Table 1. Number of Hours of Coursework and Courses Supported by PEECE in Year 1**

Tier	Number of Hours of Coursework	Number of Courses
Tier I	NA	NA
Tier II	1,350	30
Tier III	9,450	165
Tier IV	4,950	111
Tier V	8,010	178
Tier VI	4,500	100
Tier VII	75	2

Specifically, First Steps offered 1,350 hours of Child Growth and Development coursework to low-income women interning in Boston’s early childhood programs who were in tier 2. In addition, ABCD Boston offered 9,450 hours of Child Development Associate (CDA) coursework to early childhood educators in tier 3. To meet the needs of the linguistically diverse populations of early childhood educators working in the Boston area, PEECE offered some of the CDA courses in Spanish and began to develop a Chinese-language CDA curriculum. PEECE also funded 4,950 hours of coursework for educators seeking early childhood certificates through Urban College of Boston and 8,010 hours of coursework for educators seeking associate’s degrees in early childhood. Finally, PEECE supported 4,500 hours of bachelor’s degree coursework at Lesley University and 75 hours of graduate course work.

Leaders made plans in year 1 to develop tailored professional development opportunities for participants in tier 1. Such opportunities are designed to address areas of need, specifically around language and literacy practices. These workshops will be provided in Head Start classrooms in the community.

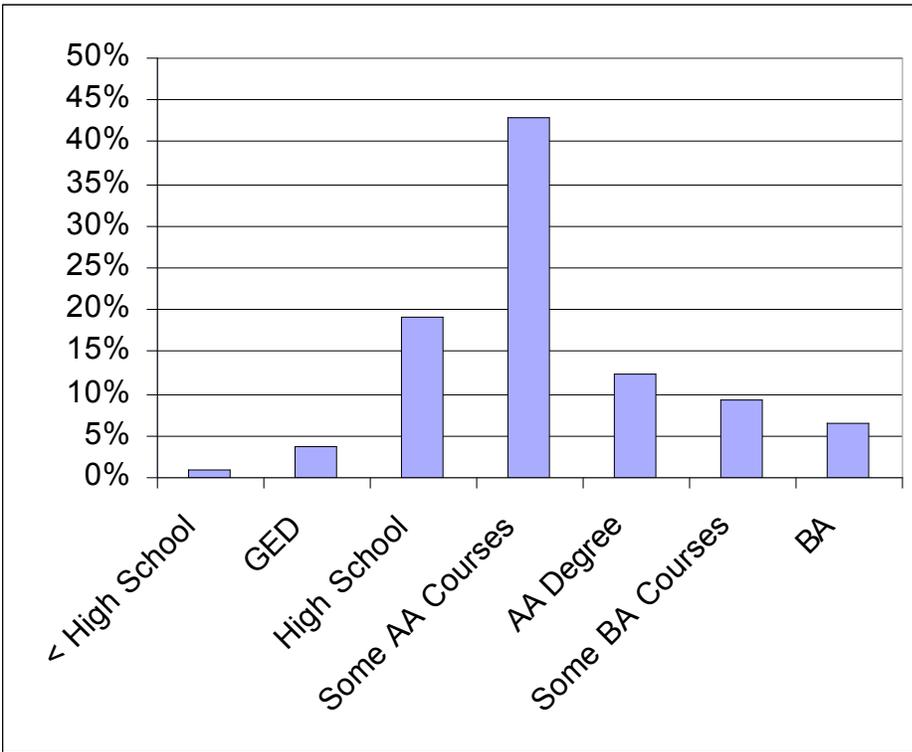
## **PEECE Increased the Number of High-Quality Professional Development Opportunities Received by Early Childhood Educators**

During the fall of 2004, PEECE leaders successfully developed recruitment materials that were disseminated to Head Start and child care teaching staff working in ABCD Head Start agencies and receiving services through Child Care Choices of Boston. ABCD Head Start and Child Care Choices—the Boston Resource and Referral Association for child care providers—recruited early childhood educators working in child care centers and family child care homes. In addition, leaders representing First Steps of Boston—the Boston Workforce Development program that serves families transitioning from welfare to work—recruited interns working in Boston-area early childhood environments to participate in the tiered professional development opportunities. Project leaders undertook these activities with the goal of recruiting a total of 640 participants in the PEECE project over the two-year grant period and 332 individuals during the first year of the project.

In the first year of the project, PEECE supported education and professional development courses for 459 individuals—exceeding the year one target. The individuals who took the courses represented all tiers except tier 1. Leaders chose to focus initial effort on teachers and assistants who had the ability to leverage improvements in the quality of early childhood classrooms and planned to provide workshops to parent volunteers who work in the classrooms in the second year of the project. Moreover, while the project leaders focused their efforts on tiers 2 through 5 during the first year of the project, the project nonetheless supported 2 graduate courses during the first year.

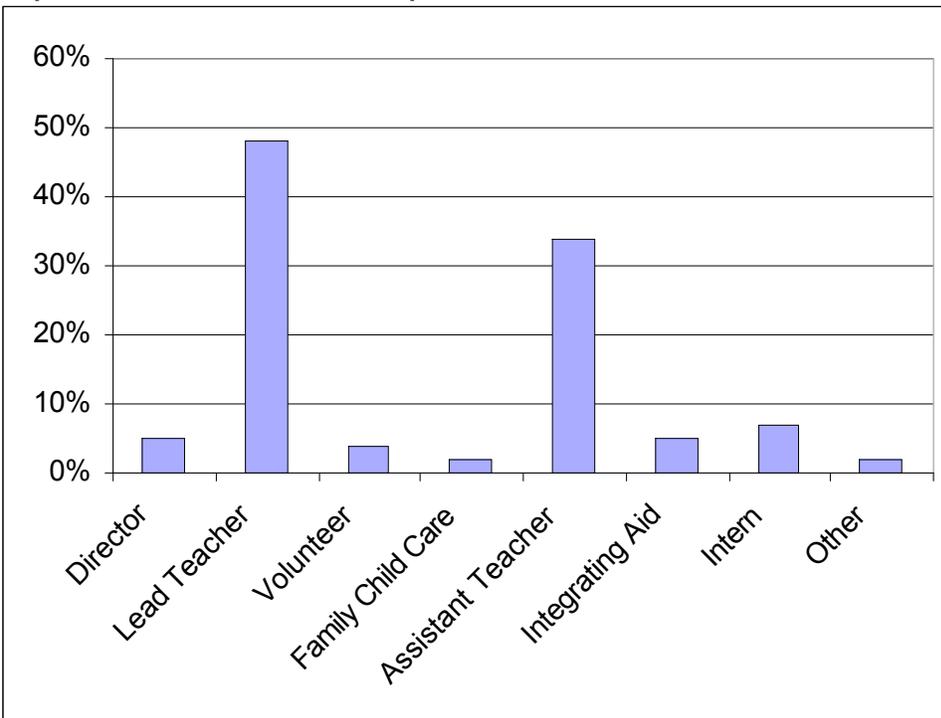
Analysis of survey data revealed that the characteristics of PEECE participants reflect the diverse educational needs and unique educational challenges of early childhood educators serving low-income children. Graphic 2 describes the self-reported educational attainment of early care and education staff participating in the first year of the PEECE project.

**Graphic 2. Educational Attainment of Respondents**



Analyses also revealed that the majority of PEECE participants are lead teachers and many are assistant teachers. Graphic 3 presents the roles of PEECE participants.

**Graphic 3. Roles of PEECE Participants**



## PEECE Participants in Higher Tiers Report Higher Results on Surveys of Research-Based School Readiness Practices

During the first year of the project, evaluators surveyed PEECE participants to learn about the research-based approaches and assessments early childhood educators in Boston use and to assess differences across tiers. A total of 413 individuals responded to questions about their knowledge, attitudes, and behaviors with regard to early childhood practices and assessments. Of those who completed the survey 271 individuals were in one of the six tiers seeking a new credential or degree and an additional 135 individuals were taking courses but were not actively seeking a new credential or degree.

Evaluators analyzed survey data and developed composites for the following: assessment/curriculum planning, classroom quality/rich learning environment; teacher beliefs about learning and teaching, teacher beliefs about recognition of class diversity, child initiated activities, beliefs about literacy development, and parental involvement activities. Table 2 below presents the average scores and standard deviation for these composites.

**Table 2. PEECE Teacher Survey Composite Descriptive Statistics**

<b>Composite</b>	<b>'n'</b>	<b>Min/Max</b>	<b>Mean</b>	<b>SD</b>
Assessment/Curriculum Planning Composite (Total of 3 items; Range 0-6)	322	0.00/6.00	5.25	1.49
Classroom Quality/Rich Learning Environment Composite (Total of 20 items; Range 0-78)	167	20.0/78.0	69.41	8.44
Teacher Beliefs About Learning and Teaching Composite (Total of 17 items; Range 0-67)	282	27.0/67.0	48.75	8.12
Teacher Beliefs About Recognition of Class Diversity Composite (Total of 5 items; Range 0-20)	375	3.0/20.0	17.17	2.55
Child Initiated Activities Composite (Total of 6 items; Range 0-24)	354	7.0/24.0	19.66	3.06
Beliefs About Literacy Development Composite (Total of 4 items; Range 0-16)	356	.00/16.0	8.71	3.61
Parental Involvement Composite (Total of 7 items; Range 0-24)	294	4.0/24.0	20.61	3.36

Analyses of survey data revealed that the individuals in tier 6 report higher scores than individuals in tier 2 (See Table 3 below).

**Table 3. PEECE Teacher Survey Composite Descriptive Statistics by Tier**

<b>Composite</b>	<b>'n'</b>	<b>Min/Max</b>	<b>Mean</b>	<b>SD</b>
<b>Assessment/Curriculum Planning Composite (Total of 3 items; Range 0-6)</b>				
<i>Tier II</i>	14	.00/6.0	2.43	2.85
<i>Tier III</i>	60	.00/6.0	5.42	1.31
<i>Tier IV</i>	54	.00/6.0	5.33	1.17
<i>Tier V</i>	55	.00/6.0	5.62	1.08
<i>Tier VI</i>	20	4.0/6.0	5.65	.67
<i>Tier VII</i>	2	5.0/6.0	5.50	.71
<b>Classroom Quality/Rich Learning Environment Composite (Total of 20 items; Range 0-78)</b>				
<i>Tier II</i>	3	34.0/77.0	50.67	23.07
<i>Tier III</i>	36	53.0/78.0	71.14	5.58
<i>Tier IV</i>	32	62.00/76.0	68.59	4.64
<i>Tier V</i>	32	66.0/78.0	72.41	3.74
<i>Tier VI</i>	7	41.0/75.0	67.86	12.21
<i>Tier VII</i>	1	54.0/54.0	54.0	0
<b>Teacher Beliefs About Learning and Teaching Composite (Total of 17 items; Range 0-67)</b>				
<i>Tier II</i>	25	34.0/56.0	41.24	5.45
<i>Tier III</i>	49	33.0/64.0	49.0	8.26
<i>Tier IV</i>	41	29.0/63.0	45.78	6.72
<i>Tier V</i>	50	27.0/65.0	49.70	8.27
<i>Tier VI</i>	17	45.0/67.0	52.53	5.73
<i>Tier VII</i>	2	45.0/61.0	53.0	11.31
<b>Teacher Beliefs About Recognition of Class Diversity Composite (Total of 5 items; Range 0-20)</b>				
<i>Tier II</i>	29	11.0/19.0	14.97	2.11
<i>Tier III</i>	68	11.0/20.0	17.75	2.43
<i>Tier IV</i>	62	12.0/20.0	16.71	2.06
<i>Tier V</i>	60	3.0/20.0	17.13	3.02
<i>Tier VI</i>	20	12.0/20.0	17.95	2.33
<i>Tier VII</i>	3	15.0/20.0	18.33	2.89
<b>Child Initiated Activities Composite (Total of 6 items; Range 0-24)</b>				
<i>Tier II</i>	28	12.0/23.0	16.46	3.02
<i>Tier III</i>	64	13.0/24.0	19.55	3.23
<i>Tier IV</i>	56	14.0/24.0	19.20	2.38
<i>Tier V</i>	58	11.0/24.0	20.09	2.55
<i>Tier VI</i>	19	15.0/24.0	21.11	2.47
<i>Tier VII</i>	2	17.0/24.0	20.50	4.95
<b>Beliefs About Literacy Development Composite (Total of 4 items; Range 0-16)</b>				
<i>Tier II</i>	28	1.0/11.0	5.75	2.81
<i>Tier III</i>	66	.00/16.0	8.73	3.98
<i>Tier IV</i>	54	.00/16.00	7.26	3.52

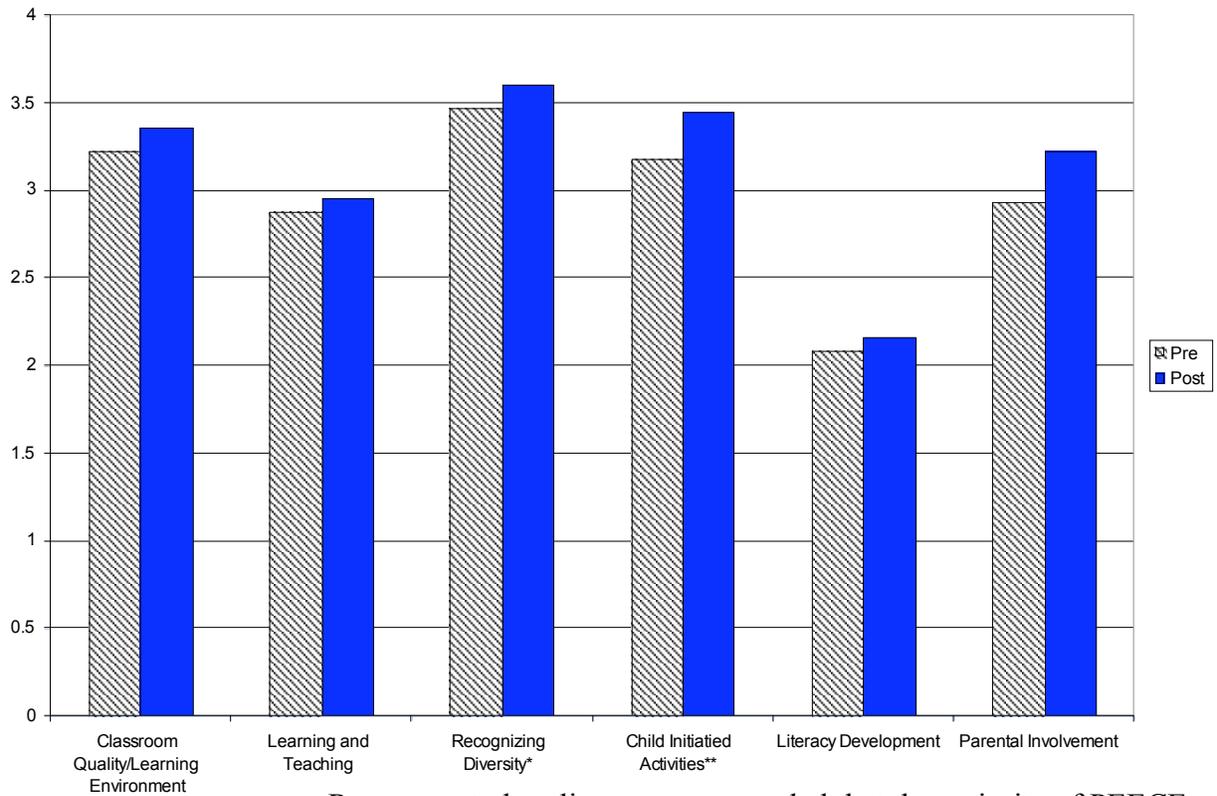
<b>Composite</b>	<b>'n'</b>	<b>Min/Max</b>	<b>Mean</b>	<b>SD</b>
<i>Tier V</i>	62	1.0/16.0	9.44	3.55
<i>Tier VI</i>	21	5.0/16.0	9.71	2.76
<i>Tier VII</i>	2	9.0/12.0	10.50	2.12
<b>Parental Involvement Composite (Total of 7 items; Range 0-24)</b>				
<i>Tier II</i>	7	4.0/24.0	16.57	7.25
<i>Tier III</i>	61	13.0/24.0	21.39	2.67
<i>Tier IV</i>	43	12.0/24.0	20.02	3.14
<i>Tier V</i>	52	13.0/24.0	20.96	2.83
<i>Tier VI</i>	18	16.0/24.0	21.06	2.51
<i>Tier VII</i>	1	21.0/21.0	21.0	0

The evaluators found that early childhood educators who are seeking child development associate's degrees, early childhood certificates, or associates degrees report similar practices and beliefs. That is, while there appear to be slight differences in scores, differences are not statistically significant. For example, early childhood educators were asked about their beliefs and practices regarding early childhood assessments and curriculum. On an assessment/curriculum sub-scale with a range from 0 to 6, the average score reported by individuals in tier 2 was 2.43 (SD = 2.85) and the average score reported by individuals in tier 6 was 5.65 (SD = .67). By contrast, the average reported by individuals in tier 3 was 5.42 (SD = 1.31), in tier 4 was 5.33 (SD = 1.17), and in tier 5 was 5.62 (SD = 1.08). Similar differences were reported on language and literacy sub-scales of the survey instrument. Specifically, on this subscale with a range from 0 to 16, the average score for individuals in tier 2 was 5.75 (SD=2.81) and the average for individuals in tier 6 was 9.71 (SD=2.76). The scores of individuals in tiers 3, 4, and 5 were 8.73 (SD=3.98; 7.26 (SD=3.52), and 9.44 (SD=3.55) respectively.

### **PEECE Participants Report More Frequent Use of Research-Based Approaches and Age-Appropriate Assessments**

To determine whether PEECE participants' attitudes, knowledge, and behaviors changed during the first year of the project, evaluators analyzed data from a small sub-sample of PEECE participants (n=33) who had moved up a tier and had completed a follow up survey in August 2005. Preliminary analyses of survey data revealed that even though the period of time between the beginning of the project and the follow-up survey was short, participants reported some improvement in their knowledge of research based school readiness practices on the follow up surveys. Specifically, the sample of teachers reported statistically significant improvements on the beliefs of class diversity sub-scale and beliefs about child-initiated activities ( $p < .05$ ). Graphic 4 below shows the average scores on the composites—with a range from 0 to 4—from the pre and post surveys.

**Graphic 4. Pre and Post Survey Results**



Responses to baseline surveys revealed that the majority of PEECE participants (90%) answering this question used assessments on a regular basis. Survey respondents were asked who conducted assessments and screenings and the vast majority reported that lead teachers complete developmental screenings. See Table 4 below.

**Table 4. Developmental Screenings**

<b>Who conducts developmental screenings...</b>	<b>Percent Yes (n=381)</b>
<i>Lead Teacher</i>	307 (80.6%)
<i>Assistant Teacher</i>	180 (47.2%)
<i>Director</i>	95 (24.9%)
<i>HS Family Service Worker</i>	44 (11.5%)
<i>Social Service Worker</i>	53 (13.9%)
<i>Disabilities Specialists</i>	144 (37.8%)
<i>Health Staff</i>	90 (23.6%)
<i>Education Supervisor</i>	193 (50.7%)

In addition to collecting survey data, the project assessed the quality of early childhood environments, through supporting rigorous observations of a sample of early childhood settings in which PEECE participants taught. Specifically, 55 classrooms were observed using the Early Childhood Environmental Rating Scale-Revised Edition (ECERS-R). This psychometrically valid and reliable instrument provides data about the quality of early childhood settings. In addition, 3 observations were conducted of family child care homes using the Family Day Care Environmental Rating Scale (FDCRS). Analyses of baseline data revealed that the early childhood settings in which the PEECE participants teach were high-quality, with an average rating of above 6 for both the ECERS-R and the FDCRS and a range of 4.31 to 6.98 on the ECERS-R and over 6 for all three FDCRS observations.

The independent evaluators also observed a target sample of classrooms using the Early Language and Literacy Environmental Classroom Observation Tool (ELLCO). These observations revealed that the overall quality of the classrooms was high, but improvements could be made in the areas of language and literacy development. Specifically, the majority of the classrooms observed scored higher than the average on the Literacy Environment Checklist, yet each teacher observed had particular areas that could be targeted for improvement. For example, one teacher in tier 6 whose classroom was high overall, nonetheless scored a 1 (the lowest possible rating) on Oral Language Facilitation. However, most of the other teachers in her same tier scored a 4 or 5 (with 5 as the highest possible rating). This teachers' continued involvement in PEECE could help her to improve in this area as she becomes more comfortable speaking in class and writing in her college courses. Another area with room for improvement on the ELLCO was the Approach to Curriculum Integration, as average scores were less than exemplary. Nonetheless, all of the classrooms that were observed had separate book areas with soft materials and a wide variety of books. The ELLCO revealed that while teachers understand what a classroom should look like to promote appropriate development and early childhood practices, improvements could be made as teachers learn more through the PEECE courses about facilitating children's active engagement in language and literacy development.

### **Steps Taken to Improve the Infrastructure for Providing High-Quality Tiered Professional Development**

During the first year of the PEECE project, leaders took steps to create an infrastructure to sustain high-quality tiered professional development. Evaluators collected qualitative data to assess actions taken to improve the infrastructure for sustained coordinated early childhood professional development opportunities. The steps taken during the first year of the project are described below.

- ◆ Project leaders met regularly to share information about high-quality professional development opportunities available to the community. Through these regular meetings, leaders learned about new state funds that were available to early childhood educators and shared research about early literacy and professional development issues. Leaders reported that they plan to continue these meetings as they have seen the benefit of regularly sharing information about resources and new research.
- ◆ Urban College of Boston created new courses to address the language and literacy needs of its students, to ensure students had opportunities to take general education courses that

could count toward bachelor's degrees, and to add specific supports such as offering courses at alternate hours that could assist students in their pursuit of early childhood credentials and degrees.

- ◆ Lesley University worked with Urban College of Boston to ensure that students enrolled in the bachelors program could take courses required for their bachelor's degrees through a lower-cost community college.
- ◆ ABCD Boston created new professional development opportunities for early childhood educators to address specific areas of weakness. For example, as leaders learned that language and literacy are areas where early childhood educators need additional support, they supported literacy coaches. In addition, ABCD supported the development of targeted literacy workshops to provide teachers with opportunities to consider how to integrate research-based literacy approaches into their classrooms.
- ◆ Project leaders shared the early data about their project approach and baseline data to the broader community through presentations at numerous conferences and events.

### **Conclusion: Potential for Informing Research, Policy, and Programs**

While data are still being collected and analyzed, researchers believe that the quantitative data will provide useful information for researchers, policymakers and programs. Upon completion of the data collection and analysis, researchers will provide answers to the following questions:

- Is there a relationship between participation in a tiered professional development program and changes in teacher attitudes, knowledge and behaviors?
- Is there a relationship between participation in a tiered professional development program and changes in classroom quality as measured by the ECERS-R and the ELLCO?

The answers to these questions will provide useful information to others considering the development and implementation of a tiered and integrated professional development system.

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