

Guidance to ECEPD Grantees Clarifying Information Submitted in FY 2007 Performance Reports

Grantees should include the following information in their evaluation reports to assist the program office in determining the rigor of local evaluations and, for rigorous evaluations, what can be said about the impact of ECEPD grantee projects. Grantees should submit this report along with their Annual Performance Report (APR). The evaluation report needs to include the following detailed information regarding the intervention and the evaluation design, implementation, and findings. If a grantee's evaluation is not complete, the grantee should provide as much information as possible on the following items with each APR.

Early Education Professional Development (EEPD)

Intervention

- Describe the professional development (PD) intervention as implemented including the setting, content, and delivery (i.e., curriculum, provider, duration, intensity, and implementation fidelity).

The Early Education Professional Development Project (EEPD) served Rochester, New York, an area where 1) a very high percentage of children live in poverty and have many risk factors 2) most children attend early education programs out of the home and 3) professional development for early educators was fragmented and lacked intensity. These factors created a significant need for training and support for early educators. Offerings included: intensive and sustained mentoring; courses on developmental practices, observing and assessing young children, understanding differences among families and their cultures, working with behaviorally challenging children, early language and literacy, and identifying and working with children who may have been abused. The Higher Education Initiative included: convening a Higher Ed Task Force, developing Infant and Toddler Demonstration Sites and launching an Early Education Professional Development Institute.

Treatment ECE's received approximately 5 hours per month of one-on-one mentoring services including goal setting, use of evaluation measures and results, modeling appropriate strategies to support social-emotional development, literacy and numeracy; observing adult-child interactions and providing feedback; helping educators develop action plans for working with children needing extra support; and assisting early educators to make links to appropriate services for children and their families.

During the entire grant period a total of 1,573 children attended the experimental preschool classrooms over 3 years. At the same time 109 infant/toddler classrooms were included.

Evaluation design

- Present the final evaluation questions.

The final evaluation questions were unchanged from our original proposed evaluation and are as follows (note: specific outcomes of all indicators are reported in full within APR):

- **ECEs will participate in an increased number of hours of high quality professional development (statutory indicator 1)**
- **ECEs who serve low-income children will participate in greater and increasing number of hours in high quality professional development (statutory indicator 2).**
- **ECEs who participate in EL I, EL II or WWCC will show mastery of the content knowledge (statutory indicator 3)**
- **Mentors will demonstrate application of the ITERS, ECERS-R and ELLCO standards (statutory indicator 4)**
- **Classrooms staffed by EEPD mentoring participants will show improved early education (statutory indicator 4)**
- **Classrooms staffed by EEPD early literacy and/or mentoring participants will show improved early education and literacy learning environments (statutory indicator 4)**
- **Increasing numbers of children from classrooms of EEPD trained teachers in early literacy and/or mentoring will demonstrate readiness for kindergarten in socio-emotional competencies, motor skills, language and literacy skills as measured by the Teacher-Child Rating Scale (T-CRS), Child Observation Record (COR), Peabody Picture Vocabulary Test (PPVT) and the Test of Early Reading Ability (TERA) compared with children from comparable classrooms of non-trained teachers (statutory indicator 5)**
- **Children from classrooms of EEPD trained teachers in early literacy and/or mentoring will outperform comparable peers at the end of the kindergarten year in socio-emotional adaptation to the school environment, motor, cognitive and language skills as measured by the COR and T-CRS completed by the kindergarten teacher blind to EEPD condition (statutory indicator 5)**

- Describe the evaluation design, indicating whether it is an experimental, quasi-experimental, or other study. For experimental and quasi-experimental designs, describe how treatment and control/comparison groups were assigned or matched. For “other studies,” explain the rationale i.e. why an experimental or quasi-experimental study was not conducted and describe the details of the evaluation design.

Mentoring recipients (mentees) were recruited from early care and education center-based programs serving infants, toddlers and preschool children living in high poverty. Mentors were matched with mentees based on geographic location, scheduling constraints, personality and cultural/linguistic background. For the preschool classrooms, a comparison group was recruited from the same locale of center-based programs. All comparison and experimental classrooms were assessed pre/post in years 2 and 3. In year 1, only a spring assessment was conducted due to delays in project start-up (e.g. IRB, recruitment barriers). Child assessments followed a pre/post evaluation schedule.

The originally planned random assignment evaluation model reduced participation interest on the part of preschool mentees and was impossible to maintain. Due to initial recruitment difficulties, ECE’s were assigned to receive mentoring service and a comparison group for preschool classrooms was then recruited; a quasi-experimental design with a matched comparison group. Both experimental and comparison groups had high rates of turnover, which contributed to high attrition rates. The high attrition rate of mentees required management and documentation by the supervisory mentor and evaluation teams and the development and monitoring of database tracking systems.

- For experimental and quasi-experimental evaluations describe services received (if any) by the control/comparison group including the setting, content, and delivery of services. If other designs were implemented in lieu of an experimental and quasi-experimental evaluation, explain what was done.

The comparison group consented to participate in the evaluation and did not receive any direct services.

- Describe the size of the sampling frame, and how the study’s sample was selected. Provide the number of centers, classrooms, teachers, and/or children selected for each group in the study.

The entire randomly selected sample of measured classrooms included those in the original sample (n=60) of classrooms assessed in April 2005 plus others that were randomly selected and added during the last two years of the grant period in order to make up for the high rate of classroom attrition. This sample, with an unequal number of classrooms and sometimes including different classrooms, at different points of time, was not ideal for our analysis. However, due to the high rate of mentee/classroom attrition in the project, it was considered the least objectionable of all other possibilities. The originally planned number of prekindergarten students to be included in the evaluation (n=150) was lower than anticipated due to less parent consent than anticipated as well as child attrition over the years.

- Describe all teacher and student outcome measures used in the study (GPRA and non-GPRA), including evidence that the instruments used are reliable and valid.

This project used well-established reliable and valid measures: ITERS-R, ECERS-R, ELLCO, COR, PPVT, TERA, and T-CRS. All measures used are reliable and valid. Teachers, testers and classroom observers were trained for proper use of the instruments and to meet requirements for acceptable levels of inter-rater reliability. Additionally, a mentor/mentee log was used to track identification and acquisition of goals as well as other supervisory mechanisms such as hours of mentoring.

Evaluation implementation

- For experimental and quasi-experimental evaluations, compare the characteristics between the treatment and control/comparison groups to show that there were no systematic differences at baseline. If there were systematic differences, describe those differences and how they were addressed in the analysis.

All ECE's, both treatment and comparison groups, were recruited from early care and education center-based programs serving infants, toddlers and preschool children living in high poverty with no general differences in sample characteristics overall. The internal validity of the evaluation of the preschool classrooms was limited due to the recruitment difficulties of ECE's and the inability to select a randomized control group. Outcomes of both experimental and comparison preschool classrooms were likely affected by other factors such as the educational experiences of individual educators, the work environment of the centers and children's experiences outside of the classroom.

- Discuss the timing and procedures used for data collection. For experimental and quasi-experimental evaluations, discuss whether the data collection for the treatment and control/comparison groups used the same procedures and was conducted at the same (relative) times.

All comparison and experimental classrooms were assessed pre/post in years 2 and 3. In year 1, only a spring assessment was conducted due to delays in project start-up (e.g. IRB, recruitment barriers). Child assessments followed a pre/post evaluation schedule.

- Provide attrition rates (percentage of teachers and children who participated in the pre-tests but not post-tests) and response rates (the percentage of teachers and children for whom there are data for each instrument).

Fifty-four percent of the original preschool experimental classrooms/ECE's ended participation by the spring of the project's 2nd year. However, by comparison, only forty percent of the original comparison classrooms left the program by the spring of the 2nd year. There was a lower attrition rate for the infant/toddler classrooms. Only 36% of these

classrooms ended participation by the spring of the 2nd year. In year three, 23% of preschool children were assessed pre- but not post- due to attrition.

- Describe how the data were analyzed for each outcome. Be specific about the statistical techniques used. For regression analyses, describe the specified model including covariates. For hierarchical linear models (HLM) also identify the levels. Provide the type of statistical test used to determine significance, and describe how effect sizes were calculated.

See below in evaluation findings tables.

- Describe any problems in implementing the evaluation design and lessons learned and how they were addressed.

As described above, the original random assignment evaluation design was unable to be completed due to considerable recruitment issues as well as ECE's ability to cease participation (as per IRB requirement). In general, the turnover rate of ECE's in addition to child attrition had significant affect on the evaluation and direct services, as well as causing the need for considerable tracking efforts and database management systems to monitor these changes. Programmatically, these factors had an impact on services to ECE's. One lesson learned was with regard to overall communications with program directors. More emphasis on the director as an integral component to the work with individual mentees was needed during all phases of the grant period. Our original intent was to emphasize relationships with individual mentees and keep directors informed. In many respects, implementation may have been improved with director involvement on a deeper level. In terms of the evaluation design, directors may have helped with overall recruitment and support of mentees' understanding of the value of the random assignment evaluation design and their important role in its implementation.

Evaluation findings

- For each outcome measure, present statistics including, but not limited to:
 - Means (by treatment status), indicate if they were regression-adjusted,
 - Standard deviations (by treatment status),
 - Sample size (by treatment status),
 - Statistical significance (e.g., p-value), and
 - Effect size estimates (i.e., the magnitude of impact).

Evaluation Findings for Each Outcome Measure

This section of the report contains sample sizes, means, standard deviations, effect sizes, and significance tests for each measure, comparing the treatment and comparison groups of classrooms in 2006-07.

ECERS-R

Table A-1 ECERS-R 2006-07 Matching Pre and Post Scores

2006-07 EEPD ECERS-R Results									
Includes Only Observations with Complete Data at Time1 and Time2									
	Experimental Group ¹			Comparison Group			Group Differences E-C		
	n	mean	std dev	n	mean	std dev	diff E-C	effect size= diff./std dev	t value
Time1									
Space and Furnishings	11	5.8	0.8	4	6.2	0.6	-0.4	-0.5	-0.83
Personal Care Routines	11	5.9	1.1	4	6.3	1.0	-0.4	-0.4	-0.63
Language and Reasoning	11	5.5	0.8	4	6.3	1.1	-0.8	-0.9	-1.61
Activities	11	5.1	1.1	4	6.0	0.7	-0.9	-0.9	-1.56
Interaction	11	6.5	1.1	4	7.0	0.0	-0.5	-0.5	-0.89
Program Structure	11	5.9	1.1	4	6.6	0.8	-0.7	-0.7	-1.18
Parents and Staff	11	6.7	0.6	4	6.5	0.6	0.1	0.3	+0.39
Total	11	5.9	0.5	4	6.4	0.4	-0.5	-1.0	-1.95
Time2									
Space and Furnishings	11	5.4	0.9	4	5.8	1.2	-0.4	-0.4	-0.69
Personal Care Routines	11	5.1	1.6	4	5.6	1.0	-0.5	-0.3	-0.61
Language and Reasoning	11	6.0	0.8	4	6.4	0.8	-0.4	-0.5	-0.82
Activities	11	5.3	1.0	4	5.0	1.2	0.4	0.3	+0.57
Interaction	11	6.5	1.5	4	5.9	0.8	0.6	0.4	+0.69
Program Structure	11	6.0	1.2	4	6.3	0.7	-0.3	-0.3	-0.48
Parents and Staff	11	6.4	0.8	4	6.5	0.9	-0.1	-0.1	-0.14
Total	11	5.8	0.8	4	5.9	0.6	-0.1	-0.1	-0.25
Change = Time2 - Time1									
Space and Furnishings	11	-0.4	1.1	4	-0.4	0.9	0.0	0.0	+0.05
Personal Care Routines	11	-0.8	1.6	4	-0.6	1.9	-0.1	-0.1	-0.13
Language and Reasoning	11	0.5	1.1	4	0.1	1.5	0.4	0.3	+0.58
Activities	11	0.2	1.1	4	-1.1	1.6	1.3	1.0	+1.77
Interaction	11	-0.1	0.6	4	-1.1	0.8	1.0	1.5	+2.74²
Program Structure	11	0.0	1.6	4	-0.4	0.3	0.4	0.3	+0.49
Parents and Staff	11	-0.3	0.9	4	-0.1	0.5	-0.2	-0.2	-0.39
Total	11	-0.1	0.6	4	-0.5	0.8	0.4	0.6	+1.00
Notes: ¹ Experimental classrooms include only those where 9 or more months of mentoring occurred between 2/1/05 and 6/30/07									
² Signifies that the t-Test on this difference was significant at Pr(t) <= .05.									

Table A-2 ECERS-R 2006-07 All Observations

2006-07 EEPD ECERS-R Results									
All Observations									
	Experimental Group ¹			Comparison Group			Group Differences E-C		
	n	mean	std dev	n	mean	std dev	diff E-C	effect size= diff./std dev	t value
Time1									
Space and Furnishings	12	5.8	0.7	5	5.8	1.0	0.0	0.0	+0.10
Personal Care Routines	12	5.8	1.0	5	5.7	1.5	0.1	0.1	+0.22
Language and Reasoning	12	5.4	0.7	5	5.8	1.4	-0.3	-0.4	-0.60
Activities	12	5.2	1.1	5	5.5	1.4	-0.3	-0.3	-0.48
Interaction	12	6.5	1.0	5	6.6	1.0	-0.1	-0.1	-0.11
Program Structure	12	6.0	1.0	5	6.1	1.3	-0.1	-0.1	-0.17
Parents and Staff	12	6.5	0.9	5	6.6	0.5	-0.1	-0.1	-0.29
Total	12	5.9	0.4	5	6.0	1.0	-0.1	-0.2	-0.43
Time2									
Space and Furnishings	20	5.5	1.0	5	5.8	1.0	-0.2	-0.3	-0.43
Personal Care Routines	20	5.3	1.5	5	5.6	0.8	-0.3	-0.2	-0.38
Language and Reasoning	20	5.8	1.1	5	6.3	0.7	-0.6	-0.5	-1.09
Activities	20	5.3	1.0	5	4.9	1.0	0.4	0.4	+0.79
Interaction	20	6.1	1.6	5	6.1	0.9	0.0	0.0	+0.03
Program Structure	20	6.1	1.0	5	6.1	0.7	0.0	0.0	+0.02
Parents and Staff	20	6.2	0.9	5	6.4	0.8	-0.1	-0.2	-0.31
Total	20	5.8	0.8	5	5.9	0.6	-0.1	-0.1	-0.29
Change² = Time2 - Time1									
Space and Furnishings	11	-0.4	1.1	4	-0.4	0.9	0.0	0.0	+0.05
Personal Care Routines	11	-0.8	1.6	4	-0.6	1.9	-0.1	-0.1	-0.13
Language and Reasoning	11	0.5	1.1	4	0.1	1.5	0.4	0.3	0.58
Activities	11	0.2	1.1	4	-1.1	1.6	1.3	1.0	+1.77
Interaction	11	-0.1	0.6	4	-1.1	0.8	1.0	1.5	+2.74³
Program Structure	11	0.0	1.6	4	-0.4	0.3	0.4	0.3	+0.49
Parents and Staff	11	-0.3	0.9	4	-0.1	0.5	-0.2	-0.2	-0.39
Total	11	-0.1	0.6	4	-0.5	0.8	0.4	0.6	+1.00
Notes: ¹ Experimental classrooms include only those where 9 or more months of mentoring occurred between 2/1/05 and 6/30/07									
² Changes are calculated from only those classes where matching pre and post scores exist									
³ Signifies that the t-Test on this difference was significant at Pr(t) <=.05.									

ELLCO

The calculations for this measure were performed as described in the ELLCO Technical Appendix in the User's Guide to the Early Language & Literacy Classroom Observation Toolkit (Research Edition). Authors: Miriam W. Smith & David K. Dickinson, Paul H. Brookes Publishing Co., Copyright 2002.

Additional ELLCO notes:

- 1) The **Literacy Environment Checklist**, the **Classroom Observation**, and the **Literacy Activities Rating Scale** should be interpreted as 3 separate measures, according to the authors. There is no grand total ELLCO score calculated.
- 2) The **Literacy Environment Checklist** has a possible range of 1 to 40 and is an integer.
- 3) The **Classroom Observation** measure is scored as mean values by item, based on a possible range of 1 to 5 on each item. For this measure, one item, Presence and use of Technology (item 3), was problematic, and was excluded by the authors from all summaries and analyses. The possible range of values for this measure is 1 to 5.
- 4) For the **Literacy Activities Rating Scale**, 2 items were considered problematic by the authors from all summaries and analyses. These items were Item 4 ("Did you observe an adult engaged in one-to-one book reading or small-group book reading") and item 5 ("Is time set aside when children are asked to look at books alone or with a friend?"). The possible range of values for this measure is 0 to 13 and is an integer.

Table A-3 ELLCO 2006-07 Matching Pre and Post Scores

2006-07 EEPD ELLCO Results									
Includes Only Observations with Complete Data at Time1 and Time2									
	Experimental Group ¹			Comparison Group			Group Differences E-C		
	n	mean	std dev	n	mean	std dev	mean	effect size= diff./std dev	t value ²
Time1									
Books Subtotal	9	17.0	3.2	6	16.3	2.2	0.7	0.2	+0.44
Writing Subtotal	9	13.6	3.7	6	13.7	4.1	-0.1	0.0	-0.05
Literacy Environment Checklist Total	9	30.6	6.5	6	30.0	4.8	0.6	0.1	+0.18
General Classroom Environment Subtotal	9	3.7	0.7	6	3.9	1.1	-0.2	-0.2	-0.47
Language, Literacy, and Curriculum Subtotal	9	3.5	0.8	6	3.8	0.8	-0.3	-0.4	-0.59
Classroom Observation Total	9	3.6	0.7	6	3.9	0.9	-0.2	-0.5	-0.56
Full-Group Book Reading Subtotal	9	2.9	1.3	6	3.3	1.4	-0.4	-0.3	-0.64
Writing Subscale Literacy Activities Subtotal	9	2.6	1.7	6	1.8	1.6	0.7	0.5	+0.81
Literacy Activities Rating Scale Total Score	9	5.4	2.0	6	5.2	2.8	0.3	0.1	+0.23
Time2									
Books Subtotal	9	18.4	2.6	6	17.2	2.6	1.3	0.5	+0.94
Writing Subtotal	9	16.7	3.0	6	14.8	4.2	1.8	0.6	+1.00
Literacy Environment Checklist Total	9	35.1	5.0	6	32.0	6.3	3.1	0.6	+1.06
General Classroom Environment Subtotal	9	4.1	1.0	6	4.2	0.7	-0.1	-0.1	-0.15
Language, Literacy, and Curriculum Subtotal	9	3.9	0.8	6	3.9	0.6	0.0	0.0	+0.23
Classroom Observation Total	9	4.0	0.9	6	4.0	0.6	0.0	0.0	+0.03
Full-Group Book Reading Subtotal	9	3.8	1.0	6	5.0	1.5	-1.2	-1.2	-1.89
Writing Subscale Literacy Activities Subtotal	9	3.1	1.9	6	2.7	1.5	0.4	0.2	+0.48
Literacy Activities Rating Scale Total Score	9	6.9	1.9	6	7.7	2.3	-0.8	-0.4	-0.72
Change = Time2 - Time1									
Books Subtotal	9	1.4	2.5	6	0.8	1.7	0.6	0.3	+0.53
Writing Subtotal	9	3.1	3.7	6	1.2	7.0	1.9	0.4	+0.71
Literacy Environment Checklist Total	9	4.6	5.6	6	2.0	8.2	2.6	0.4	+0.72
General Classroom Environment Subtotal	9	0.4	0.9	6	0.3	1.5	0.2	0.1	+0.25
Language, Literacy, and Curriculum Subtotal	9	0.4	1.1	6	0.1	1.1	0.3	0.3	+0.60
Classroom Observation Total	9	0.4	1.0	6	0.2	1.3	0.3	0.2	+0.43
Full-Group Book Reading Subtotal	9	0.9	2.1	6	1.7	2.4	-0.8	-0.4	-0.65
Writing Subscale Literacy Activities Subtotal	9	0.6	2.4	6	0.8	0.8	-0.3	-0.1	-0.27
Literacy Activities Rating Scale Total Score	9	1.4	2.9	6	2.5	2.9	-1.1	-0.4	-0.69

Notes: ¹Experimental classrooms include only those where 9 or more months of mentoring occurred between 2/1/05 and 6/30/07
² Signifies that none of the t-Tests on these differences were significant at Pr(t) <= .05.

Table A-4 ELLCO 2006-07 All Observations

EEPD 2005-06 ELLCO Results									
All Observations									
	Experimental Group ¹			Comparison Group			Group Differences E-C		
	n	mean	std dev	n	mean	std dev	mean	effect size= diff./std dev	t value
Time1									
Books Subtotal	11	16.9	2.9	6	16.3	2.2	0.6	0.2	+0.43
Writing Subtotal	11	13.0	3.9	6	13.7	4.1	-0.7	-0.2	-0.33
Literacy Environment Checklist Total	11	29.9	6.3	6	30.0	4.8	-0.1	0.0	-0.03
General Classroom Environment Subtotal	11	3.8	0.7	6	3.9	1.1	-0.2	-0.1	-0.35
Language, Literacy, and Curriculum Subtotal	11	3.6	0.8	6	3.8	0.8	-0.2	-0.2	-0.48
Classroom Observation Total	11	3.7	0.7	6	3.9	0.9	-0.2	-0.3	-0.43
Full-Group Book Reading Subtotal	11	2.8	1.2	6	3.3	1.4	-0.5	-0.4	-0.82
Writing Subscale Literacy Activities Subtotal	11	2.6	1.6	6	1.8	1.6	0.8	0.5	+0.98
Literacy Activities Rating Scale Total Score	11	5.5	1.9	6	5.2	2.8	0.3	0.1	+0.25
Time2									
Books Subtotal	16	18.3	2.3	7	17.6	2.6	0.7	0.3	+0.64
Writing Subtotal	16	15.6	3.2	7	15.7	4.5	-0.1	0.0	-0.05
Literacy Environment Checklist Total	16	33.9	4.6	7	33.3	6.7	0.6	0.1	0.24
General Classroom Environment Subtotal	16	4.0	0.8	7	4.3	0.7	-0.3	-0.4	-0.98
Language, Literacy, and Curriculum Subtotal	16	3.9	0.6	7	4.0	0.6	0.0	-0.2	-0.13
Classroom Observation Total	16	4.0	0.7	7	4.1	0.7	-0.2	-0.1	-0.60
Full-Group Book Reading Subtotal	16	3.8	0.9	7	5.1	1.5	-1.3	-1.2	-2.67³
Writing Subscale Literacy Activities Subtotal	16	2.5	1.9	7	2.9	1.5	-0.4	-0.2	-0.45
Literacy Activities Rating Scale Total Score	16	6.3	2.0	7	8.0	2.2	-1.7	-0.8	-1.80
Change² = Time2 - Time1									
Books Subtotal	9	1.4	2.5	6	0.8	1.7	0.6	0.3	+0.53
Writing Subtotal	9	3.1	3.7	6	1.2	7.0	1.9	0.4	+0.71
Literacy Environment Checklist Total	9	4.6	5.6	6	2.0	8.2	2.6	0.4	+0.72
General Classroom Environment Subtotal	9	0.4	0.9	6	0.3	1.5	0.2	0.1	+0.25
Language, Literacy, and Curriculum Subtotal	9	0.4	1.1	6	0.1	1.1	0.3	0.3	+0.6
Classroom Observation Total	9	0.4	1.0	6	0.2	1.3	0.3	0.2	+0.43
Full-Group Book Reading Subtotal	9	0.9	2.1	6	1.7	2.4	-0.8	-0.4	-0.65
Writing Subscale Literacy Activities Subtotal	9	0.6	2.4	6	0.8	0.8	-0.3	-0.1	-0.27
Literacy Activities Rating Scale Total Score	9	1.4	2.9	6	2.5	2.9	-1.1	-0.4	-0.69
Notes: ¹ Experimental classrooms include only those where 9 or more months of mentoring occurred between 2/1/05 and 6/30/07									
² Changes are calculated from only those classes where matching pre and post scores exist									
³ Signifies that the t-Test on these differences was significant at Pr(t) <=.05.									

Additional Questions & Answers for 2006-07 ELLCO Results:

- 1) Question: What was the number of teachers whose classrooms were assessed at **post-test** using the Literacy Environment Checklist, Classroom Observation and Literacy Activities Rating Scale (for measure 2.1 in APR reported number with both pre- and post-test scores)?

Answer: A total of 23 teachers were assessed at post-test with ELLCO observations.

- 2) Question: What was the average post-test scores on the Literacy Environment Checklist, Classroom Observation and Literacy Activities Rating Scale regardless of whether or not the teachers had a pre-test (for measure 2.1 in APR reported average for teachers with both pre- and post-test scores)?

Answer:

Mean scores for 23 post-test ELLCO observations in 2006-07	
Scale	Mean
Literacy Environment Checklist	33.7
Classroom Observation	4.0
Literacy Activities Rating Scale	6.8

Re: Number of Teachers with 2006-07 ELLCO Scores

ECEPD Questions 4/25/08:

If the same teachers did not participate in the project in reporting year 2006 and reporting year 2007 please provide the following:

- o **Question #1:** The number of teachers with pre-test and post-test scores on the ELLCO Literacy Checklist in reporting year 2007
- o **Question #2:** The number of teachers whose scores on the ELLCO Literacy Checklist increased from the pre-test to the post-test in reporting year 2007

Answer #1:

Table D-2						
2006-07 EEPD ELLCO Results						
Number of teachers with pre-test and post-test scores on the ELLCO Literacy Checklist in reporting year 2007						
	Experimental Classes			Comparison Classes		
	n	mean	std dev	n	mean	std dev
Time1						
Literacy Environment Checklist Total	9	30.6	6.5	6	30.0	4.8
Time2						
Literacy Environment Checklist Total	9	35.1	5.0	6	32.0	6.3

Answer #2:

Table D-3		
2006-07 EEPD ELLCO Results		
The number of teachers whose scores on the ELLCO Literacy Checklist increased from the pre-test to the post-test in reporting year 2007		
	Experimental Classes	Comparison Classes
Number of teachers who had both pre and post test scores.	9	6
Number of teachers whose scores increased from the pre-test to the post-test	7	4
Percentage of Teachers with Increased Scores	78%	68%

When measured by the ELLCO Literacy Checklist measure in 2006-07, 78% of the treatment classrooms showed pre- to post- increases compared to only 68% for the comparison classrooms.

COR

Table A-5 COR 2006-07 Matching Pre and Post Scores

2006-07 EEPD COR Results									
Includes Only Observations with Complete Data at Time1 and Time2									
	Experimental Group ¹			Comparison Group			Group Differences E-C		
	n	mean	std dev	n	mean	std dev	mean	effect size= diff./std dev	t value
Time1									
COR Initiative & Social	50	2.85	0.88	19	2.78	0.78	0.07	0.08	+0.20
COR Movement & Music	50	3.00	0.62	19	2.79	0.52	0.21	0.35	+1.30
COR Language & Literacy	50	2.46	0.76	19	2.23	0.80	0.23	0.30	+1.10
COR Math & Science	50	2.39	0.78	19	2.17	1.06	0.22	0.25	+0.90
COR Total	50	2.70	0.68	19	2.53	0.72	0.17	0.25	
Time2									
COR Initiative & Social	50	3.67	0.68	19	3.57	0.97	0.10	0.10	+0.40
COR Movement & Music	50	3.77	0.68	19	3.51	0.91	0.26	0.35	+1.28
COR Language & Literacy	50	3.52	0.92	19	3.06	1.07	0.46	0.48	+2.64³
COR Math & Science	50	3.50	0.77	19	2.81	1.38	0.69	0.71	+1.70
COR Total	50	3.62	0.66	19	3.28	1.00	0.34	0.44	+1.46
Changes									
COR Initiative & Social	50	0.82	0.66	19	0.78	0.38	0.03	0.07	+0.20
COR Movement & Music	50	0.77	0.65	19	0.72	0.53	0.05	0.08	+0.30
COR Language & Literacy	50	1.06	0.61	19	0.83	0.56	0.23	0.39	+1.42
COR Math & Science	50	1.12	0.45	19	0.64	0.56	0.47	1.00	+3.65³
COR Total	50	0.92	0.43	19	0.75	0.41	0.17	0.40	+1.48

Notes: ¹ Experimental classrooms include only those where 9 or more months of mentoring occurred between 2/1/05 and 6/30/07
² Signifies that this t-Test difference is significant at Pr(t) <=.05.

Table A-6 COR 2006-07 All Observations

2006-07 EEPD COR Results									
Includes Only Observations with Complete Data at Time1 and Time2									
	Experimental Group ¹			Comparison Group			Group Differences E-C		
	n	mean	std dev	n	mean	std dev	mean	effect size= diff./std dev	t value
Time1									
COR Initiative & Social	50	2.85	0.88	19	2.78	0.78	0.07	0.08	+0.20
COR Movement & Music	50	3.00	0.62	19	2.79	0.52	0.21	0.35	+1.30
COR Language & Literacy	50	2.46	0.76	19	2.23	0.80	0.23	0.30	+1.10
COR Math & Science	50	2.39	0.78	19	2.17	1.06	0.22	0.25	+0.90
COR Total	50	2.70	0.68	19	2.53	0.72	0.17	0.25	
Time2									
COR Initiative & Social	50	3.67	0.68	19	3.57	0.97	0.10	0.10	+0.40
COR Movement & Music	50	3.77	0.68	19	3.51	0.91	0.26	0.35	+1.28
COR Language & Literacy	50	3.52	0.92	19	3.06	1.07	0.46	0.48	+2.64³
COR Math & Science	50	3.50	0.77	19	2.81	1.38	0.69	0.71	+1.70
COR Total	50	3.62	0.66	19	3.28	1.00	0.34	0.44	+1.46
Changes									
COR Initiative & Social	50	0.82	0.66	19	0.78	0.38	0.03	0.07	+0.20
COR Movement & Music	50	0.77	0.65	19	0.72	0.53	0.05	0.08	+0.30
COR Language & Literacy	50	1.06	0.61	19	0.83	0.56	0.23	0.39	+1.42
COR Math & Science	50	1.12	0.45	19	0.64	0.56	0.47	1.00	+3.65³
COR Total	50	0.92	0.43	19	0.75	0.41	0.17	0.40	+1.48

Notes: ¹ Experimental classrooms include only those where 9 or more months of mentoring occurred between 2/1/05 and 6/30/07
² Signifies that this t-Test difference is significant at Pr(t) <=.05.

T-CRS

Table A-7 T-CRS 2006-07 Matching Pre and Post Scores

2006-07 EEPD 2005-06 T-CRS Results									
Includes Only Observations with Complete Data at Time1 and Time2									
	Experimental Group ¹			Comparison Group			Group Differences E-C		
	n	mean	std dev	n	mean	std dev	mean	effect size= diff./std dev	t value
Time1									
Task Orientation	53	29.1	7.2	18	25.7	8.1	3.4	0.5	+1.69
Assertiveness	53	30.6	6.2	18	26.4	5.6	4.2	0.7	+2.54²
Peer Social	53	30.8	6.2	18	26.9	5.4	3.8	0.7	+2.33²
Behavior Control	53	26.5	7.6	18	24.1	8.7	2.5	0.3	+1.15
Total	53	117.1	22.4	18	103.2	25.1	13.9	0.6	+0.20²
Time2									
Task Orientation	53	29.7	7.9	18	29.6	6.6	0.1	0.0	+0.06
Assertiveness	53	32.1	7.6	18	30.7	5.1	1.4	0.2	+0.73
Peer Social	53	31.9	7.2	18	31.2	6.7	0.8	0.1	+0.40
Behavior Control	53	27.0	8.9	18	27.2	7.0	-0.2	0.0	-0.10
Total	53	120.8	25.7	18	118.7	23.6	2.1	0.1	+0.30
Change = Time2 - Time1									
Task Orientation	53	0.6	6.4	18	3.9	6.0	-3.3	-0.5	-1.91
Assertiveness	53	1.5	5.4	18	4.3	6.2	-2.8	-0.5	-1.82
Peer Social	53	1.2	5.2	18	4.2	6.3	-3.0	-0.5	-2.02
Behavior Control	53	0.5	6.6	18	3.2	6.0	-2.7	-0.4	-1.54
Total	53	3.8	17.9	18	15.6	21.6	-11.8	-0.6	-2.29²

Notes: ¹ Experimental classrooms include only those where 9 or more months of mentoring occurred between 2/1/05 and 6/30/07
² Signifies that the t-Tests on these differences were significant at Pr(t) <=.05.

Table A-8 T-CRS 2006-07 All Observations

2006-07 EEPD 2005-06 T-CRS Results									
All Observations									
	Experimental Group ¹			Comparison Group			Group Differences E-C		
	n	mean	std dev	n	mean	std dev	mean	effect size= diff./std dev	t value
Time1									
Task Orientation	69	30.0	7.3	22	25.4	8.3	4.6	0.6	+2.51³
Assertiveness	69	31.3	6.1	22	26.4	5.8	4.9	0.8	+3.31³
Peer Social	69	31.9	6.3	22	26.1	6.2	5.8	0.9	+3.77³
Behavior Control	69	27.4	7.7	22	23.1	8.7	4.3	0.5	+2.21³
Total	69	120.5	22.9	22	100.9	26.5	19.6	0.8	+3.36³
Time2									
Task Orientation	55	29.7	7.8	19	29.7	6.4	0.0	0.0	+0.02
Assertiveness	55	32.4	7.6	19	30.4	5.1	1.9	0.3	+1.04
Peer Social	53	31.9	7.2	19	31.0	6.6	0.9	0.1	+0.5
Behavior Control	55	26.8	8.9	19	27.5	6.9	-0.7	-0.1	-0.30
Total	53	120.8	25.7	19	118.6	23.0	2.2	0.1	+0.33
Change² = Time2 - Time1									
Task Orientation	55	0.4	6.5	18	3.9	6.0	-3.5	-0.5	-2.05³
Assertiveness	55	1.5	5.3	18	4.3	6.2	-2.8	-0.5	-1.85
Peer Social	53	1.2	5.2	18	4.2	6.3	-3.0	-0.5	-2.02
Behavior Control	55	0.0	6.9	18	3.2	6.0	-3.1	-0.4	-1.74
Total	53	3.8	17.9	18	15.6	21.6	-11.8	-0.6	-2.29³

Notes: ¹ Experimental classrooms include only those where 9 or more months of mentoring occurred between 2/1/05 and 6/30/07
² Changes are calculated from only those classes where matching pre and post scores exist
³ Signifies that the t-Tests on these differences were significant at Pr(t) <=.05.

PPVT-III

Some notes on the PPVT calculations:

- 1) One small deviation from the suggested instructions was that the Basal set for all children was set #1. That is, for the PPVT observations, all children started off from Set #1, regardless of age. This was done for the sake simplicity in the instructions, plus our student population was very close to the starting 3 year-old group (mean child age was about 3.7 years).
- 2) The PPVT scores in the following table are, as defined in the instructions included in the PPVT Form IIIA by Lloyd M. Dunn and Leota M. Dunn (Copyright 1997). For each of 9 sets, the ceiling set and ceiling item, is reached when there are 8 errors in a set. The raw score is equal to the ceiling item minus all of the errors up to that set and item.
- 3) The standardized score shown were manually derived from the PPVT-III Norms Booklet.

Table A-9 PPVT-III 2006-07 Matching Pre and Post Scores

2006-07 EEPD PPVT Results									
Includes Only Observations with Complete Data at Time1 and Time2									
	Experimental Group ¹			Comparison Group			Group Differences E-C		
	n	mean	std dev	n	mean	std dev	mean	effect size= diff./std dev	t value ²
Time1									
PPVT Raw Score	31	43.4	18.5	16	42.4	15.2	1.0	0.1	+0.19
Standardized Score	31	89.2	16.2	16	88.3	14.2	0.8	0.1	+0.34
Time2									
PPVT Raw Score	31	57.0	14.4	16	55.4	17.8	1.7	0.1	+0.18
Standardized Score	31	95.8	11.8	16	94.4	15.8	1.4	0.1	+0.34
Change = Time2 - Time1									
PPVT Raw Score	31	13.6	16.3	16	13.0	6.8	0.6	0.0	+0.15
Standardized Score	31	6.7	15.2	16	6.1	7.3	0.6	0.0	+0.14

Notes: ¹ Experimental classrooms include only those where 9 or more months of mentoring occurred between 2/1/05 and 6/30/07
² Signifies that none of the t-Tests on these differences were significant at Pr(t) <=.05

Table A-10 PPVT-III 2006-07 All Observations

2006-07 EEPD PPVT Results									
All Observations									
	Experimental Group ¹			Comparison Group			Group Differences E-C		
	n	mean	std dev	n	mean	std dev	mean	effect size= diff./std dev	t value ³
Time1									
PPVT Raw Score	42	42.7	17.3	26	44.7	16.8	-2.0	-0.1	-0.46
Standardized Score	31	89.2	16.2	16	88.3	14.2	0.8	0.1	+0.18
Time2									
PPVT Raw Score	39	56.2	15.5	17	53.4	19.1	2.8	0.2	+0.57
Standardized Score	31	95.8	11.8	16	94.4	15.8	1.4	0.1	+0.34
Change² = Time2 - Time1									
PPVT Raw Score	31	13.6	16.3	16	13.0	6.8	0.6	0.0	+0.15
Standardized Score	31	6.7	15.2	16	6.1	7.3	0.6	0.0	+0.14

Notes: ¹ Experimental classrooms include only those where 9 or more months of mentoring occurred between 2/1/05 and 6/30/07
² Changes are calculated from only those classes where matching pre and post scores exist
³ Signifies that none of the t-Tests on these differences were significant at Pr(t) <=.05.

Additional Question & Answers for 2006-07 PVVT-III Results:

- 3) Question: What was the number of children who had **post-test** scores on the PPVT (for measure 1.2 in APR reported number with both pre- and post-test scores)?

Answer: The total number of children who had PPVT post-test scores was 56.

- 4) Question: What was the number of children who had a standard score of 85 or higher on the PPVT post-test regardless of whether or not the children had a pre-test (for measure 1.2 in APR reported this for the children who had both a pre- and post-test)?

Answer: Forty-six children had a standardized score of 85 or higher on the PPVT post-test regardless of whether or not the children had a pre-test (82%).

TERA-3

The TERA scores are calculated for each of the 3 TERA Subtests as follows: For each child, and for each independent subtest, the ceiling item is reached when there are 3 straight errors. The raw score is equal to the ceiling item minus all of the errors up to that item.

Table A-11 TERA-3 - 2006-07 Matching Pre and Post Scores

EEPD 2005-06 TERA-3 Results									
Includes Only Observations with Complete Data at Time1 and Time2									
The TERA-3 Scores in this table are raw scores, not standardized for the child's age									
	Experimental Group ¹			Comparison Group			Group Differences E-C		
	n	mean	std dev	n	mean	std dev	mean	effect size= diff./std dev	t value
Time1									
Subtest I. Alphabet	31	3.4	3.5	16	3.8	4.4	-0.3	-0.1	-0.28
Subtest II. Conventions	31	2.5	1.9	16	2.4	2.4	0.1	0.0	+0.22
Subtest III. Meaning	31	6.4	2.2	16	5.7	2.0	0.7	0.3	+1.06
Time2									
Subtest I. Alphabet	31	5.1	4.1	16	5.5	4.6	-0.4	-0.1	-0.33
Subtest II. Conventions	31	4.2	2.5	16	4.6	2.0	-0.3	-0.2	-0.46
Subtest III. Meaning	31	7.2	1.7	16	5.8	1.9	1.4	0.8	+2.59²
Change = Time2 - Time1									
Subtest I. Alphabet	31	1.6	2.8	16	1.8	3.0	-0.1	-0.1	-0.12
Subtest II. Conventions	31	1.7	2.3	16	2.2	2.3	-0.5	-0.2	-0.68
Subtest III. Meaning	31	0.8	1.4	16	0.1	2.6	0.7	0.4	+1.23

Notes: ¹ Experimental classrooms include only those where 9 or more months of mentoring occurred between 2/1/05 and 6/30/07
² Signifies that the t-Test on this difference was significant at Pr(t) <=.05.

Table A-12 TERA-3 - 2006-07 All Observations

EEPD 2005-06 TERA-3 Results									
All Observations									
The TERA-3 Scores in this table are raw scores, not standardized for the child's age									
	Experimental Group ¹			Comparison Group			Group Differences E-C		
	n	mean	std dev	n	mean	std dev	mean	effect size= diff./std dev	t value
Time1									
Subtest I. Alphabet	42	3.9	3.9	26	3.7	4.0	0.2	0.1	+0.23
Subtest II. Conventions	42	2.6	2.0	26	2.6	2.5	0.0	0.0	+0.01
Subtest III. Meaning	42	6.4	2.3	26	5.7	2.1	0.7	0.3	+1.19
Time2									
Subtest I. Alphabet	39	5.6	4.2	17	5.2	4.6	0.4	0.1	+0.31
Subtest II. Conventions	39	4.2	2.5	17	4.5	2.0	-0.3	-0.1	-0.38
Subtest III. Meaning	39	7.2	1.7	17	5.5	2.0	1.7	0.9	+3.09³
Change² = Time2 - Time1									
Subtest I. Alphabet	31	1.6	2.8	16	1.8	3.0	-0.1	-0.1	-0.12
Subtest II. Conventions	31	1.7	2.3	16	2.2	2.3	-0.5	-0.2	-0.68
Subtest III. Meaning	31	0.8	1.4	16	0.1	2.6	0.7	0.4	+1.23

Notes: ¹ Experimental classrooms include only those where 9 or more months of mentoring occurred between 2/1/05 and 6/30/07
² Changes are calculated from only those classes where matching pre and post scores exist
³ Signifies that the t-Test on this difference was significant at Pr(t) <=.05.

ITERS-R

Table A-13 ITERS-R 2006-07 Matching Pre and Post Scores

2006-07 EEPD ITERS-R Results			
Includes Only Observations with Complete Data at Time1 and Time2			
	n	mean	std dev
Time1			
Space and Furnishings	20	5.3	0.9
Personal Care Routines	20	4.1	1.3
Language and Reasoning	20	5.1	1.0
Activities	20	4.4	1.1
Interaction	20	6.0	1.1
Program Structure	20	5.1	1.8
Parents and Staff	20	5.6	0.9
Total	20	5.1	0.8
Time2			
Space and Furnishings	20	5.4	0.8
Personal Care Routines	20	4.5	1.0
Language and Reasoning	20	5.8	0.9
Activities	20	5.1	0.9
Interaction	20	6.3	0.8
Program Structure	20	6.1	1.3
Parents and Staff	20	6.1	0.7
Total	20	5.6	0.6
Changes			
Space and Furnishings	20	0.1	1.2
Personal Care Routines	20	0.4	1.6
Language and Reasoning	20	0.8	1.3
Activities	20	0.7	1.2
Interaction	20	0.3	1.0
Program Structure	20	1.0	1.8
Parents and Staff	20	0.4	1.0
Total	20	0.5	0.8

Table A-14 ITERS-R 2006-07 All Observations

2006-07 EEPD ITERS-R Results			
All Observations			
	n	mean	std dev
Time1			
Space and Furnishings	21	5.2	1.0
Personal Care Routines	21	4.0	1.3
Language and Reasoning	21	5.1	1.0
Activities	21	4.4	1.1
Interaction	21	6.1	1.0
Program Structure	21	5.0	1.8
Parents and Staff	21	5.7	0.9
Total	21	5.1	0.8
Time2			
Space and Furnishings	25	5.3	0.8
Personal Care Routines	25	4.5	1.1
Language and Reasoning	25	5.8	1.0
Activities	25	5.1	1.0
Interaction	25	6.3	0.8
Program Structure	25	6.1	1.3
Parents and Staff	25	6.0	0.7
Total	25	5.6	0.6
Changes¹			
Space and Furnishings	20	0.1	1.2
Personal Care Routines	20	0.4	1.6
Language and Reasoning	20	0.8	1.3
Activities	20	0.7	1.2
Interaction	20	0.3	1.0
Program Structure	20	1.0	1.8
Parents and Staff	20	0.4	1.0
Total	20	0.5	0.8
Notes: ¹ Changes are calculated from only those classes where matching pre and post scores exist			

State what the evaluation results say about the intervention's effectiveness and how success was defined.

- Describe factors and circumstances that may account for the intervention's effect (or lack thereof). For example, if the comparison group was exposed to similar services provided to the treatment that may diminish the observed differences between the groups.

Both years of preschool children's pre/post assessments showed increases in language and developmental outcomes, but did not show a direct causal effect of the intervention on child outcomes due a lack of significant differences between the treatment and comparison groups. Though inconsistent and not significant, there were some outcomes in favor of the experimental group child outcomes over the comparison group. By the second year there was a statistically significant difference in favor of the experimental group on the COR Language/Literacy post scores and in the change score of Math/Science outcomes. For the TCRS, there was a statistically significant difference in favor of the comparison group in overall change score between pre and post assessments. On the PPVT, there were no statistically significant differences between experimental and comparison groups. Nevertheless, TERA assessments showed a significant difference in favor of the treatment group on the Meaning post test. Overall, teachers who had two years of mentoring on literacy instruction had students who performed better on select literacy measures.

Over the course of the grant period, there was improvement in classroom quality in experimental preschool and infant/toddler classrooms as measured by ITERS-R, ECERS-R and ELLCO. Additionally, the ITERS-R and ELLCO Literacy Environment Checklist (LEC) classroom observations showed significant positive changes over two years, when contrasted to the comparison group. Improving general classroom quality and the literacy environments take time.

Coursework combined with mentoring was a main goal of our professional development model – mentoring to support ECE's integration of new knowledge into practice. Nearly 50% of those mentees' classrooms assessed received sustained mentoring during the entire grant period. Increases were observed between each of the five classroom assessment cycles and the greatest amount of growth occurred between the last two assessments. Once again, it appears to take much more time to create and observe systematic change than originally hypothesized. Also worth noting, the infant/toddler mentees received sustained mentoring year round whereas most of the preschool mentees had an interruption in service over the summer and school breaks/holidays due to their programs' schedule of operation. Because no comparison group was planned nor used with the infant-toddler group, it is impossible to make definitive statements, but the clinical impression of mentors and mentees suggested that sustained, continuous, year-around mentoring was extremely valuable to those being mentored.

The significant positive changes in preschool classrooms as measured by ELLCO (LEC) illustrated the impact of mentoring combined with the emphasis of mentor/mentee goals in the area of early literacy. As measured by mentor logs, literacy was one of the most frequently identified goals upon which mentors and mentees focused. This supports the

general statement well known in education interventions – significant changes occur when there is a focused effort on making specific changes.

There were many barriers encountered during the grant period. The very high rate of attrition among mentees due to turnover of center staff (50 – 60%) was an unanticipated barrier in our project and required significant adjustments in project management, staff time and evaluation systems. IRB requirements and parent consenting process for both experimental and comparison groups was extremely challenging and lessened our overall recruitment and sample of child assessments due to low parental consent.

Despite many advantageous preplanning activities, delayed start-up affected the evaluation schedule in Year 1. Lower than anticipated skill levels of many mentees necessitated goals first to be basic, foundational and for some, safety/health related. These basic skills needed to be solidified before more in depth and literacy-focused goals could be put in place and accomplished. Evaluation commitments on the part of preschool ECE's was challenging for many who had no previous experience with assessment. However, for mentees, observation skills and use of assessments were designated goals for which mentors provided support and individualized instruction after trainings. Evaluation requirements also limited our ability to recruit a comparison group.

Last, it was very difficult to recruit students for courses and for them to accomplish successful completion. There were many logistical, personal and resource barriers that inhibited ECEs' participation in coursework after work hours. Also, many of those in ECE had low educational attainment to begin with and typical course structures associated with high schools and community colleges did not fit their learning styles nor abilities.

Serving families and children living in poverty and those adults who work in centers is very complicated with many competing factors. Provision of quality professional development is essential and straightforward, though receipt of these services does not consistently and readily occur. We found that ECE's had multiple demands on their in-work and out-of-work time and for many, seeking professional development was challenging. Moreover, for many ECE's professional development was of high value and a commitment was made in many respects to attaining knowledge and improving practice. We learned about appropriate expectations and the range of abilities in our target groups and adjusted our emphasis and framework accordingly in order to allow for the greatest success and impact possible within the wide range of individuals. Our recommendation: first assess ECE's "readiness to change" and their basic skills. Work on the basics first; focus on higher order skills, such as literacy instruction, after the basic skills are mastered.

The broad range of education and skills of ECE's in the field of early childhood education presents the need for a variety of professional development offerings at differing levels and from many venues in order to maximize the ability to reach as many ECE's as possible. Work continues in improving the quantity and accessibility of high quality early care and education programs for children living in poverty by improving the skills of ECE's. While not definitive, results provide evidence that the intensive one-on-one mentoring intervention coupled with knowledge gained from coursework had an impact on improving

the quality of childcare environments, and in turn, improving children's foundation for school success. Also, future researchers should not assume that typical ECE's have basic knowledge of child development or basic skills in behavioral management. This suggests that to implement literacy and professional development programs for literacy successfully, training in such basic skills, if not present, will be required.

- If experimental or quasi-experimental evaluation designs were not implemented, provide statistics for other evaluation designs. **NA**