

**ASSESSING THE QUALITY
IN DIFFERENT U.S. EARLY CHILDHOOD EDUCATION PROGRAMS**

Dr. Mehmet BULDU
Çukurova Üniversitesi
mbuldu@cu.edu.tr

Arif YILMAZ
İndiana Üniversitesi
aryilmaz@indiana.edu

ABSTRACT:

The aim of this study was to assess the quality of different types of early childhood education programs in a Midwestern university town in the US. This study reveals the structural and process characteristics observed in the classrooms, according to the results from the application of the Early Childhood Environment Rating Scale Revised Edition (ECERS-R). Additional evidences such as sketches of classrooms, photographs of classrooms, daily classroom schedules, overall program philosophy and descriptions, and copies of children's work samples, were also collected from the classrooms observed to evaluate the quality in these programs. Results of this study indicated that early childhood programs observed in this study exhibited an acceptable minimum level of quality, even though there were differences among types of programs. University affiliated programs showed a higher quality than the Head Start programs did. Compared to the children in Head Start programs, for children who attended university-affiliated early childhood programs, there were a greater quantity and variety of materials, more space to explore and experiment, better personal care conditions, higher favorable conditions for early learning experiences, better interaction among the children as well as between children and adults in the classroom, and better working conditions for teachers.

Keywords: early childhood, classroom environment, quality, ECERS-R

ÖZET:

Bu çalışmanın temel amacı Amerika Birleşik Devletleri'nde bulunan farklı türlerdeki okulöncesi eğitim kurumlarının kalitelerini ölçmektir. Çalışmanın örneklemini, Amerika Birleşik Devletleri'nin Ortabatı bölgesinde bir üniversite şehrinde bulunan, birbirinden farklı 10 okulöncesi eğitim kurumunu kapsamaktadır. Bu çalışma, gözlemlenen kurumlardaki yapısal ve işlevsel özellikleri, "Early Childhood Environment Rating Scale Revised Edition" değerlendirme ölçeği kullanarak elde edilen sonuçlar doğrultusunda ortaya çıkarmaktadır. ECERS-R değerlendirme ölçeği şu kategorileri kapsamaktadır: (1) sınıf ortamı ve mobilyalar; (2) kişisel bakım düzeni; (3) dil ve nedenleme; (4) aktiviteler; (5) etkileşim; (6) program yapısı; (7) aile ve personel. Okul öncesi kurumları yukarıda verilen kategoriler bazında karşılaştırılmıştır. Bu çalışmada incelenen bütün kurumlar farklı yapılarda olmalarına rağmen gerekli olan kabul edilebilir en düşük kalite seviyesi ortalamasını tutturmuşlardır. Üniversite destekli kurumlar diğer kurumlara göre, Head Start programlarına göre daha yüksek seviyede kaliteye sahiptirler. Bütün kurumlar karşılaştırıldığında ortaya çıkan sonuçlar gösteriyor ki üniversite destekli kurumlar daha geniş alana, sayısal ve çeşitlilik bakımından daha fazla oyuncak ve materyale, çocuklar için daha iyi kişisel bakım koşullarına, daha iyi arkadaş ve öğretmen-öğrenci iletişimine ve öğretmenler için daha iyi çalışma

kosullarına sahiptirler. Bu çalışma ayrıca gösteriyor ki okulöncesi kurumlarının eğitim kalitelerinin yüksekliği, o kurumda eğitim alan öğrencilerin okulöncesi eğitimin gerektirdiği öğrenme ve oyun gibi aktivitelerden maksimum seviyede yararlanabilmelerine olanak sağlamaktadır.

Anahtar Kelimeler: Okulöncesi eğitimi, sınıf ortamı, kalite, ECERS-R

INTRODUCTION:

Assessing classroom quality in early childhood education programs has been studied widely by researchers in universities, governmental and non-governmental institutions in the last two decades in the U.S (Anderson, Nagle, Roberts, and Smith, 1981; NAEYC, 1995; NICHD Early Child Care Research Network, 1993, 1999; Peisner-Feinburg, Burchinal, 1997, Peisner-Feinburg et. al., 2001). Studies confirm that classroom quality is associated with children's social, physical, emotional, cognitive development closely. Some of the factors that addressing these domains and associated with classroom quality are: "classroom composition, curriculum and program philosophy, physical environment, staff characteristics, adult-child interactions, and parent-staff communication" (Ceglowski and Bacigalupa, 2002, p. 89).

In educational literature, these factors have been categorized into two main groups: "structural variables" and "process variables". Structural variables are those such as group size and ratio of adults to children, and the quality, quantity, and safety of resources available per child (Howes, 1997). Process variables include direct experiences such as teacher-child and teacher-parent relationships, and teachers' personal characteristics and dispositions (McCarty, Abbott-Shim and Lambert, 2001).

Process variables were examined in some large scale studies (NAEYC, 1995; Layzer, Goodson, and Moss, 1993). For example, a notable research study is the Cost, Quality, and Child Outcomes in Child Care Center's Study (NAEYC, 1995). This study basically sought answers to the relationship between child care costs, the quality of care, and the nature of child development (NAEYC, 1995 cited in Glantz and Layzer, 2000). Using random sampling, the study team selected 50 non-profit and 50 for-profit centers in several states and included two classrooms randomly from each center. Study findings revealed that "childcare in most centers in the US is poor to mediocre", "children's cognitive and social development are positively related to the quality of their childcare experience", "quality of care is strongly related to staff-child ratios, staff education and administrators' experience. Teacher wages, education and training also discriminate among centers of differing levels of quality", "higher licensing standards are related to higher observed levels of quality", "good quality services cost more but not a lot more", and "children who attended higher-quality child care centers demonstrated better cognitive and social skills from preschool into the early elementary school years". (Glantz and Layzer, 2000 p. 4) ECERS and ITERS were the main classroom quality observation tools used in this widely cited and recognized early childhood study.

In their Observational Study of Early Childhood Programs (OSECP), Layzer, Goodson, and Moss (1993) investigated Head Start and other center-based programs serving 4-year-old children. One hundred and nineteen early childhood programs were randomly selected for the study, the goals of which were to measure the quality of early

childhood programs, to determine the effects of staff members on classroom quality, and to identify the relationship between classroom quality and classroom dynamics. The types of programs included Head-Start Programs, school-sponsored programs, and community based day-care centers. The study revealed that all three types of programs had acceptable levels of quality but Head Start programs were more consistent with keeping this quality level. Lower staff ratio was positively associated with classroom quality and teachers with college degree tended to be more responsive to children (The Department of Education, 2004).

Assessing Structural and Process Quality

Many tools or instruments have been used for identifying and exploring process and structural variables. Assessment Profile for Early Childhood Programs (APECP) (Abbott-Shim and Sibley, 1992), Caregiver Interaction Scale (CIS) (Arnett, 1989), Classroom Practices Inventory (CPI) (Hyson, Hirsh-Pasek and Rescorla, 1990), and the Early Childhood Environmental Rating Scale-Revised (Harms, Clifford, and Cryer, 1998) are among the most widely used ones. APECP is a checklist of global quality indicators. The observer checks 147 “yes” or “no” to items describing characteristics of classroom. It was used in NICHD Study of Early Child care. CIS is a 26-item scale using a four-point scale to rate process quality of the classroom, such as the emotional climate, discipline style, and responsiveness of teachers. It was used in Cost Quality, & Child Outcomes Study (1995). The CPI is a 26-item rating scale that focuses teacher’s educational attitudes and classroom’s emotional climate. Each item on the scale was rated on a 5-point-Likert-type scale, from “not all like this classroom” to “very much like this classroom”. It was used in NICHD Study of Early Child Care (1996), Observational Study of Early Childhood Programs (Layzer, Goodson, & Moss, 1993).

The Early Childhood Environment Rating Scale (ECERS) (Harms & Clifford, 1980) and its revised version the Early Childhood Environment Rating Scale-Revised (ECERS-R) (Harms, Clifford, and Cryer, 1998) are used to measure overall structural and process quality in the early childhood programs (Tietze, Cryer, Bairrao, Palacios, and Wetzel, 1996). The ECERS, in the last decade, has become very popular and widely used among researchers in the U.S as well as in other countries in the world. The majority of the studies have been conducted in the USA, however, including the following widely cited studies: Bryant, Burchinal, Lau, and Sparling, 1994; Bryant, Clifford, and Peisner 1991; Bryant, Maxwell, and Burchinal, 1999; Buell and Cassidy 2001, Cost Quality, and Child Outcomes Study Team, 1995; Cryer, Tietze, Burchinal, Leal, and Palacios, 1999; Hagekull, and Bohlin, 1995; Howes, and Smith, 1995; NICHD Early Child Care Research Network, 1993, 1999, Peisner-Feinberg and Burchinal, 1997; Peisner-Feinburg et. al., 2001. There have also been a number of well known studies using these instruments in many other countries in Europe, Asia, South America, Australia and New Zealand, including, for example, Farquar, 1989; Kärrby and Giota, 1994, 1995; Munton, Rowland, Mooney, and Lera, 1997; Tietze, Bairrao, Leal, and Rossbach, 1998; Tietze, Cryer, Bairrao, Palacios, and Wetzel, 1996.

In this research, ECERS-R was used to assess process and structural quality of the classrooms. It is one of the most widely and reliably used rating tool in classroom quality studies. Its multidimensional structure is one of the most advantageous parts of the instrument which allows researchers assess multi-level quality indicators of

classrooms. Although its usage is somewhat more complex than the others, with training clear and reliable results can be obtained.

Current Study

The current study aimed to explore the effect of structural and process variables in different environments, such as, Head Start programs and university affiliated programs. In this study, researchers examined four Head Start classrooms and six university-affiliated preschool classrooms in terms of process aspects of classroom environment and structural dimensions of child care that have been linked in the research literature to classroom quality. There is a need to increase our knowledge and understanding about the factors that influence children's social, emotional, and cognitive development as well as how these factors are associated with different classrooms. In that sense, the specific questions asked in this research were as follows:

(1) How do process and structural variables differ between Head Start and university affiliated early childhood programs?

(2) How much variation is there in the quality of the classrooms—across classrooms within Head Start and across classrooms within university affiliated?

(3) How good is the average quality of Head Start and university affiliated classrooms, as judged by trained observers using a well-established early childhood program environment rating scale?

DESIGN AND METHODS

In this study, two types of early childhood programs were investigated: university affiliated and Head Start. Information was collected by observational techniques based on a rating scale which defines early childhood program environment as the spatial, programmatic, and interpersonal features that directly affect the children and adults in an early childhood setting (Harms, Clifford, and Cryer, 1998).

The observation data were first analyzed using descriptive statistics, including means and standard deviations of the each item in the rating scale, as well as total scores for each setting were computed. T-tests were conducted to compare each setting's subscale and total quality scores in relationship to the type of early childhood program observed.

Before the observations conducted, teachers who work in these programs were asked to select samples of children's work and to take pictures of their classrooms using disposable cameras provided. Researchers then visited the programs to conduct observations and to collect artifacts.

Sample

The sample included 10 early childhood programs located in a Midwestern university town in the US. The ages of the children attending the programs observed ranged from three to six. Number of children in the classrooms observed was varied between 14 and 20.

Measure

The researchers used the Early Childhood Environment Rating Scale Revised Edition (ECERS-R) (Harms, Clifford, & Cryer, 1998) to measure overall process quality of the

educational environment in early childhood settings (Karrby and Giota, 1994; Tietze, Cryer, Bairrao, Palacios, & Wetzel, 1996). The philosophy of the ECERS-R is compliant with the idea of developmentally appropriate practice that characterizes the accreditation criteria of the National Association for Education of Young Children. The ECERS-R is widely used among researchers in the U.S. (see Helburn, 1995; Scarr, Eisenberg, & Deater-Deckard, 1994) as well as those in many other countries in Europe, Asia, South America, Australia and New Zealand (see Cryer, Tietze, Burchinal, Leal, & Palacios, 1999). The scale consists of 43 individual items that were each rated by two independent observers, in this study the researchers, using a seven-point scale with descriptors for 1 (inadequate), 3 (minimal), 5 (good), and 7 (excellent). The 43 items are organized according to the following categories: (1) space and furnishings; (2) personal care routines; (3) language-reasoning; (4) activities; (5) interaction; (6) program structure; and, (7) parents and staff. Levels of program quality were based on current definitions of best practice and on research relating practice to child outcomes (Harms, Clifford, and Cryer, 1998). The correlation between two observers was .96, and the interrater internal consistency was .93. The two raters were in complete agreement for 79% of the items scored, 18% of the scores were within one point, but for a full 3% of the items, they differed by two or more points.

Document Analyses

Samples of children's work provided by the teachers, daily classroom schedules, and diagrams and photographs of the classroom layout were among the artifacts collected. These items were used along with quantitative data to complete a profile of each early childhood setting in order to add supporting information to evaluate the quality of programs.

FINDINGS

Individual ECERS-R Items

Table 1 presents some of the descriptive statistics that are useful for characterizing the individual items in the ECERS-R. As it has been noted earlier, the scale consists of 43 items, divided into 7 subscales. The number of items composing each subscale varies between 4 and 10.

Table 1.
Descriptive Statistics on ECERS-R Items and on the 7 ECERS-R Subscales

Items in Each Subscale	Item Means	SD	Item Means (subscales)	Range (subscales)
<i>Space and Furnishings</i>				
1. Indoor space	6.65	.94		
2. Furniture for routine care, play, and learning	6.95	.15		
3. Furniture for relaxation	5.65	1.66		
4. Room arrangement for play	6.20	1.00		
5. Space for privacy	5.55	.95		
6. Child related display	4.20	1.03		
7. Space for gross motor	5.55	1.46		
8. Gross motor equipment	6.45	1.57		
			5.90	2.70
<i>Personal Care Routines</i>				
9. Greeting/departing	6.05	1.42		
10. Meals/snacks	5.90	.21		
11. Nap/rest	5.11	1.45		
12. Toileting/diapering	5.25	2.07		
13. Health practices	4.05	2.19		
14. Safety practices	6.45	1.06		
			5.45	2.40
<i>Language Reasoning</i>				
15. Books and pictures	4.60	1.14		
16. Encouraging children to communicate	6.55	.86		
17. Using language to develop reasoning skills	5.20	1.43		
18. Informal use of language	5.55	1.38		
			5.47	1.95
<i>Activities</i>				
19. Fine motor	5.60	1.42		
20. Art	5.20	1.39		
21. Music/movement	4.75	1.76		
22. Blocks	5.85	1.05		
23. Sand/water	6.05	1.53		
24. Dramatic play	5.40	.84		
25. Nature/science	5.40	1.26		
26. Math/number	4.90	1.22		
27. Use of TV, video and/or computers	4.00	.00		
28. Promoting acceptance of diversity	4.10	.69		
			5.20	2.05
<i>Interaction</i>				
29. Supervision of gross motor activities	5.80	1.00		
30. General supervision of children	5.45	1.44		
31. Discipline	6.30	.53		
32. Staff-child interactions	6.25	1.20		
33. Interaction among children	6.55	.95		
			6.07	1.10

Table 1. (Cont'd)

Descriptive Statistics on ECERS-R Items and on the 7 ECERS-R Subscales

Items in Each Subscale	Item Means	SD	Item Means (subscales)	Range (subscales)
<i>Program Structure</i>				
34. Schedule	6.20	1.61		
35. Free play	5.60	1.12		
36. Group time	6.75	.26		
37. Provision for children with disabilities	4.00	.00		
			6.11	2.75
<i>Parents and Staff</i>				
38. Provisions for parents	6.60	.96		
39. Provisions for personal needs of staff	4.10	2.38		
40. Provisions for professional needs of staff	5.35	1.43		
41. Staff interaction and cooperation	6.70	.42		
42. Supervision and evaluation of staff	5.85	1.22		
43. Opportunities for professional growth	6.45	.49		
			5.84	2.60
<i>Summary Statistics for 43 Items</i>			5.74	

In the total sample of 10 early childhood education programs, the range of scores varied between 4.00 and 6.95, Mean = 5.75. When we have a closer look at the individual items in ECERS-R, on the basis of average scores, it might be assumed that there are some items that might be considered as indicators of aspects of quality of early childhood education programs on which we are good at in our sample of 10 programs.

As it is presented in Table 1, the highest average score in the entire scale (M = 6.95) is found in the rating of furniture for routine care, play, and learning. Group time obtains the next highest score (M = 6.75). The average score of staff interaction and cooperation (M = 6.70) secure a third place in the rank of highest average scores in the ECERS-R. Indoor space (M = 6.65) and provisions for parents (M = 6.60), are found at the fourth and fifth place in the ranking list of item means. Moreover, it should be noted that interaction among children, staff-child interactions, encouraging children to communicate, safety practices, opportunities for professional growth, gross motor equipment, discipline, room arrangement for play, schedule, sand/water, and greeting/departing were among the highest as well. They were all rated above 6.00, which is described as above "good" in the ECERS-R. However, if there are some individual items that might be regarded as indicative of aspects of high quality, then there must be some items that might be considered as indicators of low quality.

As it is revealed in Table 1, the lowest average score of all 43 items on the scale is the ratings of use of TV, video and/or computers (M = 4.00) and provision for children with disabilities (M = 4.00). The next lowest mean value appears to be the rating of health practices (M = 4.05). Promoting acceptance of diversity and provisions for personal needs of staff, both, (M = 4.10) take the third place in the rank of the lowest mean values on the scale. Child related display, books and pictures, and music/movement had also low average ratings, below 5.00. These findings might be

interpreted as indicators of aspects of quality that might be regarded as being in need of improvement.

Total Index Scores

According to the ECERS-R the characteristics which define the early childhood environment are described in seven categories: space and furnishings, personal care routines, language-reasoning, activities, interaction, program structure; parents and staff. In order to evaluate an early childhood program quality, a total score for a setting was obtained by summing across the item scores for all quality indicators. Therefore, a maximum possible total score that an early childhood program could get from the ECERS-R was 301, where the observer would have selected excellent for all of the ECERS-R items. The minimum possible score that a program could get from the ECERS-R was 43, where the observer would have selected inadequate for all of the ECERS-R items.

Before doing any further analysis, early childhood education programs observed were dichotomized into two groups (university affiliated programs and Head Start programs). In this study, the mean index score for early childhood education programs observed varied between 222.61 and 268.50. The mean index score for university affiliated programs was 248.93, and for Head Start programs it was 229.40 (Table 2).

Table 2.
Descriptive Results of ECERS-R by Early Childhood Education Program Type

	<u>N</u>	<u>Minimum</u>	<u>Maximum</u>	<u>Sum</u>	<u>Mean</u>	<u>SD</u>
University Affiliated Programs	6	234.60	268.50	1493.60	248.93	12.88
Head Start Programs	4	222.61	236.50	917.61	229.40	7.36
Total	10	222.61	268.50	2411.21	241.12	14.56

To learn whether there were any differences between the early childhood education programs observed, they were compared on the subscale and total index scores of ECERS-R, using independent samples t-tests. The results of these t-tests (presented in Table 3) revealed that there were significant differences in “activities” subscale scores of university affiliated programs ($M = 5.80$, $SD = .36$), and Head Start programs [$M = 4.31$, $SD = .46$; $t(8) = 5.69$, $p < .001$]. The results also indicated that there were no significant differences in all other ECERS-R subscale scores and total ECERS-R scores of university affiliated programs and Head Start programs. See Table 3 for more detail.

Table 3.
Comparison of ECERS-R Subscale and Total Index Scores in Terms of Program Type

		<u>N</u>	<u>M</u>	<u>SD</u>	<u>t-test</u>	<u>df</u>
I. Space & Furnishing	UA	6	6.07	.44	1.33	8
	HS	4	5.64	.60		8
II. Personal Care Routines	UA	6	5.70	.41	1.81	8
	HS	4	5.06	.73		8
III. Language Reasoning	UA	6	5.56	.83	.40	8
	HS	4	5.34	.88		8
IV. Activities	UA	6	5.79	.36	5.69 ***	8
	HS	4	5.31	.47		8
V. Interaction	UA	6	6.00	.69	.43	8
	HS	4	6.17	.53		8
VI. Program Structures	UA	6	6.08	.64	.22	8
	HS	4	6.16	.45		8
VII. Parents & Staff	UA	6	5.80	.91	.14	8
	HS	4	5.89	1.11		8
TOTAL INDEX SCORES	UA	6	5.90	.35	2.02	8
	HS	4	5.51	.18		8

UA = University Affiliated Programs

HS = Head Start Programs

*** $p < .001$ (two-tailed)

A closer look at the t-tests results of the each item in “activities” subscale of ECERS-R provide some explanation for the differences between university affiliated and Head Start programs. For instance, in the activities subscale, university affiliated programs scored higher than Head Start programs in items such as fine motor, art, music/movement, blocks, and sand/water. But, on the other hand, in the same subscale, there were not any significant differences in items such as dramatic play, nature/science, math/number, use of TV, video and/or computers, and promoting acceptance of diversity between university affiliated programs and Head Start programs.

The t-test results revealed that traditional content areas of the curriculum, in particular, mathematics are not encouraged in both type of early childhood education programs whereas science is promoted in just university affiliated programs. Music and use of TV, video and/or computers were also valued less in both types of programs. See Table 4 for more detailed comparison of university affiliated programs and Head Start programs in the activities subscale of ECERS-R.

Qualitative Summary

Table 4.
Comparison of Activities Subscale Scores of ECERS-R in Terms of Program Type

		<i>N</i>	<i>M</i>	<i>SD</i>	t-test	<i>df</i>
19. Fine motor	UA	6	6.67	.52	10.11***	8
	HS	4	4.00	.00		8
20. Art	UA	6	6.08	1.07	3.99**	8
	HS	4	3.87	.25		8
21. Music / movement	UA	6	5.83	1.13	3.66**	8
	HS	4	3.12	1.18		8
22. Blocks	UA	6	6.42	.49	2.72*	8
	HS	4	5.00	1.15		8
23. Sand/water	UA	6	7.00	.00	3.75**	8
	HS	4	4.63	1.60		8
24. Dramatic play	UA	6	5.75	.52	1.80	8
	HS	4	4.88	1.03		8
25. Nature/science	UA	6	6.00	1.09	2.19	8
	HS	4	4.50	1.00		8
26. Math/number	UA	6	4.83	1.21	.20	8
	HS	4	5.00	1.41		8
27. Use of TV, video and/or computers	UA	6	4.00	.00	.35	8
	HS	4	4.00	.00		8
28. Promoting acceptance of diversity	UA	6	4.17	.93	1.18	8
	HS	4	4.00	.00		8

UA = University Affiliated Programs

HS = Head Start Programs

* $p < .05$ (two-tailed)

** $p < .01$ (two-tailed)

*** $p < .001$ (two-tailed)

In addition to the ECERS-R data, supplementary evidences were also collected from the classrooms observed to evaluate the quality in these programs. These evidences included sketches of classrooms, photographs of classrooms, daily classroom schedules, overall program philosophy and descriptions, and copies of children's work samples. Taking these classroom artifacts into consideration, the settings observed were evaluated by program type.

University Affiliated Programs:

The teachers in university affiliated programs are highly child-centered in that children are allowed free choice time for much, in fact most of the day, according to the classroom schedules and what could be observed directly. Students have one ten to twenty minute circle time in the mornings during which they gather as a whole group, and in the afternoons, they have a twenty minute period in which on some days, small

groups form for special activities. The teachers highly value ideas that come from the children and trust and respect these young children to be competent in doing many things themselves. Children have ownership of these classrooms in terms of making choices about what to do, and for the most part, when to do it, but they are limited somewhat by what has been made available to them by the teachers who seem to control somewhat the materials and supplies they make available to the children. Though, all materials and supplies are within children's reach, and they trust the children to use the materials and environment appropriately. Children are even allowed some choice at scheduled circle or whole group time, at which time they are not required to be a part of the whole group time, but can quietly engage in another activity as long as it doesn't disrupt the whole group. The evidences for these come from both direct observations by the researchers.

One of the major interest areas that university affiliated program teachers emphasizes more is literacy and promoting literacy skills in their students. This is evidenced in the materials that they have out for the children to use, the "Word Wall" and "Phrases" posted by children along two walls of the classrooms, in the activities that are part of their daily schedule (e.g. "Book Time" and "Writing Time") and in their emphasis on literacy-related activities during their circle/group times with the children. Furthermore, in these programs, stories are retold throughout days and across time, written about, drawn about, sung about, etc. and highly valued as a way of getting the children.

Art and creativity was also evident in children's work displayed throughout the rooms. Most of the art work that children were doing, however, was process art—art work in which directions were not provided and there were no pre-conceived ideas of the outcome. Gross motor skills were emphasized through the encouragement of big blocks, the woodworking table, and outdoor play. These programs were rich in gross motor equipment. Prominent in these classrooms is support for dramatic play—both in a traditional housekeeping area, and in other areas of the classroom, such as in the block area. Cultural and ethnical diversity was represented in these classrooms through pictures of children and families from different cultures and representing different ethnicities.

On the other hand, there is very little evidence that major traditional content areas of the curriculum, in particular, social studies, mathematics, and science, are encouraged in these environments, specifically. Although, there is a great deal of evidence that dramatic play, constructive activities such as large and small block building, manipulative play, and many creative art activities are supported in terms of the materials and supplies to which children have access, with the exception of books and some writing supplies that are available, there appears to be no identifiable mathematics, science or social studies curriculum in these classrooms.

Head Start Programs:

Overall, in Head Start programs, literacy and language development were highly emphasized. This can be seen in various evidence such as letter-picture combination activities, labels found on objects, writings in different languages used, as well as story books found in these classrooms. An emphasis on cognitive development and academic

skills were also apparent in small and large group activities, and in individual projects due to the nature of Head Start programs.

The teachers, in these programs, seemed to value children being active, as they let them choose their own activities based on their interests during free play time as well as during small group activities. However, in seeming contrast to their child-centered philosophies, these teachers usually use traditional materials such as predefined lines or pre-drawn shapes for these activities, especially during the large group activities.

The teachers also emphasized children being physically active. During the free play time, the children were able to be physically active playing in a dramatic play area as well as within construction activity areas of the classroom, and outdoor activities were provided for the children on a daily basis.

Cultural diversity was represented through classrooms in materials and books that contain culture-specific features, such as pictures from other cultures. On the contrary, in general, the teachers in these programs seemed less responsive to the children's immediate needs and interests. During both the small and large group activity times, the teachers mostly gave direct instructions to the children rather than asking open-ended questions to facilitate children's thinking. And, especially, group activities in these classrooms were more teacher-directed and academic-oriented.

DISCUSSION

A prime focus of this study was to explore the effect of structural and process variables in different environments, such as, Head Start programs and university affiliated programs.

Early childhood education programs were compared using categories in ECERS-R as well as additional evidences collected and it was found out that all the different types of early childhood programs observed in this study exhibited an acceptable minimum level of quality, even though there were differences among types of programs. University affiliated programs showed a higher quality than the Head Start programs did. Compared to the children in Head Start programs, for children who attended university-affiliated early childhood programs, there were a greater quantity and variety of materials, more space to explore and experiment, better personal care conditions, higher favorable conditions for early learning experiences, better interaction among the children as well as between children and adults in the classroom, and better working conditions for teachers. The results of the study also revealed that while Head Start program teachers used more teacher-centered practices, university-affiliated program teachers used more child-centered practices. Differences between the teacher practices can reasonably be attributed to the characteristics of the children attending these programs as well as the aim of the programs. This research supports the evidence associating quality indices in early childhood classroom environments with benefits for early learning.

Furthermore, the results of this study identify the importance of several early childhood program environment characteristics which have direct impact the behavior as well as the physical, social, emotional, cognitive and intellectual development on children attending early childhood education programs.

IMPLICATIONS FOR PRACTICE

This study has important implications from a practice standpoint as early childhood education teachers search for ways to create learning environments that promote development across different domains for young children. The results will also help them to do a self-assessment.

It has also crucial implications for early childhood teacher educators and for early childhood teacher training programs, too. They are the ones who train teachers of young children who have a vital role for creating the best possible environment for young children. What they will teach to future teachers of young children will have impact on what children learn in early childhood environments.

The results of this study may also have implications for early childhood program directors for supervision and program improvement. They will be able to search for high quality characteristics in their programs and improve these characteristics, if needed. Program directors will also be able to see the aspects of low quality characteristics in their programs and focus their attention to these characteristics.

Limitations

This study would have been strengthened if the observations had been conducted over a longer period of time rather than 3-4 hours for each observer in each setting. Moreover, the sample size and diversity would have been more diverse to see the difference between many types of early childhood education programs in the US. The sample would have consisted of religious programs (church or other religious organization affiliated), home care environments, Montessori programs, High/Scope programs, programs which incorporated to the public elementary schools and many others as well as the ones included in this study.

CONCLUSION

It is hoped that the results of this study might spark the dialogue about where we, as teachers of young children, early childhood teacher educators, program directors, and many other early childhood education professionals, go from here and how to build on our knowledge about various structural and process quality of early childhood education programs. Such dialogue among the scholars and practitioners in early childhood profession is critical as we seek to improve the quality of early childhood education programs and the quality of early care and education services delivered to young children and their families.

REFERENCES

- Abbott-Shim, M. & Sibley, A. (1992). *Assessment profile for childhood programs*. Atlanta, GA: Quality Assistance, Inc.
- Anderson, C., Nagle, R., Roberts, W., & Smith, J. (1981). Attachment to substitute caregivers as a function of center quality and caregiver involvement. *Child Development, 52*, 53-61.
- Arnett, J. (1989). Caregivers in day-care centers: Does training matter? *Journal of Applied Developmental Psychology, 10*(4), 541-552.
- Bryant, D. M., Burchinal, M. R., Lau, L. B., & Sparling, J. J. (1994). Family and

- classroom correlates of Head Start children's developmental outcomes. *Early Childhood Research Quarterly*, 9(3/4), 289-309.
- Bryant, D. M., Clifford, R. M., & Peisner, E. S. (1991). Best practices for beginners: Developmental appropriateness in kindergarten. *American Educational Research Journal*, 28(4), 783-803.
- Bryant, D. M., Maxwell, K. L., & Burchinal, M. (1999). Effects of a community initiative on the quality of preschool child care. *Early Childhood Research Quarterly*, 14(4), 449-464
- Buell, M. J. & Cassidy, D. J. (2001). The complex and dynamic nature of quality in early care and educational programs: a case for chaos. *Journal of Research in Childhood Education*, 15(2), 209-220.
- Ceglowski, D. & Bacigalupa, C. (2002). Four perspectives on child care quality. *Early Childhood Education Journal*, 30(2), 87-92.
- Cryer, D., Tietze, W., Burchinal M. R., Leal, T., & Palacios, J. (1999). Predicting process quality from structural quality in preschool programs: A cross-country comparison. *Early Childhood Research Quarterly*, 14(3), 339-361.
- Farquhar, S. (1989). Assessing New Zealand child day care quality using the Early Childhood Environment Rating Scale. *Early Child Development and Care*, 47, 93-105.
- Glantz, F. B. & Layzer, J., (2000). *The Cost, Quality and Child Outcomes Study: A Critique*. Cambridge, MA: Abt Associates, Inc.
- Hagekull, B., & Bohlin, G. (1995). Day care quality, family and child characteristics and socioemotional development. *Early Childhood Research Quarterly*, 10(4), 505-526.
- Harms, T., & Clifford, R. M. (1980). *Early Childhood Environment Rating Scale*. New York: Teachers College Press
- Harms, T., Clifford, R., & Cryer, D. (1998). *Early Childhood Environmental Rating Scale, Revised Edition*. Teachers College Press: New York.
- Helburn, S. (Ed.) (1995). *Cost, quality and child outcomes in child care centers: Technical report*. Denver, CO: University of Colorado. Department of Economics. Center for Research in Economic Social Policy.
- Howes, C. (1997). Children's experiences in center-based childcare as a function of teacher background and adult: child ratio. *Merrill-Palmer Quarterly*, 43(3), 404-425.
- Howes, C., & Smith, E. W. (1995). Relations among child care quality, teacher behavior, children's play activities, emotional security, and cognitive activity in child care. *Early Childhood Research Quarterly*, 10(4), 381-404.
- Hyson, M. C., Hirsh-Pasek, K., & Rescorla, L. (1990). The Classroom Practices inventory: an observation instrument based on NAEYC's guidelines for Developmentally Appropriate Practices for 4- and 5- year-old children. *Early Childhood Research Quarterly*, 5(4), 475-494.
- Kärby, G., & Giota, J. (1994). Dimensions of quality in Swedish day care centers: An analysis of the Early Childhood Environment Rating Scale. *Early Child Development and Care*, 104, 1-22.

- Kärby, G., & Giota, J. (1995). Parental conceptions of quality in daycare centers in relation to quality measured by the ECERS. *Early Child Development and Care, 110*(95), 1-18.
- Layzer, J. I., Goodson, B. D., & Moss, M. (1993). *Final Report Volume I: Life in Preschool. Observational study of early childhood programs, prepared for the Office of the Under Secretary, U.S. Department of Education*. Cambridge, Mass.: Abt Associates.
- McCarty, F., Abbott Shim, M., & Lambert, R. (2001). The relationship between teacher beliefs and practices, and Head Start classroom quality. *Early Education and Development, 12*(2), 225-38.
- Munton, A. G., Rowland, L., Mooney, A., & Lera, M. J. (1997). Using the Early Childhood Environment Rating Scale (ECERS) to evaluate quality of nursery provision in England: Some data concerning reliability. *Educational Research, 39*, 99-104.
- NAEYC (1995). Cost, quality and child outcomes in child care centers: Key findings and recommendations. *Young Children, 50*(4), 40-44.
- NICHD Early Child Care Research Network. (1993). *The NICHD Study of Early Child Care: A comprehensive longitudinal study of young children's lives*. ERIC Document Reproduction Service No. ED 353 0870
- NICHD Early Child Care Research Network. (1996). Characteristics of infant child care: factors contributing to positive caregiving. *Early Childhood Research Quarterly, 11*, 269-306.
- NICHD Early Child Care Research Network. (1999). Child outcomes when child-care classrooms meet recommended guidelines for quality. *American Journal of Public Health, 89*, 107-1077.
- Peisner-Feinberg, E.S., & Burchinal, M. R. (1997). Relations between childcare experiences and concurrent development. The cost, quality and outcomes study. *Merill-Palmer Quarterly, 43*, 451-477.
- Peisner-Feinberg, E.S., Burchinal, M. R., Clifford, R. M., Culkin, M. L., Howes, C., Kagan, S. L., & Yazejiaen, N. (2001). The relation of preschool child-care quality to children's cognitive and social developmental trajectories through second grade. *Child Development, 72*(5), 1534-1553.
- Philips, D., Howes, C., & Whitebook, M. (1992). The social policy context of childcare: effects on quality. *American Journal of Community Psychology, 20*, 25-51.
- Scarr, S., Eisenberg, M., & Deater-Deckard, K. (1994). Measurement of quality in child care centers. *Early Childhood Research Quarterly, 9*, 131-151.
- The Department of Education (2004). Observational Study of Early Childhood Programs. Retrieved on June 23, 2004, from <http://www.ed.gov/offices/OUS/PES/esed/erlyanyl.htm>
- Tietze, W., Bairrao, J., Leal, T.B., & Rossbach, H.G. (1998). Assessing quality characteristics of center-based early childhood environments in Germany and Portugal: A cross-national study. *European Journal of Psychology of Education, 13*(2), 283-298.

Tietze, W., Cryer, D., Bairrao, J., Palacios, J., & Wetzel, G. (1996). Comparisons of observed process quality in early child care and education programs in five countries. *Early Childhood Research Quarterly, 11*, 447-475.