The School Readiness Initiative in South-Central Connecticut:

Classroom Quality, Teacher Training, and Service Provision

Meriden Middletown New Haven Waterbury

Final Report of Findings for Fiscal Year 1999

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This evaluation is the product of a community-driven effort. As such, the true authors are the local school readiness councils, mayors, and school superintendents in the four municipalities whose programs were being evaluated. The driving force behind this evaluation was, and remains, the four school readiness coordinators from these municipalities: Lisa Quine Brini (Meriden), Denise Duclos (New Haven), Christine Fahey (Middletown), and Andrea Urbano (Waterbury). Both individually and collectively, their enthusiasm and creative input were invaluable to the collaborative process. Alice F. Torres of the Area Cooperative Educational Services coordinated the vision of these communities into a coordinated effort, and singularly is responsible for a large degree of the success of this endeavor. (Prior to the release of this report, Donna Fox replaced Ms. Urbano as the Coordinator in Waterbury. Though not the focus of this evaluation, the school readiness program in West Haven, under the coordination of Billie Ladd and Diane Horan, has recently joined this effort and will be included in future reports.)

A project like this requires the coordinated efforts and support of many individuals and groups. Data were collected through the careful efforts of our trained staff of classroom raters (in alphabetical order): Donald Abdule-Lateef, Rachel Baker, Kristin Cool, Sarah Patton Davis, Katherine DeNaples, Gail Gatling-Ellison, Barbara Hegenbart, Dr. Janet P. Kremenitzer, Amy Mason-Mann, Jennifer Petito, Karen Prevost, Tina Weiner, and Nancy Wogman. In addition to her work as a classroom rater, Amy Mason-Mann coordinated much of the scheduling of classroom observations and helped manage the flow of information. Dr. Rebekah Levine Coley, of Boston College, provided the training on the observational measures used in this study, and Magdalina Hernandez and Deborah Ditze assisted as mentors. Gail A. Gould was responsible for much of the organization and entered all of the data collected.

Some of the major findings presented in this report were discussed with State Senator Thomas Gaffey, Senator Joan Hartley, and Representative Cameron Staples. Their comments and encouragement are sincerely appreciated. Dr. Paul Flinter, Bureau Chief, and Joyce Staples, Education Consultant, (both of the Bureau of Early Childhood Education for the Connecticut Department of Education) also were exceptionally helpful. Drs. Edward Zigler and Nancy Close of the Yale Child Study Center provided constructive critiques of earlier drafts of this report.

A special thanks is extended to the directors, teachers, and assistant teachers at each of the 123 classrooms that were the focus of this evaluation. Without their cooperation this project would have been neither possible nor profitable. In addition, the staff at several sites made their classrooms available to us as practice sites for training our observers, and their important role in this project is gratefully acknowledged.

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CONTENTS

LIST OF TABLES

LIST OF FIGURES

EXECUTIVE SUMMARY

The School Readiness Initiative in South Central Connecticut: Classroom Quality, Teacher Training, and Service Provision

Final Report of Findings for Fiscal Year 1999

After nearly forty years of research on the effects of preschool, two overall findings appear clear. First, preschool programs can have a remarkable, long-lasting impact on the lives of low-income children. Second, these impacts are dependent on the quality of the preschool program – high quality preschool programs lead to high quality impacts, and low quality programs are often associated with disappointing findings. Furthermore, research suggests that the importance of quality in preschool programs appears to be independent of the child's home environment. Indeed, there is a current awareness of the role of quality that is unprecedented in the field of early childhood care and education. In evaluations of state-funded preschool programs in both Michigan and South Carolina, children who attended high-quality programs were found to have achieved grater levels of school readiness than children who attended lesser quality programs. Nationally, Head Start has launched a similar investigation into the role of quality, and the results have shown the same relationship between quality and child outcomes.

Given the wealth of evidence supporting the effectiveness of high-quality preschool programs at enhancing the lives of low-income children, the intent of this study was not to heap further evidence on a clearly decided issue. Rather, our purpose was to document the degree to which the 123 Connecticut School Readiness Initiative (CSRI) classrooms operating in South-central Connecticut during FY 1999 are achieving high-quality in the services they are providing. Rather than producing stagnant "yes-no" data regarding the effectiveness of the program, the goals of this project included identifying factors that may contribute to the attainment of classroom quality and providing timely and informative feedback to the individual classrooms and programs in order to facilitate their own quality enhancement.

The main purpose of this study is to provide a baseline from which to develop plans for continuous program improvement. Basic evaluative questions include the following: How do classrooms rate on the various structural and process indicators of quality that are known to be related to positive child outcomes? What are the characteristics of the directors, teachers, and assistants that provide the care and education services? What aspects of the classroom are related to quality? How might quality enhancement efforts best be supported?

EVALUATION METHODS

In this evaluation, measures of classroom quality and characteristics were obtained on all 123 classrooms across the four priority school districts in South-central Connecticut, including Meriden (n = 18), Middletown (n = 22), New Haven (n = 54), and Waterbury (n = 29). Data were collected by 13 trained observers using the *Early Childhood Environment Rating Scale–Revised* (ECERS-R) and the *Arnett Caregiver Interaction Scale* (CIS), two well-known and

validated scales that have been used in a variety of similar projects nationwide. Observers were trained during a three-day workshop and acceptable levels of inter-rater reliability were achieved in practice observations prior to data collection (median agreement on the ECERS-R was 95%). Surveys were then mailed to individual program directors, classroom teachers, and assistant teachers. Results for individual programs and classrooms were provided to directors and teachers, and assistance was offered regarding the establishment of a plan for enhancing the quality of services in each participating classroom. In addition, immediate needs were addressed to insure that all site-specific health, safety, and facility repair issues were remedied. School readiness councils at each of the four municipalities used either current quality enhancement or "carry-over" funds for these program improvements.

This project was funded by the school readiness councils of the four priority school districts in South-central Connecticut during the second year of the CSRI (FY 1999; Meriden, Middletown, New Haven and Waterbury), under the coordination of Area Cooperative Educational Services (ACES). Rather than each of the municipalities designing, implementing and funding their own evaluation, effort and money were combined in a single project. In this way each school readiness council was able to receive an evaluation of their CSRI classrooms at a fraction of the cost and effort of separate evaluations. Furthermore, the increased number of classrooms that resulted from this combined effort permitted more sophisticated analyses and greater confidence in the results.

MAJOR FINDINGS FROM FISCAL YEAR 1999

1. ***Overall, results of classroom observations indicated exceedingly wide variability in the quality of CSRI classrooms.*** Sixty percent of classrooms that received school readiness funding as of June 1999 received scores in the "good" to "excellent" range, and forty percent needed work to reach that level of quality. Indeed, the majority of CSRI classrooms appear to be doing a good job at providing high quality care and educational opportunities to young children, and some classrooms are truly exemplary. The degree of variability in quality observed in these CSRI classrooms, however, far exceeded that typically observed in other large-scale programs. Additionally, 24% of the CSRI classrooms scored in the "inadequate" range on at least one of the seven ECERS-R domains, and most classrooms (71%) scored below the threshold for "good" in at least one area. These findings indicate that many classrooms needed some or considerable help in at least one area.

2. ***Classrooms in programs accredited by the National Association for the Education of Young Children (NAEYC) significantly outscored their non-accredited counterparts on virtually every measure of program quality assessed.*** Furthermore, not even one of the 39 NAEYC-accredited classrooms scored in the "inadequate" range on the ECERS-R, and only four scored in the "minimal" range, overall. Unfortunately, only 32% of the classrooms in these four cities were accredited. This significant relationship between NAEYC accreditation and classroom quality existed across all major program funding types: public-funded, for-profit, non-profit agency.

3. ***Both the number of staff and the overall staff-child ratio was significantly related to***

classroom quality. Over 98% of all CSRI classrooms met or bettered the minimal adult-child ratios for classrooms serving four-year-olds recommended by NAEYC, Head Start, Connecticut child care licensing regulations, and most state-funded prekindergarten programs around the nation. Additionally, 82% of all classrooms exceeded the 1:8.5 ratio recommended for classrooms predominantly serving three-year-olds. Adult-child ratios were typically a favorable 1:6 to 1:7. Analyses indicated that classrooms with only one teacher in the room provided far less "school readiness" oriented activities than did classrooms with three or more staff in the room. Furthermore, 26% of the classrooms with 7 or more children per staff member scored in the "inadequate" range in terms of providing appropriate activities, whereas less than half that proportion (12%) scored in this range when a more favorable staff-child ratio of less than 7 children per staff member was provided.

4. ***Safety and health concerns were noted in many classrooms.*** In particular, 27% of the playgrounds were inadequate in size for the number of children utilizing them, and 31% of the playgrounds did not meet minimal levels of safety. Also, 34% of classrooms evidenced *at least one* major safety hazard inside or outdoors that potentially could lead to a serious injury for children. Indoors, 7% of classrooms were in *poor repair* (e.g., peeling paint on the walls and ceiling; rough and damaged floors), and another 7% had *several indoor hazards* that could result in serious injury. Also, 11% of the classrooms showed clear evidence of *unsanitary practice* (e.g., *most* of the children and/or adults did not wash their hands before handling food), and in 6% of the classrooms an inadequate control of germs was observed. Classrooms both in public-funded and faith-affiliated programs were found to need particular help in providing a safe environment for children.

5. ***The area of greatest need for quality improvement was in the program aspects most consistent with CSRI's legislated goal of promoting "school readiness" through a developmentally appropriate learning curriculum.*** CSRI classrooms tended to struggle in providing a consistent and developmentally appropriate schedule of activities aimed at promoting "school readiness." Developmentally appropriate activities are designed to promote children's development in the areas of number skills, visual/spatial skills, fine motor control, natural science, and creative expression. In the Activities domain of the ECERS-R, where much of this is measured, only 37% of the classrooms achieved a rating of "good" or higher, and 15% were rated as being clearly "inadequate."

6. ***Across all measures, the single area of greatest weakness overall was in terms of implementing a preschool curriculum that actively promotes the acceptance of cultural diversity.*** The legislated intent for CSRI was to help bridge the socio-cultural gaps identified by *Sheff v. O'Neil*. Therefore, it was expected that materials, interactions, and curricula in CSRI classrooms would actively foster acceptance of cultural diversity and promote positive models for success across cultural groups. As many as 81% of classrooms, however, failed to achieve a rating of "good" in terms of promoting cultural acceptance, and more than one out of every five classrooms (21%) were rated as being "inadequate." For example, in 11% of the classrooms, all of the dolls, pictures, books, and other materials reflected only one ethnicity, even though children from a variety of

cultures attended the program.

7. ***In many classrooms, teachers and assistant teachers needed enhanced opportunities to pursue formal credentials in early childhood education, and compensation and working conditions that better matched their level of training.*** Indeed, in many classrooms teacher and assistant teacher qualifications were weak, salaries were quite low, and working conditions were poor. Of staff completing our survey, only 56% of the lead teachers in CSRI classrooms possess a bachelor's degree or higher. 69% of all assistant teachers, however, possessed no more than a high school diploma. Furthermore, of the teachers employed full-time, full-year 13% earned an amount under the current federal poverty level for a family of four, and only 6½% earned enough for economic self-sufficiency in the city in which they live. These figures are far more alarming for full-time, full-year assistant teachers, of which 59% earned a salary under the current federal poverty level and none were able to achieve single income economic self-sufficiency. Furthermore, CSRI programs tended to struggle in their ability to provide adequate working conditions for their staff. For example, teachers and assistants in 12% of the classrooms have no break time or moments away from the children during the entire day.

8. ***Teachers and assistant teachers reported a considerable amount of staff turnover at the classroom level.*** Specifically, 17% of the teachers and 21% of the assistants reported that this was their first year teaching in this particular classroom, and 58% and 65% respectively reported no more than one year of previous experience in this classroom. These figures raise considerable concerns regarding the stability of teaching teams, and may be related to the issue of weak salaries previously mentioned. Further research would be needed to better understand the cause of these findings.

9. ***Many classrooms do not have access to the appropriate support services necessary for comprehensive school readiness programming.*** Most all classroom teachers (96%) reported access to a nurse or pediatrician. However, about one-third of the classrooms had no access to a speech/language therapist or a licensed psychologist/psychiatrist, and over half of the classes reported no access to a dentist, dietitian, or physical/occupational therapist.

RECOMMENDATIONS

1. ***Efforts to improve the quality of CSRI classrooms through NAEYC accreditation should be increased.*** One very optimistic finding from the project was that classrooms in NAEYC accredited programs provided significantly higher quality care and education, relative to their non-accredited counterparts. Although the initial legislative intent was that only "nationally accredited programs" be provided CSRI funding, by far most programs do not meet this standard of acceptability and many appear to be far from achieving it. However, locally driven facilitation of appropriate accreditation strategies may be a highly efficient means of promoting and maintaining high-quality CSRI classrooms.

Considerable research has supported the value of NAEYC accreditation, and a recent study has demonstrated that preschool classrooms in programs undergoing NAEYC accreditation significantly improve in quality during the accreditation process (Whitebook, Sakai, & Howes, 1999). Indeed, NAEYC accreditation is the standard benchmark for quality in the field of early childhood care and education, and classrooms in programs not accredited by NAEYC were far less successful in achieving the level of quality shown to be predictive of positive child outcomes. *However, it is worth stating that the findings in this evaluation are only applicable to accreditation through NAEYC, and the author knows of no research supporting the utility of accreditation through any alternative organization at the preschool level.*

2. ***Increased funding for quality improvement is critical to helping programs meet the legislative intent of CSRI.*** It is through evaluative projects such as this one that the classrooms and programs most in need of help can be identified and detailed plans for continuous program improvement be devised and implemented. In many instances quality enhancement is most needed in the areas directly associated with the legislated intent of CSRI, and in the areas of basic health and safety practices. This process of data-driven accountability and support has already begun in South-central Connecticut, and the data generated by this project has been essential to efficiently targeting quality enhancement efforts in a way that can result in measurable improvement. To meet the demand for targeted program improvement, we advocate establishing a quality enhancement line item budget of at least 10% of the total capacity funding for each priority school district. In addition, we recommend that local school readiness councils be permitted to utilize carry-over funds to build a system of quality care and education.

   It seems likely that the need for quality monitoring and enhancing efforts will increase significantly as the number of children and families served by CSRI increases. Currently, local school readiness councils are responsible for deciding which child care programs within their respective municipalities will participate in CSRI. Potentially, as the need for participating child care programs increases, local councils may have to resort to placing children in classrooms of increasingly lower quality. Therefore, funds to enhance quality may need to be increased at a rate higher than commensurate increases in program capacity.

3. ***Efforts to measure classroom quality and hold program administrators accountable for continuous improvement should be supported.*** This project demonstrates the utility of measuring classroom quality using well-validated instruments administered by well-trained, outside, objective raters. These methods are the most promising for promoting accountability for providing high-quality services, helping to facilitate improvement, and documenting the impacts and judicious use of quality enhancement funds. In the absence of NAEYC accreditation in many CSRI classrooms, it seems reasonable to support quality through increased objective monitoring of classroom quality and coordinated quality enhancement efforts.

4. ***CSRI classrooms need to be provided increased access to services that support their work and promote the overall development of children and families.*** These services include educational consultants for curricular development; psychologists, psychiatrists, and licensed clinical social workers for mental health concerns; speech/language therapists and physical/occupational therapists for the promotion of language and motor development; and pediatricians, nurses, dietitians, and dentists for promoting physical health and hygiene. These services are useful for all classrooms in order to better facilitate children's overall development and well being and are essential for the integration of children with special needs. Among the recommendations recently made by the Governor's Blue Ribbon Commission on Mental Health (2000) was an increased focus on early prevention of mental health problems through better mental health collaborations with the public schools. Furthermore, the urgent need for greater focus on the mental health needs of preschoolers recently has been identified by a multidisciplinary task force of leaders in the fields of early intervention and mental health (Shonkoff & Phillips, 2000). Further research should focus on the mental health, developmental, and physical health needs of children and families being supported by CSRI, so recommendations regarding efficient service delivery can be generated. State-level CSRI policy development should include other state agencies responsible for the health, safety and care of young children.

5. ***Teachers and assistant teachers (and some directors) need to be compensated at a level more commensurate with the importance of their duties in order to attract and maintain a viable workforce of professionals.*** Full-time salaries are quite low, staff turnover rates are alarming, and it seems likely that poor compensation may be related to both staff turnover and classroom quality. Further research may better elucidate this for CSRI classrooms. Relatedly, efforts to support the professional development of teachers and assistant teachers should be supported, including their attainment of higher education, specific training in early childhood care and education, and active membership in professional organizations for early childhood educators. This increased professionalization of early childhood staff may lead to increased classroom quality.

CONCLUSIONS

CSRI classrooms vary greatly in terms of classroom quality. The majority of classrooms are quite good and some are exceptional. Others, however, are clearly inadequate as a form of safe child care and apparently ineffectual as a program to promote "school readiness." Indeed, the very areas of quality most directly associated with the legislative intent of the CSRI ("school readiness" oriented activities and promoting the acceptance of cultural diversity) are the areas of greatest concern in CSRI classrooms. Rather than focusing on issues of how to promote school readiness and provide a program responsive to the needs of the children and families it is intended to serve, many classrooms struggle with the basic issues of providing a safe and sanitary environment for children.

Although the legislative intent was that only "nationally accredited programs" be provided CSRI funding, by far most programs do not meet this standard of acceptability and many appear to be far from achieving it. These findings argue for the need to locally monitor the

quality of CSRI classrooms, at least in South-central Connecticut, and to continue to fund mechanisms for enhancing the quality of these classrooms. At present the surest indicator of quality in these classrooms is NAEYC accreditation. Unfortunately, over two-thirds of the classrooms in this year-one study were in non-accredited programs, and the need for CSRI classrooms far exceeds the number of accredited classrooms available. Therefore, alternative methods for assuring the quality of preschool placements need to be utilized, such as this evaluation's use of independent objective raters. At present, some funding is available for the enhancement of CSRI quality; however, it is not clear that this funding is adequate to meet the present needs of these classrooms.

High-quality early childhood care and education is not easy to provide, and any large program like the CSRI needs time and focused effort to mature. The data in this study represent a good first step toward the goal of providing a safe and developmentally appropriate preschool program. Any program worth doing is worth doing well – especially when Connecticut's youngest and most vulnerable children are concerned.

The School Readiness Initiative in South Central Connecticut: Classroom Quality, Teacher Training, and Service Provision

Final Report of Findings for Fiscal Year 1999

INTRODUCTION

In 1997 the Connecticut state legislature passed PA 97-259 creating the Connecticut School Readiness Initiative (CSRI). The program is under the joint administration of the Connecticut Department of Social Services (DSS) and the State Department of Education (SDE). The primary purpose of the CSRI is to increase the availability of high quality full-day, full-year child care programs for low-income families and to improve the school readiness of Connecticut students. In the wake of the *Sheff v. O'Neil* court decision, calling for improved racial integration and more equitable resource allocation in Connecticut schools, CSRI further was intended to help bridge the school readiness gap between primarily minority urban students and their more affluent suburban peers (Cornerstone Consulting Group, 1999). The program primarily targets low-income preschoolers ages 3 to 5 and provides funding for up to two years of services. During FY 1998 CSRI began funding early childhood care and education programs located in Connecticut's 14 identified priority school districts. A priority school district is one that is either located in one of Connecticut's eight largest cities or is among the top eleven school districts in the number or concentration of students with remedial needs and eligibility for *Temporary Aid to Needy Families* (Connecticut Department of Education & Department of Social Services, 2000). The program has been authorized for expansion over a five-year period.

The CSRI represents a state-to-local model that requires multiple levels of partnerships. The mayor and public school superintendent in each participating municipality are responsible for the oversight of the program. They in turn appoint a local school readiness council responsible for allocating funding to individual programs that are deemed able to meet the child care and education needs of the constituent children and families. Technical assistance to the local councils and participating child care programs during the start-up phase was provided through the state's six Regional Education Service Centers (RESCs). These RESCs provide support in efforts to enhance the quality of these programs and services. Area Cooperative Educational Services (ACES), the RESC responsible for South-central Connecticut, coordinates many of the support, training, and evaluation (including this particular study) efforts for CSRI programs within its geographic region. Funds have been set aside for enhancing the quality of CSRI programs (currently set at 5% of the operating budget) and for promoting accreditation efforts. These efforts are coordinated through the local councils.

In recent years, many states have implemented preschool programs targeting low-income families. In fact, all but 10 states provide some funding for early childhood care and education programs operating within their states, and 33 states have even implemented their own unique state-funded preschool program (SFPP), typically administered through the state's public schools (Gilliam & Ripple, in press; Ripple, Gilliam, Chanana, & Zigler, 1999). In all but 8 of these 33 SFPPs, classrooms are located in a variety of settings (e.g., public and private schools, Head

Start centers, community centers, child care facilities, and in-home programs) through subcontracted arrangements with the public schools.

In some contrast to other state efforts, the Connecticut model is more inclusive of different types of local child care and education agencies, with the local school readiness councils (rather than the public schools alone) coordinating the provision of services. Arguably, the Connecticut model may provide greater local control, flexibility and coordination of services. On the other hand, the relatively greater diversity of child care programs with more diffused authority and accountability may create challenges for maintaining a minimal level of quality across all classrooms, especially when the need for additional "slots" is high. These issues were acknowledged early in the implementation of CSRI (Cornerstone Consulting Group, 1999).

The Role of Quality in Early Childhood Care and Education

After nearly forty years of research on the effects of early childhood education programs and other child care programs, two overall findings appear clear. First, high-quality preschool programs can have a remarkable, long-lasting impact on the lives of low-income children (Guralnick, 1997; Karoly et al., 1998; McCall, Larsen, & Ingram, 2000; Zigler, 1998). Positive impacts have been documented in terms of increased school readiness and social competence, as well as decreased behavior problems (Barnett, 1998; Yoshikawa, 1995). Second, these impacts are dependent on the quality of the preschool program. In studies, high-quality preschool programs are related to beneficial results, whereas low-quality programs are often associated with disappointing findings (Berlin, O'Neal, & Brooks-Gunn, 1998; CQO Study Team, 1995, 1999; Gilliam, Ripple, Zigler, & Leiter, 2000; Love, Schochet, & Meckstroth, 1996). This relationship has been demonstrated in both child care programs and early childhood education programs, such as Head Start and state-funded prekindergarten programs (CQO Study Team, 1995, 1999; Gilliam & Zigler, in press; Howes, Galinsky, & Shinn, 1998). Furthermore, research suggests that the importance of quality in preschool programs appears to be independent of the child's home environment (Bryant, Burchinal, Lau, & Sparling, 1994). In other words, quality in early childhood care and education matters whether you are rich or poor. Indeed, there currently appears to be an unprecedented awareness of the role of quality in the field of early childhood care and education. Head Start, the nation's largest early childhood education program, has recently begun to look at the relationship between classroom quality and child outcomes in a nationally representative sample of classrooms (Zill et al., 1998). Results of Head Start's evaluation mirror others studies, with the quality of classroom experiences showing a clear relationship to child outcomes.

Indicators of program quality are often described as being either structural or process (Schweinhart, 1999). Structural characteristics are program features that are straightforward and easily measured: class size, child-staff ratios, teacher and director education and experience. Lower child-staff ratios have been found to be related to improved social-emotional functioning, language, behavior, and play skills in children and increased responsiveness in teachers (Howes et al., 1998; Howes, Smith, & Galinsky, 1995; Love et al., 1996). Teacher training has been associated with greater levels of teacher sensitivity in interactions with children (Arnett, 1989).

Process characteristics refer to such things as physical arrangement of the classroom,

teacher and child behaviors and interactions, caregiver involvement, and the degree of enrichment and developmental stimulation. These variables are more difficult to measure than structural characteristics and require direct observation and careful documentation. However, process variables provide a more direct assessment of what the child actually receives and have also been associated with positive child outcomes (Love et al., 1996). Both structural and process characteristics are significantly related to child outcomes and are themselves inter-related (Phillipsen et al., 1997).

In terms of state-funded preschool programs, only three states to date appear to have used measures of process quality as part of a statewide effort to document the quality and effectiveness of their programs. Both South Carolina and Michigan found a significant relationship between classroom quality, as measured by standardized observational instruments, and child developmental outcomes. Specifically, South Carolina found that preschool teacher's classroom management skills were significantly related to children's later reading scores in kindergarten (South Carolina Department of Education, 1987). In fact, it was only after classrooms with low quality ratings were removed from analyses that positive program impacts were found. Michigan also found a significant relationship between program quality in several areas and children's subsequent developmental level in kindergarten (Florian, Schweinhart, & Epstein, 1997). In contrast to South Carolina and Michigan, as well as the previously mentioned studies, Kentucky was unable to find a relationship between measured classroom quality and program impacts (Hemmeter et al., 1997). This lack of a relationship may be due in part to the relatively small number of classrooms evaluated (n = 24) and the somewhat restricted variability in quality scores in that sample.

Purpose of This Study

Given the wealth of evidence supporting the effectiveness of high-quality preschool programs at enhancing the lives of low-income children, the intent of this study was not to heap further evidence on a clearly decided issue. Rather, our purpose was to document the degree to which Connecticut School Readiness Initiative (CSRI) classrooms in South-central Connecticut are achieving high-quality in the services they are providing. The goal of this study is not the production of stagnant "yes-no" data regarding the effectiveness of these CSRI classrooms. Nor is the goal simply to identify some classrooms as "good" and others as being less than good. Rather, the goals include the identification of factors that may contribute to the attainment of classroom quality and the provision of timely and informative feedback to the individual classrooms and programs in order to facilitate their own quality enhancement.

The main purpose of this study is to provide a baseline from which to develop plans for continuous program improvement. Basic evaluative questions include the following: How do classrooms rate on the various structural and process indicators of quality that are known to be related to positive child outcomes? What are the characteristics of the directors, teachers, and assistants that provide the care and education services? What aspects of the classroom are related to quality? How might quality enhancement efforts best be supported?

This project was funded by the school readiness councils of the four priority school districts in South-central Connecticut during the second year of the CSRI (FY 1999; Meriden,

Middletown, New Haven and Waterbury), under the coordination of Area Cooperative Educational Services (ACES). Rather than each of the municipalities designing, implementing and funding their own evaluation, effort and money were combined in a single project. In this way each school readiness council was able to receive an evaluation of their CSRI classrooms at a fraction of the cost and effort of separate evaluations. Furthermore, the increased number of classrooms that resulted from this combined effort permitted more sophisticated analyses and greater confidence in the results.

EVALUATION METHODS

This evaluation was conducted as a collaborative effort of the school readiness programs of the four participating cities, through a partnership with the Area Cooperative Educational Services (ACES). The primary purposes of this evaluation were to examine the quality of care provided by CSRI classrooms in all priority school districts in South Central Connecticut during the 1999 fiscal year. At that time there were only four cities (Meriden, Middletown, New Haven, and Waterbury) in that portion of the state with economic needs great enough to be classified by the state as "priority districts." The Connecticut Departments of Education and Social Services targeted these four high-needs cities for immediate implementation of the CSRI. This evaluation aimed to collect data on classroom quality and program and teacher characteristics in all classrooms in those four cities that were currently serving CSRI children. As such, these data represent the status of all such classrooms during the 1999 fiscal year, rather than a sample from which inferences must be made.

As of June 30, 1999, South-central CSRI children in these four priority districts were served in 123 classrooms located in 41 distinctly different preschool programs. A total of 2,177 children were served in these 123 CSRI-funded classrooms. These programs and classrooms, as well as the teachers and directors who work there, were the focus of this evaluation.

It is important to acknowledge that the classroom quality data collected in this study represent how these classrooms were functioning at a single moment in time, i.e. the particular moment these classrooms were being observed and rated. Therefore, it is true that these results represent a "snapshot" in the lives of these dynamically changing programs and classrooms. These results are best interpreted as a baseline estimate of classroom quality at the time the ratings were made. Nonetheless, all program directors and classroom teachers were aware of the exact date and time of their ratings, and although these ratings may represent a "snapshot" in time, it is anticipated that teachers likely strove to present their classrooms at their best possible during the time the raters were observing. In other words, *it is anticipated that for many classrooms these ratings may represent an upper-end estimate of their quality*.

Evaluation Instruments

This study used both standardized measures of classroom quality and surveys administered to program directors, teachers, and assistant teachers. These instruments are presented briefly below.

Early Childhood Environment Rating Scale-Revised Edition

The ECERS-R (Harms, Clifford, & Cryer, 1998) is a well-known, standardized measure of the quality of childcare. It is probably the most widely used instrument of its kind, and has been utilized extensively for both program evaluation and improvement. This instrument is currently being used in the statewide evaluation of CSRI, being conducted by Terry Bond of the Families and Work Institute. It has also been used in other evaluations of state preschool programs, as well as several national studies of program quality in childcare and Head Start. The

ECERS-R has sound psychometric properties of reliability and validity as a measure of classroom quality with implications for child outcomes. The ECERS-R consists of 470 individual indicators of quality that contribute to 43 specific items located in 7 quality domains. The domains include (1) Space and Furnishings, (2) Personal Care Routines, (3) Language-Reasoning, (4) Activities, (5) Interaction, (6) Program Structure, and (7) Parents and Staff. Each item is scored on a seven-point anchored scale (1 = Inadequate; 3 = Minimal; 5 = Good; 7 = Excellent). Items within domains are averaged to yield a similarly interpreted score for each domain and for the total ECERS-R. Complete administration of the ECERS-R requires a well-trained rater and about 4 hours of classroom observation, followed by about 45 minutes of teacher interview.

Individual items address the adequacy of materials and practices in each of the seven domains identified above. These items and their respective domains are presented in Figure 1, in order to provide the reader with a sense of what each of these domains measures.

Caregiver Interaction Scale

The CIS (Arnett, 1989) is another well-known instrument that measures quality of childcare. (See Appendix A.) Unlike the ECERS-R, which measures a wide variety of issues associated with childcare quality, the CIS focuses exclusively on the quality of the interactions between the teacher(s) and children. The CIS consists of 26 items that measure four aspects of interaction: the frequency and quality of *positive interactions* and the degrees to which teachers are *not overly detached* from the children, *not overly permissive*, or *not overly punitive*. Each item is scored on a four-point scale and averaged to yield domain scores. Domain averages were transformed so that a high score always corresponded to something positive (e.g., high degrees of positive interactions, teachers not being too punitive, etc.).

Connecticut School Readiness Initiative Teacher/Director Survey

This three-page survey was developed specifically for this evaluation. (See Appendix B.) It consists of items that measure teacher and director experience, training and ongoing professional development, teacher/director turnover, teacher/director salary and benefits, the program's availability of comprehensive services, program accreditation, program funding, etc. Teachers and program directors were asked to complete this survey and mail it back to the evaluators. Of the 123 classrooms in this evaluation, lead teachers from 81 classrooms (65.85%) completed the survey. No meaningful differences were noted in classroom quality between teachers completing and not completing the survey, as measured by the ECERS-R total score ($F_{(1,121)} = 0.20$; $d = 0.08$).

Teacher Thoughts and Feelings Survey

This 22-item survey has been used in previous research, and addresses issues of teacher motivation and burn-out. (See Appendix C.) It was included in this evaluation in order to provide a measure of the degree to which teacher and director feelings are related to issues of program quality. Results from this survey are not presented in this report, but will appear in subsequent reports.

Figure 1
ECERS-R Domains and Contributing Items

Space & Furnishings
1. Indoor space
2. Furniture for routine care, play, & learning
3. Furniture for relaxation
4. Room arrangement for play
5. Space for privacy
6. Child-related display
7. Space for gross motor
8. Gross motor equipment

Personal Care Routines
1. Greeting/departing
2. Meals/snacks
3. Nap/rest
4. Toileting/diapering
5. Health practices
6. Safety practices

Language-Reasoning
1. Books and pictures
2. Encouraging children to communicate
3. Using language to develop reasoning skills
4. Informal use of language

Program Structure
1. Schedule
2. Free play
3. Group time
4. Provisions for children with disabilities

Activities
1. Fine motor
2. Art
3. Music/movement
4. Blocks
5. Sand/water
6. Dramatic play
7. Nature/science
8. Math/numbers
9. Use of TV, video, and/or computers
10. Promoting acceptance of diversity

Interaction
1. Supervision of gross motor activities
2. General supervision of children
3. Discipline
4. Staff-child interactions
5. Interactions among children

Parents & Staff
1. Provisions for parents
2. Provisions for personal needs of staff
3. Provision for professional needs of staff
4. Staff interaction and cooperation
5. Supervision and evaluation of staff
6. Opportunities for professional growth

Procedures

Recruiting and Training Classroom Observers

This evaluation relies heavily on ratings of classroom quality, as measured by well-trained, objective raters who are not familiar with the programs being evaluated. Therefore, the

recruitment and training of these raters were extremely important issues.

Recruitment. During early Spring 1999, 12 raters were recruited by ACES. It was agreed that ACES would take full responsibility for the recruitment, training, and dispatch of raters, so that raters could remain objective and separated from local school readiness programs. All raters held college degrees in either early childhood education or some other form development or human services. All raters had a minimum of a bachelor degree, although three had master degrees and one had a doctorate. Furthermore, all raters had at least some experience (median of 8 years) with early childhood education.

Training. Prior to data collection, all raters were provided three days of training on both of the standardized classroom quality measures used in this evaluation. Training was provided by a professional who has extensive experience in using and training others to use these instruments and is not affiliated with this study. Training consisted of one partial day of orientation to the study and the two standardized measures and two full days practicing the measures in real preschool classrooms that were not a part of this study. During the orientation sessions, raters were introduced to all of the items individually, scoring was discussed in detail, and all raters practiced scoring classrooms from a training video (Harms & Cryer, 1999). During the final two days of training, raters were sent in teams of two or three to independently rate classrooms, in order to provide further practice and discussion of scoring issues and to collect inter-rater reliability data.

Inter-rater Reliability. After independently rating classrooms during the final two days of training, raters were asked to compare their ratings. Where differences in scoring existed, raters were instructed to arrive at a consensus score. Individual raters' scores were compared to the consensus scores. Near-hit accuracy rates were computed for each rater by dividing the number of items on the *ECERS-R* that the rater scored within one point of the consensus score by the total number of items scored. Typically, researchers have interpreted near-hit rates anywhere from 80% to 90% as providing adequate evidence of inter-rater reliability. By the end of the training, the raters used in this evaluation had achieved a median near-hit rate of 94.9%, with a mean near-hit rate of 91.1%.

Data Collection

After training was completed and acceptable inter-reliability demonstrated, raters were dispatched to all 123 classrooms where CSRI children were enrolled. Classroom raters were used to evaluate classrooms in cities where they did not live, and care was taken to ensure that raters were not observing programs or classrooms where they might know staff. Classroom observations took place from late April to early June 1999. All but 13 of the 123 classrooms were observed during this period of time, and the remaining 13 were observed during the Spring of the following year. Raters returned completed ECERS-R and CIS protocols after each observation visit. After each classroom's visit was completed, teachers and directors were provided the survey forms and a stamped return envelope. Respondents were not compensated. Once data were returned, they were entered into a confidential database.

Timely Feedback to Programs

Results for individual programs and classrooms were provided to directors and teachers, and assistance was offered regarding the establishment of a plan for enhancing the quality of services in each participating classroom. Each classroom's results were printed individually and shared with the program director and classroom teacher. The school readiness coordinator for each city provided assistance on how to use the information for program improvement. Preliminary presentations of findings were given to the school readiness advisor councils at each city, as well as to program directors and teachers. Immediate needs were addressed to insure that all site-specific health, safety, and facility repair issues were remedied. School readiness councils at each of the four municipalities used either current quality enhancement or "carry-over" funds for these program improvements.

RESULTS AND DISCUSSION

Description of Programs and Classrooms

In this section programs and classrooms are described in terms of their location, type of funding, accreditation status, class size and staff-child ratios, and number of children with identified disabilities.

Numbers and Locations

As previously mentioned, 123 classrooms in 41 different programs served CSRI-funded children during FY 1999 in the four priority districts of South Central Connecticut. These programs and classrooms, and their respective location, are shown in Table 1 below. On average, each program serving CSRI-funded children had three different classrooms where those children were located.

Table 1
Number of Programs and Classrooms Serving CSRI-Funded Children during FY 98-99

Location	Number of Programs	Number of Classrooms
Meriden	7	18
Middletown	8	22
New Haven	18	54
Waterbury	12	29
Total for SC Connecticut	**41 ***	**123**

* Four childcare programs were operating in more than one city. Therefore, these numbers cannot be simply added.

Since the purpose of this study was not to compare one city's school readiness programs to another, no further mention will be made in this report regarding the performance of programs across different cities. Little usefulness can derive from pitting one city's programs against another. Indeed, such comparisons are not only unwarranted, they are also likely to yield misleading results. These 123 classrooms do not represent all of the preschool classrooms in these four cities. Rather they are the classrooms that have opted to accept CSRI-funded children. Therefore, cities with greater numbers of low-income families in need of subsidized childcare are likely to need to rely on a larger number of childcare programs of varied quality to meet that need, rendering inter-city comparisons rather meaningless.

Program Funding Types

One method of describing child care programs is based on their type of funding: non-profit, for-profit, and public-funded. Although all the programs included in this evaluation accept at least some level of public funding through CSRI, each program has its own history of funding that may be related to issues of program philosophy and quality. Table 2 presents the number of programs and classrooms broken down by specific funding type.

As can be seen in the table, non-profit agencies account for well over half the total

number of programs and classrooms where CSRI-funded children are served. Furthermore, a large proportion of those non-profit programs and classrooms are operated by a religious organization or a non-profit multi-service agency, such as the YMCA. Relatively few classrooms were located in for-profit childcare centers, and only one large for-profit chain (with two classrooms) was represented. As a single program (with four local grantees in this sample), Head Start utilized a sizeable proportion of the CSRI-funded positions.

Table 2
Programs and Classrooms by Type of Funding

	Programs		Classrooms	
	Number	**Percent**	**Number**	**Percent**
Non-Profit	**24**	**58.54**	**74**	**60.16**
Faith-Affiliated	(5)	(12.20)	(24)	(19.51)
University-Affiliated	(3)	(7.32)	(11)	(8.94)
Multi-Service Agency	(9)	(21.95)	(24)	(19.51)
Independent	(7)	(17.07)	(15)	(12.20)
For-Profit	**10**	**24.39**	**15**	**12.20**
Chain	(1)	(2.44)	(2)	(1.63)
Independent	(9)	(21.95)	(13)	(10.57)
Public-Funded	**7**	**17.07**	**34**	**27.64**
Public School	(2)	(4.88)	(11)	(8.94)
Head Start Grantee	(4)	(9.76)	(21)	(17.07)
State-Funded Center	(1)	(2.44)	(2)	(1.63)
TOTAL	**41**		**123**	

* Due to rounding, percentages may not always add up to exactly 100%.

Program Accreditation

Despite original legislative intents for national accreditation of all CSRI programs, the vast majority of CSRI program sites and classrooms in South-central Connecticut are not accredited by the National Association for the Education of Young Children (NAEYC), the nation's leading accrediting body for early childhood education programs. Only 39 of the 123 classrooms (31.71%) were in NAEYC-accredited centers. Public-funded programs were the least likely to hold NAEYC accreditation. (See Table 3.)

Table 3
Percent of Classrooms with NAEYC Accreditation by Funding Type

	NAEYC Accredited?	
	Yes	**No**
Non-Profit	36.49%	63.51%
For-Profit	33.33%	66.67%
Public-Funded	20.59%	79.41%
All Classrooms	**31.71%**	**68.29%**

* Due to rounding, percentages may not always add up to exactly 100%.

Class Size and Staff-Child Ratio

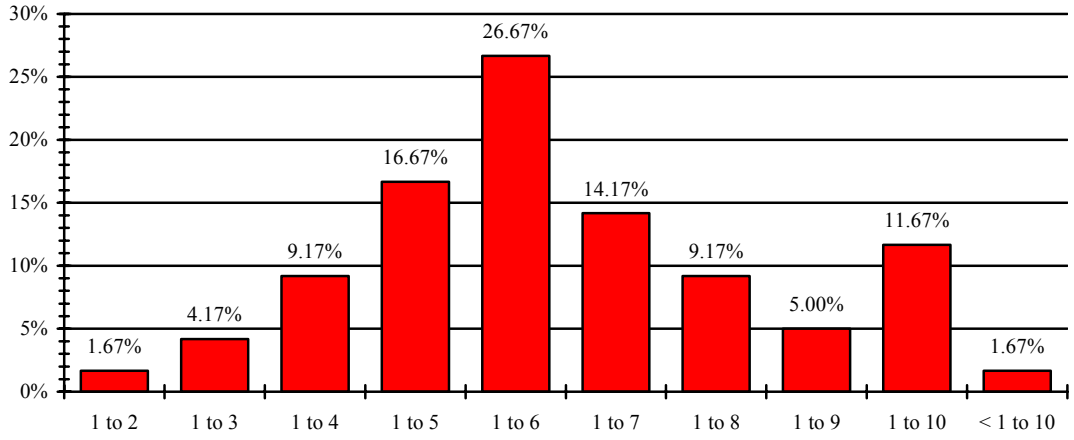
Nationally endorsed preschool guidelines (NAEYC, 1998; Head Start Bureau, 1999) recommend preschool class sizes no larger that 20 children and a staff-child ratio no greater than 1:10. These recommended limits match current child care licensing regulations established by the Connecticut State Department of Public Health. For classrooms serving predominantly three-year-olds, however, the recommendations for class size and staff-child ratio are 17 and 1:8.5, respectively. These guidelines are further endorsed by most (77%) of the 33 state-funded preschool programs around the nation, which mandate that all classrooms must match or better these criteria (Gilliam & Ripple, in press). During our observations, CSRI classrooms mostly met or exceeded these minimal guidelines. (See Table 4.) Classrooms had on average nearly 3 adult staff members present in the room. Teachers also reported average per class enrollments of nearly 18 children. Typically, during our visits, 3 to 4 children were absent. These figures combined to indicate an average 6.79 staff per child across all classrooms.

Table 4
Mean Number of Staff and Children in All Classrooms

	Number of Classrooms	Mean	*SD*
Staff Present	121	2.80	1.36
Children Enrolled	122	17.70	6.11
Children with Disabilities Enrolled	123	0.80	1.37
Children Present	121	14.11	4.83
Children Enrolled per Staff Member	120	6.79	2.05
Children Present per Staff Member	119	5.49	1.90

A breakdown of the proportion of classrooms with various staff-child ratios indicates that a sizeable percentage of the classrooms far exceeded these minimal guidelines. (See Figure 2.) Indeed, the most common staff-child ratio observed was 1:6, well exceeding the minimum for even classrooms serving predominantly 3-year-olds. Almost 12% of the classrooms, however, barely met the minimal guidelines, and two classrooms (1.67%) well exceeded the 1:10 mark — one classroom with 12 children per staff and one with a remarkable 14 preschoolers to one teacher.

Figure 2
Percent of CSRI Classrooms with Various Staff-Child Ratios (*n* = 120)



Although the mean number of children with diagnosed disabilities was reported to be only .80, these children did not seem to be evenly distributed throughout all the CSRI classrooms. These disabilities were typically some form of developmental delay (e.g., cognitive, speech/language, motor, etc.) with required special education programming or a medical condition that required special classroom accommodations. Most classrooms reported having no children with disabilities. Conversely, several other classrooms reported having as many as 3, 4, 5 or even more children with disabilities. (See Figure 3.) Classrooms reporting 2 or more children with disabilities did have 9% (Cohen's d = .29) [1] lower numbers of children per staff, relative to classrooms reporting no children with disabilities. (See Table 5.) Although this difference is heartening, this sample is too small to consider a difference of this size as being reliably replicable (F = 2.18; p = .12; Scheffé = .43).

[1] A common convention for interpreting the magnitude of standardized effect sizes as measured by Cohen's d is to group them into one of four bands: trivial (d < .20), small (d = .20 to .50), moderate (d = .50 to .80), and large (d = .80 or more; Cohen, 1962, 1988). However, even effect sizes that Cohen would categorize as "trivial" can be quite meaningful when the outcome being considered is highly valued (McCartney & Rosenthal, 2000; Rosenthal, 1993).

Figure 3
Number of Children with Identified Disabilities Per Classroom (*n* = 123)

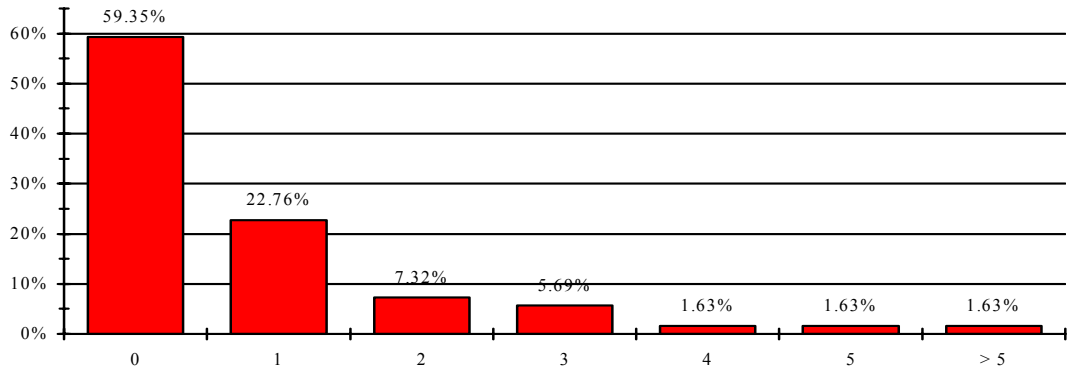


Table 5
Mean Number of Children per Staff in Classrooms with 0, 1, and 2 or More Children with Disabilities

	N	Mean	SD
0 Child with disability	71	6.78	1.97
1 Child with disability	27	7.35	2.06
2 or more children with disabilities	22	6.14	2.18

Overall Results of Classroom Observations

In this section the results of the classroom observations using the ECERS-R and the CIS are provided for all classrooms in each of the four cities combined. Breakdowns and analyses by program type, accreditation, teacher characteristics and other variables are provided later in this report.

Results of ECERS-R for All Classrooms

As previously described, ECERS-R scores are expressed on a 7-point scale (1 = Inadequate; 3 = Minimal; 5 = Good; 7 = Excellent). For the purposes of this report, scores from 1 to 2.99 will be interpreted as representing "Inadequate" performance, 3 to 4.99 as "Minimal," 5 to 6.49 as "Good" and 6.50 to 7 as "Excellent." Some scientists have considered scores in the "Minimal" range as indicative of marginally passable custodial childcare (childcare that does children no harm nor good), and "Good" and "Excellent" being associated with programs that support children's overall development.

The mean total ECERS-R score across all classrooms was 5.09, barely falling in the range identified as representing "Good" quality. (See Table 6.) Across the 7 ECERS-R domains, mean scores also fell within the lower portion of the "Good" range in all but one domain. The Activities domain, however, was in the "Minimal" range.

Table 6
ECERS-R Scores Across All CSRI Classrooms with Inter-domain Comparisons (*N* = 123)

	M	*SD*	*t*	*Cohen's d*
Space & Furnishings	5.06	1.21	-1.94	-0.10
Personal Care Routines	5.16	1.54	-0.24	-0.01
Language-Reasoning	5.18	1.51	0.08	0.00
Activities	4.55	1.20	-10.82 ***	-0.53
Interaction	5.49	1.76	3.61 **	0.21
Program Structure	5.52	1.44	4.37 ***	0.26
Parents & Staff	5.28	1.14	1.27	0.09
Total ECERS-R	**5.09**	**1.13**	**--**	**--**
Average Domain Score	**5.18**	**1.16**	**--**	**--**

** $p < .01$; *** $p < .001$. Each with standard Bonferroni correction for multiple comparisons.

Although the mean total score was in the "Good" range, considerable variability in scores was observed between CSRI classrooms, with scores ranging from 2.45 to 6.83. Figure 4 presents a graphical representation of the variability in ECERS-R total scores across all classrooms, with each circle indicating a single classroom's score. As can be seen, although scores appear somewhat more densely packed at the upper end, scores were reasonably evenly distributed throughout the observed range.

Figure 4
Variability in ECERS-R Total Scores across All Classrooms (*N* = 123)

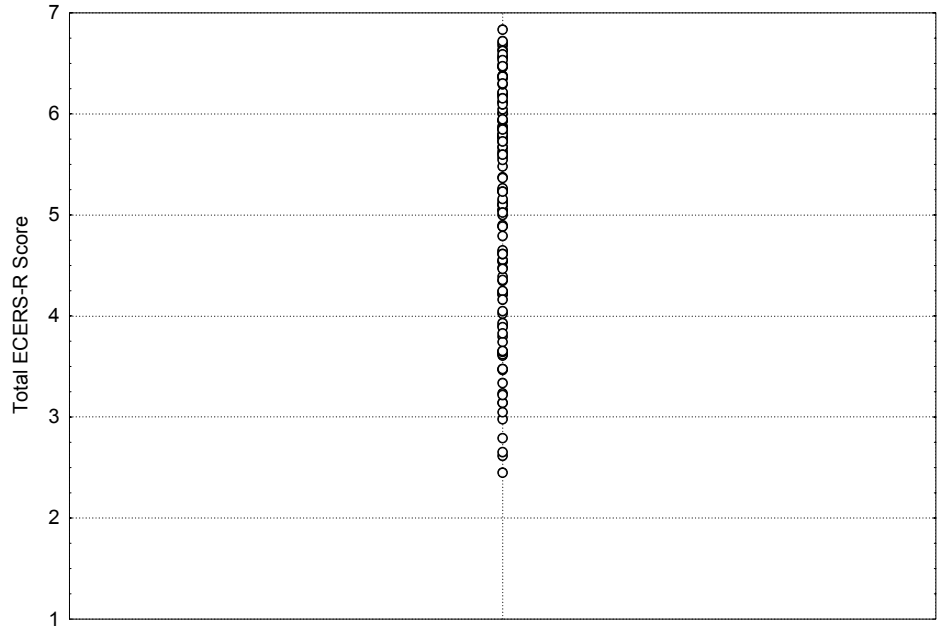
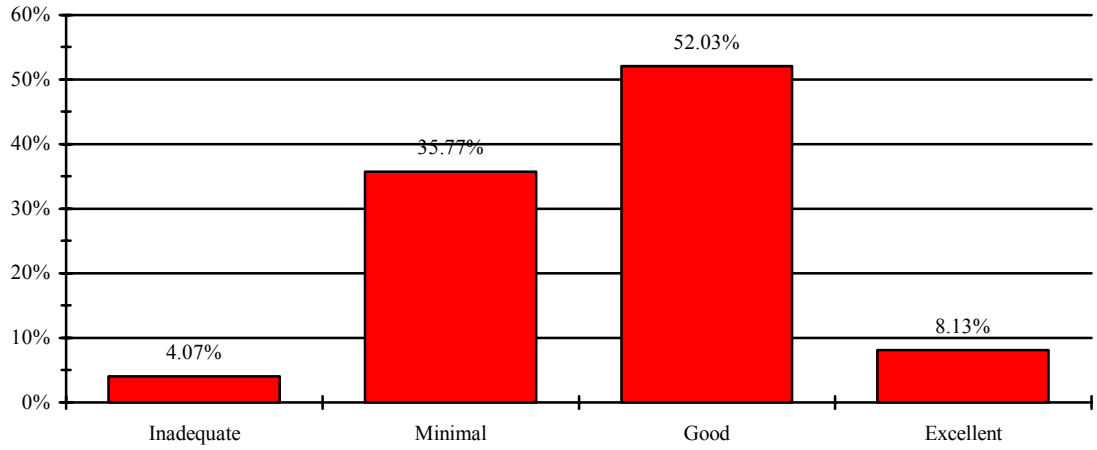


Figure 5 presents the ECERS-R total scores classified into the four quality bands defined earlier. About 40% of the classrooms obtained ECERS-R total scores below the threshold for "good," and about 4% (5 classrooms) obtained scores suggestive of "inadequate" overall quality. Based on the number of children enrolled in each of these classrooms, 824 children in these four

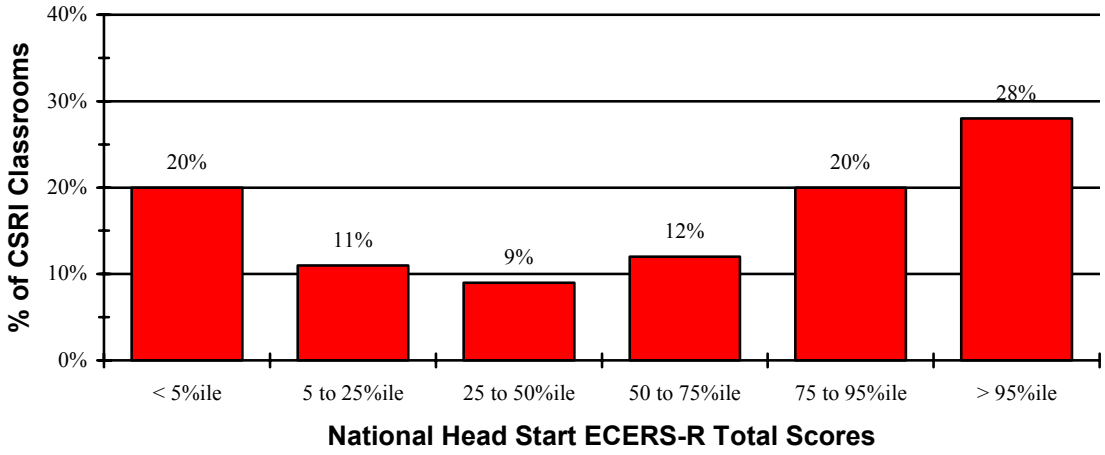
cities attended CSRI classrooms that were rated less than "good," and 85 of these children were enrolled in classrooms that overall were rated "inadequate."

Figure 5
Percent of ECERS-R Total Scores falling in Various Ranges of Quality (*N* = 123)



Possibly the best way to illustrate the degree of variability in quality observed across these CSRI classrooms is to compare the scores with data obtained from other sources. A recent nationally representative study of classroom quality in Head Start has indicated that mean ECERS total score for Head Start classrooms nationally is 4.9, with a standard deviation of 0.6 (Zill et al., 1998). Although the mean total score is close to what we obtained in our study (5.09), the standard deviation for our CSRI classrooms was nearly twice as large (1.13). This indicates a considerably larger degree of variability in total ECERS-R scores for our CSRI classrooms when compared to Head Start, which itself has been criticized for being too varied in quality (Zigler & Styfco, 1993). As shown in Figure 6, a greatly disproportionate percentage of CSRI classrooms achieved scores on the extreme ends of what is typical for Head Start classrooms nationally. Specifically, 20% of the CSRI classrooms in this evaluation achieved an ECERS-R total score in the bottom 5% of Head Start classrooms nationally, and 28% of the classrooms ranked in the top 5%. These percentages are respectively four and five times the expected rates, and suggest an exceptionally high degree of variability in overall classroom quality. In other words, many CSRI classrooms scored exceptionally high on the ECERS-R, but many other classrooms also scored exceptionally low. When these CSRI data are compared to results from the statewide evaluation of the Kentucky Preschool Program (the only other statewide preschool initiative evaluated with the ECERS), the variability observed in the CSRI is still over one-third larger (Hemmeter et al., 1997).

Figure 6
ECERS-R Total Scores Compared to a National Sample of Head Start Classrooms



ECERS-R Inter- and Intra-domain Comparisons

Table 7 presents the percentage of CSRI classrooms falling in each of the four score ranges across all seven ECERS-R domains. As can be seen in the table, the Activities and Interaction domains had the largest percentage of classrooms scoring in the "inadequate" domain. The Activities domain, however, appeared to be an area of particular weakness across classrooms, since over 62% scored below the threshold for a rating of "good."

Over 10% of the classrooms scored in the "inadequate" range on four of the seven domains presented in Table 7. These four domains mostly reflect the quality of the care and language-rich school readiness opportunities provided to the children. A further examination of domain scores indicated that 24.39% of the CSRI classrooms (serving a total of 490 children) scored in the "inadequate" range on at least one of the seven domains of quality. Furthermore, 10.57% of the classrooms scored in the "inadequate" range on three or more of the seven domains. Additionally, 70.73% of the CSRI classrooms scored below the threshold for "good" on at least one quality domain. In other words, although all classrooms could improve their services, about 71% of the classrooms had at least one area that was in need of special efforts toward quality enhancement, and about 24% of the classrooms had at least one area of deficiency requiring immediate improvement efforts.

Ipsative analyses were used to determine which domains of quality might represent areas of relative strength or weakness across all CSRI classrooms by comparing each domain score to the average domain score. Results suggest that the Activities domain represents an area of relative weakness as compared to other domains. As illustrated in Table 6 presented earlier, the

average domain score across all 7 domains was 5.18.[2] When the 7 mean domain scores were compared to the average domain score, three statistically significant departures from the average were identified, each with non-trivial effect sizes. Activities emerged as an area of relative weakness (d = -0.53; $p < .001$) across all classrooms, and both Program Structure (d = 0.26; $p < .001$) and Interaction (d = 0.21; $p < .01$) emerged as relative strengths. These three domains were examined closer at the item level.

Table 7
Percentage of CSRI Classrooms Scoring in Each Range on ECERS-R Domains (N = 123)

ECERS-R Domain		*% in Range*	*Cumulative %*
Space & Furnishings	Inadequate	1.63	1.63
	Minimal	40.65	42.28
	Good	43.09	85.37
	Excellent	14.63	100.00
Personal Care Routines	Inadequate	11.38	11.38
	Minimal	29.27	40.65
	Good	30.08	70.73
	Excellent	29.27	100.00
Language-Reasoning	Inadequate	10.57	10.57
	Minimal	26.02	36.59
	Good	39.84	76.42
	Excellent	23.58	100.00
Activities	Inadequate	14.63	14.63
	Minimal	47.97	62.60
	Good	34.96	97.56
	Excellent	2.44	100.00
Interaction	Inadequate	13.82	13.82
	Minimal	13.01	26.83
	Good	33.33	60.16
	Excellent	39.84	100.00
Program Structure	Inadequate	6.50	6.50
	Minimal	21.95	28.46
	Good	34.96	63.41
	Excellent	36.59	100.00
Parents & Staff	Inadequate	1.63	1.63
	Minimal	32.52	34.15
	Good	46.34	80.49
	Excellent	19.51	100.00

The Activities domain is comprised of 10 items that address aspects of the classroom that promote children's development in areas that facilitate school readiness (Table 8). In order to

[2] The average domain score differs from the total ECERS-R score, due to differing numbers of items in each domain. The total ECERS-R score represents the average of all 43 ECERS-R items equally weighted. The average domain score, in contrast, represents the mean of all 7 domain scores, each domain being equally weighted and comprised of differing numbers of items.

determine which particular aspects of quality most contribute to the relative weakness of south-central CSRI classrooms in this domain, these 10 individual items were compared to the overall Activities score. Two items emerged as relative weaknesses in this domain: Promoting Acceptance of Diversity (d = -0.51) and Music and Movement (d = -0.49), both $p < .001$ with standard Bonferroni correction (Olejnik, Li, Supattathum, & Huberty, 1997). Areas of relative strength for CSRI classrooms included Fine Motor (d = 0.36; $p < .001$) and Sand and Water materials (d = 0.35; $p < .01$).

Table 8
ECERS-R Scores within the Activities Domain with Intra-domain Comparisons (N = 123)

ACTIVITIES ITEM SCORES	*M*	*SD*	*t*	*Cohen's d*
Fine Motor	5.08	1.76	4.84 ***	0.36
Art	4.75	2.01	1.51	0.12
Music & Movement	3.83	1.71	-5.81 ***	-0.49
Blocks	4.52	1.66	-0.23	-0.02
Sand & Water	5.06	1.73	3.69 **	0.35
Dramatic Play	4.59	1.48	0.35	0.03
Nature & Science	4.41	2.24	-0.90	-0.08
Math & Number	4.63	1.82	0.63	0.05
Use of TV, Video &/or Computers	4.73	2.33	1.99	0.10
Promoting Acceptance of Diversity	3.76	1.87	-6.66 ***	-0.51
ACTIVITIES TOTAL	**4.55**	**1.20**	**--**	**--**

** $p < .01$; *** $p < .001$. Each with standard Bonferroni correction for multiple comparisons.

Appendix D presents ECERS-R scores across all domains, as well as each of the 43 items that comprise the ECERS-R. When the two relative weaknesses on the Activities domain (Promoting Acceptance of Diversity; Music and Movement) were compared to the average item score across all ECERS-R domains, these two items emerged as the two greatest relative weaknesses overall (t = -9.96 and t = -9.51, respectively with $p < .01$ with standard Bonferroni correction). The Fine Motor and Sand and Water items, however, are only relative strengths within this statistically depressed domain of Activities, and not when compared to the average of all 43 ECERS-R items.

The findings presented above suggest that south-central CSRI classrooms struggle most in terms of providing children with the types of activities useful in promoting school readiness by facilitating their development in fine motor, visual spatial, creative, and numeracy skills and cultural awareness and acceptance. Furthermore, within this area, classrooms need the most help in the areas of promoting acceptance of cultural diversity and facilitating children's music and movement development.

ECERS-R Indicator Results for Areas Most in Need of Improvement

Classroom quality within the areas of greatest need was further investigated by examining scores at the individual indicator level. Indicators, which provide the data necessary to compute ECERS-R item scores, are scored as either "yes" or "no" – "yes, the classroom or teacher has or does this" or "no, the classroom or teacher does not have this or does not do this."

In a few specific instances, raters can rate an indicator as "not applicable." Indicators are ordered in increasing levels of quality. Indicators at level 1 are indicative of clearly inadequate quality or performance in this particular area. Indicators at levels 3 and 5 indicate levels of quality that are associated with classrooms that are at least minimal or good. Indicators at level 7 are achieved by classrooms that are rated as excellent in those areas. At level 1, the preferred score is "no," and at all other levels the preferred score is "yes."

Promoting Acceptance of Diversity. As previously reported, the Activities domain was significantly weaker than other domains of quality, and the item *Promoting Acceptance of Diversity* was significantly weaker than all other items in this domain. Indeed, this item had the lowest mean score across all CSRI classrooms of all 43 items on the ECERS-R. The mean score for this item was 3.76, with a median of 4.00, indicating that the average classroom performed minimally at best in this area.

Indicator scores for the item *Promoting Acceptance of Diversity* are presented in Table 9. The median score on this item suggests that classes were typically able to achieve all of the level 3 indicators, plus one but not both of the level 5 indicators. The percentage of classrooms achieving these indicators, as presented in Table 9, supports this. Most surprising, however, is that over 10% of the CSRI classrooms have materials that show absolutely no cultural or ethnic diversity.

Table 9
Indicator Scores for *Promoting Acceptance of Diversity* for All CSRI Classrooms

		% Score	
Level	**Indicator**	**Yes**	**No**
1	No racial or cultural diversity visible in materials.	10.57	89.43
1	Materials present only stereotypes of races, cultures, ages, abilities and gender.	4.07	95.93
1	Staff demonstrate prejudice against others.	2.44	97.56
3	Some racial and cultural diversity visible in materials.	84.55	15.45
3	Materials show diversity in a positive way.	82.11	17.89
3	Staff intervene appropriately to counteract prejudice shown by children or other adults, or no prejudice is shown.	94.31	5.69
5	Many books, pictures and materials are accessible showing people of different races, cultures, ages, abilities, and gender in non-stereotyping roles.	33.33	66.67
5	Some props representing various cultures are included for use in dramatic play.	48.78	51.22
7	Inclusion of diversity is part of daily routines and play activities.	53.66	46.34
7	Activities are included to promote understanding and acceptance of diversity.	49.56	50.44

Developmentally Appropriate Classroom Schedules. The domain of Program Structure had one item of particular relative weakness. Classrooms were observed to have particular difficulty adhering to a daily schedule that was sufficiently varied and developmentally appropriate (t = -5.38, $p < .001$, as compared to the domain mean). In fact, 35.77% of CSRI classrooms scored in the "inadequate" range on this item.

Provisions for Personal Needs of Staff. CSRI classrooms also evidenced a relative weakness in the Parents and Staff domain in terms of providing their staff members adequate space, furniture, breaks, and time and place for meals (t = -11.85, $p < .001$, as compared to the

domain mean). 34.96% of CSRI classrooms scored in the "inadequate" range on this item. Low scores on this particular item were mostly due to 11.57% of the teachers having no breaks or time away from the children throughout their work day and 14.05% of the classrooms being devoid of adult size chairs for staff and parents.

Space for Gross Motor. Aside from the items mentioned above, *Space for Gross Motor* also averaged very low scores (Mean = 3.93, *SD* = 2.11). All of the classrooms had access to some form of outside space for gross motor activities and play. The quality of this space varied immensely, however. For example, in 26.66% of the classrooms the gross motor area was judged to be inadequate in size for the number of children utilizing it. As many as 30.58% of the playgrounds did not achieve minimal levels of safety, and 14.63% were rated as "very dangerous" (e.g., access requires crossing a busy street; children play in an area that is being used as a parking lot at the same time; playground is not fenced, etc.). A common theme among raters was an inadequate number of adults to supervise the children outside, especially when one teacher needed to escort a child to the restroom. Another rater noted that on the way to the playground teachers needed to lead preschoolers through a busy parking lot while carrying all the equipment that they would need in their arms.

Safety and Health Practices. For obvious reasons, scores on the *Safety Practices* item of the ECERS-R are of particular concern. On average, CSRI classrooms scored in the "minimal" range in terms of safety (Mean = 4.52, *SD* = 2.68), with considerable variability between classrooms. Over one-third (33.61%) of the classrooms evidence *at least one* major safety hazard either indoors or outdoors that could potentially lead to a serious injury for children. Furthermore, in 12.30% of the classrooms *several* major safety hazards were noted in the outdoor gross motor/play area (e.g., sharp or dangerous objects were present, easy access to road, unsafe walkways, unsafe play equipment, etc.). Also, in 6.56% of the classrooms the physical space was in poor repair (e.g., peeling paint on walls and ceiling; rough, damaged floors), and *several* hazards were noted inside (e.g., open electrical sockets, loose electrical cords, play areas in front of doors, poisonous materials within children's reach, etc.). Related, in 13.11% of the classrooms supervision was inadequate to protect children's safety *both indoors and outdoors*. In terms of basic health practices, in 5.74% of the classrooms inadequate control of germs was observed (e.g., signs of animal waste indoors or outside, body fluid spills that have not been disinfected, unwiped noses, unclean toilet area, etc.). In 11.38% of the classrooms basic sanitary conditions were observed to be violated frequently (e.g., most children and/or adults do not wash hands before handling food; tables were not sanitized). Finally, in 1 of the 123 classrooms, staff or parents were allowed to smoke tobacco in front of the children.

Results of the Caregiver Interaction Scale (CIS) for All Classrooms

The Caregiver Interaction Scale (CIS) was used to provide additional information regarding the quality of interactions between teachers/staff and children. The Interactions domain of the ECERS-R is mostly concerned with the provision of basic supervision of children, with relatively little emphasis on the quality of the interactions between staff and children. The CIS, as a more sensitive measure of caregiver-child interactions, was used to supplement the ECERS-R. All items are rated on a 4-point scale (1 = *not at all*, 2 = *somewhat*, 3 = *quite a bit*, and 4 = *very much*). Domain averages were transformed so that a high score always

corresponded to something positive (e.g., high degrees of positive interactions, teachers not being too punitive, etc.). Mean scores across all CSRI classrooms are presented in Table 10.

Table 10
Caregiver Interaction Scale (CIS) Scores Across All CSRI Classrooms (*N* = 123)

	Mean	SD	Minimum	Maximum
Positive Interactions	2.98	0.59	1.22	4.00
Not Overly Detached	2.53	0.58	1.25	4.00
Not Overly Permissive	1.81	0.43	1.00	3.25
Not Overly Punitive	2.79	0.58	1.13	4.00

A moderate to large correlation was observed between CIS and ECERS-R scores. As shown in Table 11, every CIS domain except *Not Overly Permissive* showed rather consistently high positive correlations with all ECERS-R (in particular the Interaction domain) and other CIS domains. The magnitudes of these correlation coefficients are strong enough to indicate a clear relationship between the CIS and the ECERS-R, especially the Interaction domain, but not high enough to suggest that they are redundant measures.

Table 11
Pearson Correlations between ECERS-R and CIS Domain Scores (*N* = 123)

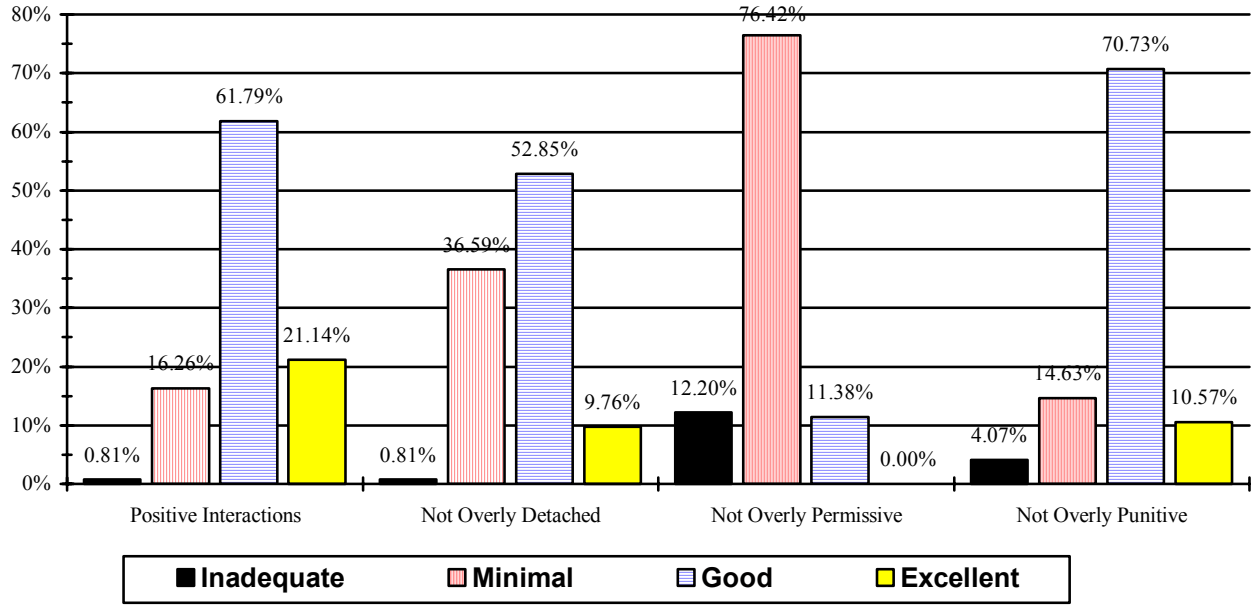
	Positive Interactions	Not Overly Detached	Not Overly Permissive	Not Overly Punitive
Space & Furnishings	.41	.47	.26	.50
Personal Care Routines	.45	.51	.22	.58
Language-Reasoning	.66	.59	.11 †	.51
Activities	.48	.61	.36	.56
Interaction	.71	.64	.12 †	.69
Program Structure	.46	.47	.11 †	.49
Parents & Staff	.28	.47	.23	.51
TOTAL ECERS-R	**.59**	**.65**	**.26**	**.67**
Positive Interactions	--	--	--	--
Not Overly Detached	.71	--	--	--
Not Overly Permissive	.00 †	.45	--	--
Not Overly Punitive	.51	.72	.55	--

Note. All coefficients statistically significant ($p < .05$), except where noted by †.

In order to improve interpretability of CIS scores, domain scores were placed into one of four bands designed to be similar to those used for interpreting the ECERS-R (Inadequate = 1.00 to 1.49; Minimal = 1.50 to 2.49; Good = 2.50 to 3.49; Excellent = 3.50 to 4.00). As can be seen in Figure 7, most classrooms fell in the "good" range in every domain except *Not Overly Permissive*. Indeed, on these three CIS scales about 60% to 82% of the classrooms scored in the "good" to "excellent" range. On the permissiveness scale, however, the distribution of scores was shifted downward, with no classroom scoring above 3.25. The resulting restriction of range and variability in this domain may have contributed to the relatively depressed correlations reported in Table 11.

Overall, these findings suggest that CSRI classroom teachers are generally engaged with the children (not overly detached) and typically interact positively and not in an overly punitive manner. The lower scores in the CIS permissiveness domain, relative to the other three domains, suggest that CSRI teachers are more likely to be overly permissive, or allow misbehavior to go unchecked, rather than be overly punitive or detached.

Figure 7
Percentage of CSRI Classrooms Scoring in Various Ranges on the CIS



Characteristics of CSRI Directors, Teachers and Assistant Teachers

Results of the CSRI Teacher/Director survey are summarized in Table 12, for directors, lead teachers, and assistant teachers. As expected, CSRI staff was overwhelmingly female, with no statistically significant differences in gender between the three groups. Significant between group differences were noted in the area of ethnicity. Follow-up analyses indicated that assistant teachers were significantly more likely to be Latino, relative to directors and lead teachers (X^2 = 26.83, $p < .001$). Directors, averaging 46 years, were significantly more mature than both teachers and assistant teachers.

Directors typically possessed a masters or doctoral degree, teachers a bachelors degree or higher, and assistant teachers a high school diploma or equivalent. Over 23% of the directors, however, possessed less than a bachelors degree. These directors led programs that were either based in a non-profit faith-based or multi-service agency or were an independent for-profit center. Bachelors and masters degrees were most typically in the fields of elementary education and early childhood education. Directors and teachers each possessed about a decade or more experience working with children under 6 years old, far more than assistant teachers who averaged less than 4 years experience with this age range. These data for teachers and assistant teachers, however, are positively skewed and therefore somewhat misleading. For example, about 40% of teachers possess 5 or fewer years of experience with this age group, and 44% of

assistant teachers possess only one year of experience or less. For 16% of the assistant teachers this was their first year working with children. Directors possessed significantly more experience than teachers and assistant teachers with early elementary school age children. Most all directors hold personal membership with the National Association for the Education of Young Children (NAEYC), whereas just under half of all teachers belong to NAEYC and only 8% of assistant teachers.

About two-thirds of all teachers and assistant teachers were employed for a full calendar year, with the rest typically employed for a 9 to 10 month academic year. A few assistant teachers were employed only for the summer. Since surveys were usually completed during the academic year, summer-only employment may be underestimated. Program directors, in contrast, were usually (91%) employed for the entire calendar year. Directors and teachers were typically full-time employees of their program, whereas barely over half of all assistant teachers held full-time employment.

On average, directors earned over 65% more than teachers, who earned over 80% more than assistant teachers. Salaries for many full-time teachers and assistant teachers were quite low. For example, 12.99% of all full-time, full-year teachers earned $16,000 or less per year from this position, an amount well under the current federal poverty level of $17,050 for a family of four (U. S. Department of Health and Human Services, 2000). Furthermore, 59.26% of all full-time, full-year assistant teachers earned $16,000 or less. These figures were even more alarming when compared to the *1998 Connecticut Self-Sufficiency Standards* for these four cities (Pearce & Brooks, 1999). The self-sufficiency standards represent the amount of income needed for a family to be able to meet adequately its basic needs without public or private assistance. Assuming a family of four (2 adults and 2 young children), a family needs to earn from $44,664 to $46,044 per year (depending on which of the four cities in which the family resides) in order to achieve minimal self-sufficiency. Of full-time staff, only 6.49% of the teachers and 30.00% of the directors earned enough to achieve self-sufficiency without supplemental income from a partner or a second job. No full-time assistant teachers earned enough for single-income self-sufficiency. In fact, the average full-time teacher needs to have a partner or second job that earns at least 79% of his or her teaching salary in order to achieve economic self-sufficiency. The average assistant teacher would need a partner or second job earning 226% of his or her salary to achieve self-sufficiency. Additionally, of these full-time staff, only 76% and 44% of teachers and assistant teachers respectively receive health insurance benefits, and only 56% and 23% respectively are eligible for retirement benefits. Across these three groups (directors, teachers, and assistant teachers), 15% to 21% of all staff held a second job concurrent to this one.

Table 12
Results of Survey for Program Directors, Lead Teachers, and Assistant Teachers

	Director (*n*=35)	Teacher (*n*=108)	Ass't. Teacher (*n*=95)	Test Statistic
Demographic				
Gender: Female	94.29%	98.15%	93.68%	X^2=2.96
Race				
White (Non-Latino)	87.88%	75.00%	44.58%	
African-American	9.09%	17.71%	21.69%	X^2=37.65***
Latino	3.03%	5.21%	31.33%	
Other	0.00%	2.08%	2.41%	
Age (in years)	46.44 (10.25) [a]	38.14 (11.09) [b]	34.98 (12.92) [b]	*F*=11.08***
Professional				
Highest Degree				
HS/GED	11.76%	11.32%	68.60%	
CDA	2.94%	11.32%	9.30%	
AA (2-yr. College)	8.82%	21.70%	17.44%	X^2=130.36***
BA (4-yr. College)	23.53%	36.79%	4.65%	
MA	50.00%	18.87%	0.00%	
PhD	2.94%	0.00%	0.00%	
Experience (in years)				
Birth to 5 years	13.58 (8.79) [a]	9.84 (7.68) [a]	3.86 (4.55) [b]	
6 to 8 years	5.85 (6.50) [a]	2.41 (4.32) [b]	1.94 (4.38) [b]	Λ=0.73***
> 8 years	1.50 (3.29) [a]	1.68 (4.12) [a]	1.10 (3.38) [a]	
NAEYC Membership	76.47%	46.30%	8.42%	X^2=67.04***
Current Job				
Contract length				
9-10 months/year	9.38%	33.33%	35.29%	
11-12 months/year	90.63%	66.67%	63.53%	X^2=11.67*
Summer only	0.00%	0.00%	1.18%	
Hours/Week Employed				
Full-time (35+)	78.79%	92.31%	55.95%	
Part-time (15-34)	15.15%	5.77%	41.67%	X^2=39.64***
< Part-time (< 15)	6.06%	1.92%	2.38%	
Gross annual earnings from this job †	$41,143 ($15,381) [a]	$24,929 ($10,383) [b]	$13,718 ($6,348) [c]	*F*=60.60***
Health Benefits	67.65%	75.93%	44.21%	X^2=22.26***
Retirement Benefits	47.06%	56.48%	23.16%	X^2=24.36***
Work at another job	17.65%	14.81%	21.05%	X^2=1.35
Years at current program	10.36 (9.90) [a]	4.90 (5.77) [b]	3.32 (5.36) [b]	*F*=12.57***
Years in current classroom	*Not Applicable*	3.84 (5.20)	2.31 (3.39)	*F*=4.53*

Note. Standard deviations are indicated in parentheses.
† Gross annual earnings were only computed for full-time employees with 9 to 12 month per year assignments.
* $p < .05$ *** $p < .001$; Superscripted letters indicate post hoc Scheffé differences at $p < .05$.

Teacher and assistant teacher turnover rates appeared to be significantly higher than

director turnover. Teachers and assistants had been employed by the same program for an average of 4.90 and 3.32 years, respectively. In contrast, directors averaged 10 years at the same program or center. These data for assistant teachers, however, are positively skewed and therefore somewhat misleading. For example, although the average number of years in the same program for assistants is 3.32, most were only in the same program for 1 year or less. Another way of examining teacher and assistant teacher mobility is at the classroom level. Since many programs operate across different building sites, staff stability at the classroom level could be less than stability in the program. Indeed, both teachers (d = 0.22; $t_{(82)}$ = 3.30; $p < .01$) and assistant teachers (d = 0.25; $t_{(70)}$ = 2.77; $p < .01$) reported significantly fewer years in the same classroom, relative to their number of years in the same program. About 58% and 65% of teachers and assistant teachers, respectively, have been in the same classroom for one year or less. Furthermore, 17% of the teachers and 21% of the assistants reported that this was their first year teaching in this particular classroom. These findings suggest that a large proportion of the staff (teachers and assistant teachers combined) in CSRI classrooms have exceedingly limited experience working together as a team.

Teacher Access to Support Services

Survey respondents also were asked to rate their access to important related service professionals, such as educational consultants, social workers, psychologists/psychiatrists, dietitians, pediatricians/nurses, physical/occupational therapists, speech/language therapists, and dentists. These professionals play important roles in programs for young children, especially programs targeting low-income families, such as the CSRI program. These professionals often serve as consultants to preschool and early intervention programs, and may offer assistance that is specific to the needs of particular children or address the overall health and developmental needs of the entire group.

In order to address the availability of these important services, ratings from the lead teacher in each classroom were tabulated. In classrooms where two teachers took equal responsibility for the classroom, responses from the teacher with the greatest level of education and experience were used.

As can be seen in Table 13, accessibility of various support professionals varied greatly depending on the type of service. Most all classrooms had some access to a nurse or pediatrician. About one-third of all CSRI classes, however, reported having no access to a speech/language therapist or licensed psychologist/psychiatrist, and over half of the classes reported no access to a dentist, dietitian, or physical/occupational therapist.

Table 13
Percentage of CSRI Classrooms with Various Levels of Access to Support Professionals

(n = 81)	Available On-Site	Available Off-Site	No Access
Educational Consultant	21.79%	61.54%	16.67%
Social Worker	25.64%	55.13%	19.23%
Psychologist/Psychiatrist	11.54%	56.41%	32.05%
Dietitian	2.56%	38.46%	58.97%
Nurse/Pediatrician	35.90%	60.26%	3.85%
Physical/Occupational Therapist	6.41%	34.62%	58.97%
Speech/Language Therapist	19.48%	44.16%	36.36%
Dentist	1.28%	47.44%	51.28%

Bivariate Pearson correlations for each of these 8 support services indicated significant relationships between the number of enrolled children with an identified disability and the teacher's access (0 = no access, 1 = access) to a physical/occupational therapist (r = .34; p < .01) and a speech/language therapists (r = .31; p < .01). Access to other supports was not related to the number of children with disabilities.

Relationship between Program Type and Classroom Quality

Within each of the three types of program funding (non-profit, for-profit, and public-funded), ECERS-R total scores for various program sub-types were examined. A significant pattern of differences on the ECERS-R was observed between classrooms representing the four groups of non-profit programs (faith-affiliated, university-affiliated, multi-service agency based, and independent; $\Lambda_{(21,184)}$ = 0.5002; p < .001). Post hoc Scheffé analyses indicated several significant pair-wise differences. These significant contrasts always showed the faith-affiliated program classrooms to differ from one or more of the other non-profit program types. Similar differences were observed for the CIS ($\Lambda_{(21,184)}$ = 0.6565; p < .01). Therefore, in subsequent analyses of quality differences between program types, faith-affiliated programs were not aggregated with the rest of the non-profit programs.

Table 14 shows the results of analyses of ECERS-R and CIS scores for the four types of programs: public-funded, for-profit, non-profit (not including faith-affiliated), and faith-affiliated. Results of statistical analyses showed significant differences between groups on the ECERS-R and CIS total scores. Pair-wise analyses were used to further investigate the pattern of between group differences. As shown in the table below, mean scores for classrooms in faith-affiliated programs were consistently lower than each of the other three program types across all 13 scores. On ECERS-R and CIS total scores, as well as several specific domain scores, differences between classrooms in faith-affiliated programs versus other non-profit and public-funded programs were large enough for statistical inferences to be drawn.

Table 14
ECERS-R and CIS Scores Across Different Program Types

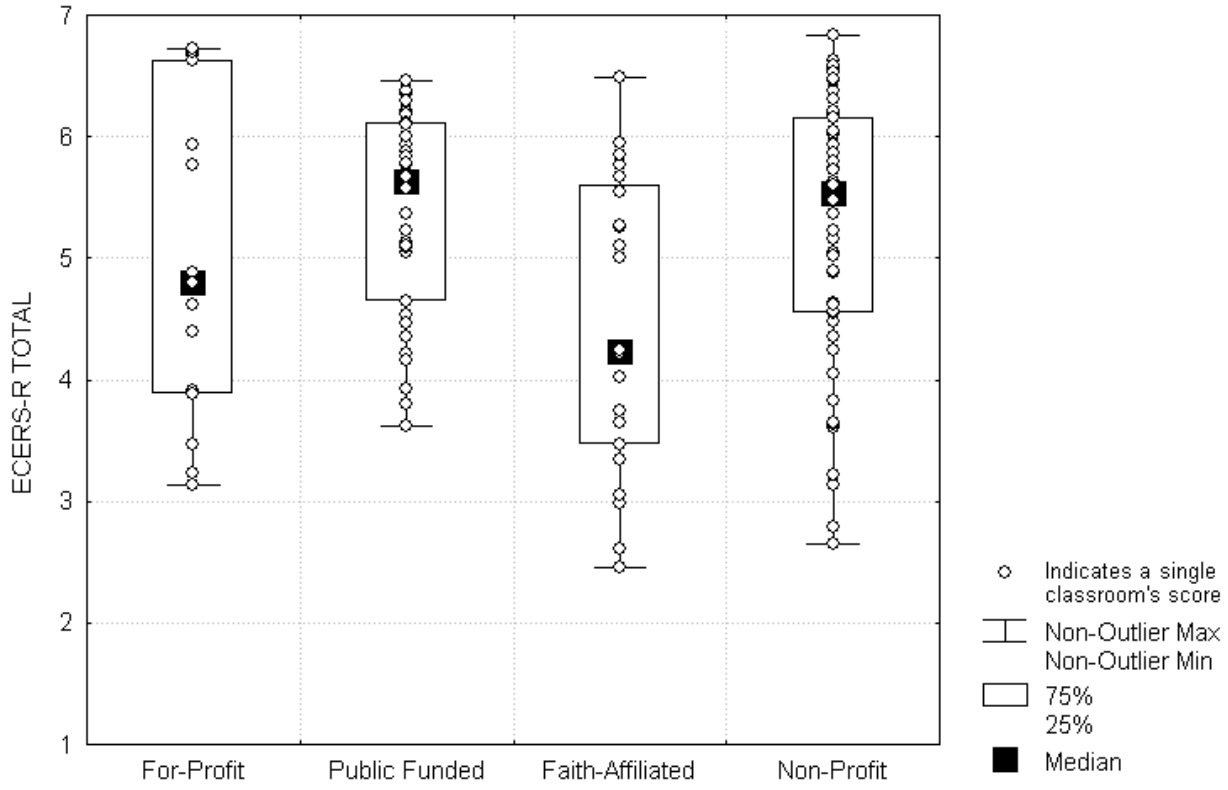
	Public	For-Profit	Non-profit	Faith-Affiliated	Pair-wise Differences [1]
ECERS-R					
Space & Furnishings	5.34 (1.10)	5.06 (1.41)	5.11 (1.19)	4.55 (1.18)	
Personal Care Routines	5.55 (1.25)	4.95 (1.59)	5.34 (1.46)	4.38 (1.82)	FA < P
Language-Reasoning	5.60 (1.14)	4.92 (1.47)	5.30 (1.63)	4.50 (1.54)	
Activities	4.90 (0.83)	4.38 (1.38)	4.63 (1.26)	3.98 (1.25)	FA < P
Interaction	5.59 (1.53)	5.60 (1.55)	5.74 (1.75)	4.78 (2.11)	
Program Structure	5.94 (1.20)	5.62 (1.47)	5.72 (1.28)	4.44 (1.58)	FA < P & NP
Parents & Staff	5.38 (1.10)	5.03 (1.29)	5.51 (1.14)	4.82 (1.03)	
ECERS-R Total [2]	5.38 (0.84)	4.98 (1.33)	5.23 (1.11)	4.44 (1.21)	FA < P & NP
CIS					
Positive Interactions	2.99 (0.52)	3.15 (0.58)	3.05 (0.64)	2.71 (0.50)	
Not Overly Detached	2.51 (0.51)	2.55 (0.55)	2.67 (0.65)	2.26 (0.47)	FA < NP
Not Overly Permissive	1.79 (0.44)	1.78 (0.43)	1.85 (0.49)	1.76 (0.28)	
Not Overly Punitive	2.77 (0.51)	2.83 (0.54)	2.93 (0.61)	2.51 (0.53)	FA < NP
CIS Total [3]	2.52 (0.35)	2.58 (0.43)	2.62 (0.49)	2.31 (0.35)	FA < NP

[1] Pair-wise differences based on Scheffé with $p < .05$ (FA = Faith-Affiliated; P = Public; NP = Non-Profit).
[2] $F_{(3,119)} = 3.95$; $p < .05$.
[3] $F_{(3,119)} = 3.11$; $p < .05$.

Overall score distributions were examined graphically in order to better understand this rather robust pattern of faith-affiliated programs scoring lower in comparison to other program types. As can be seen in Figure 8, almost half of the faith-affiliated classrooms achieved ECERS-R total scores at or above the level typical of other programs. Only 3 of these 24 faith-affiliated classrooms were NAEYC-accredited, and all 3 were among the 10 highest scoring faith-affiliated classrooms. However, many classrooms in faith-affiliated programs scored well below what is typical for other programs (especially public-funded and other non-profit programs).

Relatively little ECERS-R total score variability was observed across classrooms in public-funded programs. This likely is due to the overall close similarities in ECERS-R total scores between classrooms operated by either Head Start or the public schools, which together comprise 94% of the public-funded CSRI classrooms. On average, Head Start ($M = 5.41$; $SD = 0.80$) and public school ($M = 5.40$; $SD = 0.95$) classrooms achieved nearly identical ECERS-R total scores ($F_{(1,30)} = 0.0001$), when the two municipalities (Middletown and New Haven) with public school classrooms were combined. However, in New Haven Head Start classrooms scored much higher than public school classrooms ($d = 0.57$), whereas the opposite was true to an even greater degree in Middletown ($d = 1.18$).

Figure 8
Distribution of ECERS-R Total Scores by Program Type



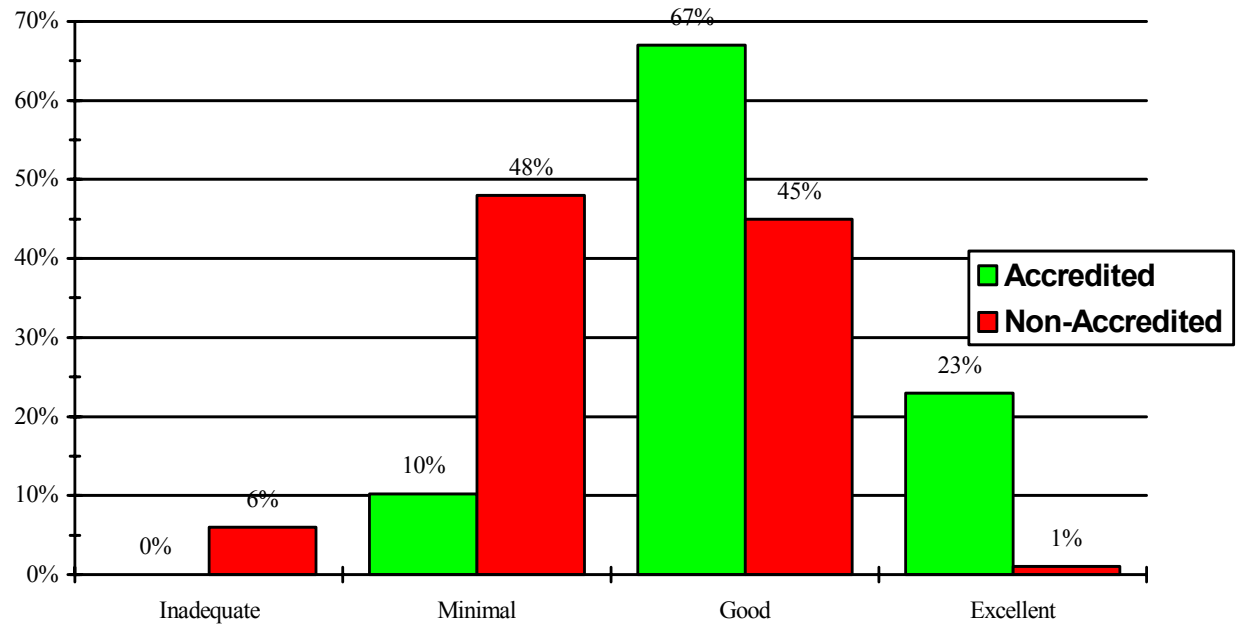
As previously reported, CSRI classrooms on average scored in the "minimal" range in terms of safety practices. In order to better understand which classrooms were most in need of improvements in this area, ratings in this area were compared across the four program types described above. Across all classrooms, 23.77% scored "inadequate" on the ECERS-R item that assesses safety practices. However, classrooms in faith-affiliated (37.50%) and public-funded (35.29%) programs were nearly three times as likely to be rated "inadequate," relative to classrooms in for-profit (13.33%) and non-profit (12.24%) programs ($X^2_{(df=3)} = 9.48$; $p < .05$).

Relationship between NAEYC Accreditation and Classroom Quality

CSRI classrooms in NAEYC-accredited sites scored significantly higher on the ECERS-R and CIS, relative to classrooms from non-accredited sites. Accredited classrooms ($M = 5.93$; $SD = 0.73$) scored significantly higher than non-accredited classrooms ($M = 4.70$; $SD = 1.07$) on the ECERS-R total score ($d = 1.09$; $F_{(1,121)} = 42.16$; $p < .001$). The magnitude of this 1.23-point difference represents a standardized effect size so large as to be rarely observed in social science research. The difference between accredited and non-accredited programs is even greater when public-funded programs, which have their own quality guidelines, are excluded from analyses ($M = 5.91$; $SD = 0.79$ and $M = 4.45$; $SD = 1.08$, respectively).

The difference in quality ratings between accredited and non-accredited classrooms may be illustrated best by examining the proportion of classrooms achieving various levels of ECERS-R total scores. As shown in Figure 9, 90% of all NAEYC-accredited classrooms achieved ECERS-R total scores in the "good" to "excellent" range, whereas only 46% of non-accredited classrooms achieved scores in these ranges. Furthermore, 23% of accredited classrooms achieved total scores in the "excellent" range, whereas only 1% of non-accredited classrooms achieved this highest of ratings. Similarly, 6% of the non-accredited classrooms scored in the "inadequate" range, whereas no accredited classrooms scored in this range.

Figure 9
ECERS-R Total Scores for NAEYC-Accredited and Non-Accredited Classrooms



Multivariate analyses were conducted in order to determine which particular ECERS-R domains contributed to the increased total score for accredited programs. Results of MANOVA indicated a significant overall effect favoring classrooms at accredited sites on each and every domain of the ECERS-R ($\Lambda_{(7,115)} = 0.65$; $p < .001$) and the CIS ($\Lambda_{(4,118)} = 0.75$; $p < .001$). Furthermore, effect sizes in most all cases were very large. (See Table 15.)

Table 15
ECERS-R and CIS Domain Scores for Accredited and Non-Accredited Classrooms

	NAEYC-Accredited (n = 39)		Non-Accredited (n = 84)		Cohen's	Post hoc
	M	*SD*	*M*	*SD*	*d*	Scheffé
ECERS-R Domains [1]						
Space & Furnishings	5.97	0.84	4.63	1.12	1.11	***
Personal Care Routines	6.14	1.11	4.71	1.51	0.93	***
Language-Reasoning	5.99	1.03	4.81	1.55	0.78	***
Activities	5.34	0.88	4.18	1.16	0.97	***
Interaction	6.39	1.04	5.07	1.87	0.75	***
Program Structure	6.08	1.11	5.26	1.50	0.57	**
Parents & Staff	6.12	0.68	4.89	1.11	1.08	***
CIS Domains [2]						
Positive Interactions	3.35	0.48	2.81	0.55	0.92	***
Not Overly Detached	2.91	0.61	2.35	0.47	0.97	***
Not Overly Permissive	1.94	0.54	1.75	0.36	0.44	*
Not Overly Punitive	3.15	0.53	2.63	0.52	0.90	***

[1] MANOVA for ECERS-R: $\Lambda_{(7,115)} = 0.65$; $p < .001$. [2] MANOVA for CIS: $\Lambda_{(4,118)} = 0.75$; $p < .001$.
** $p < .01$; *** $p < .001$.

When ECERS-R total scores were examined for NAEYC-accredited versus non-accredited programs within the different types of programs, it was clear that classrooms in NAEYC-accredited programs outscored their non-accredited counterparts regardless of the type of program. (See Table 16.) Across the four program types analyzed earlier, standardized effect sizes (Cohen's *d*) were consistently large and in favor of the classrooms in NAEYC-accredited programs.

Table 16
ECERS-R Total Scores for NAEYC-Accredited and Non-Accredited Classrooms by Program Type

	NAEYC Accredited			Non-Accredited			
Program Type	*N*	*M*	*SD*	*N*	*M*	*SD*	**Cohen's *d***
Public-Funded	7	6.01	0.31	27	5.22	0.87	0.94
For-Profit	5	6.08	1.00	10	4.44	1.14	1.23
Non-profit	24	5.93	0.80	26	4.59	0.96	1.21
Faith-Affiliated	3	5.51	0.36	21	4.29	1.21	1.01

Relationship between Number of Children and Staff and Classroom Quality

The number of staff and children, as well as child-staff ratios, were analyzed by program type and by NAEYC-accreditation status. Results indicated a statistically significant overall difference on these variables between classrooms representing the four program types identified in the preceding section ($\Lambda_{(12,\ 293)} = 0.72$; $p < .001$). Post hoc Scheffé analyses indicated that public-funded CSRI classrooms ($M = 5.77$; $SD = 1.88$) had significantly lower mean numbers of children per staff members than did either for-profit ($M = 7.64$; $SD = 12.45$; $d = 0.91$; $p < .05$) or

faith-affiliated (M = 7.66; SD = 2.18; d = 0.94; $p < .01$) classrooms. No statistically significant overall differences on these variables were found based on NAEYC-accreditation status ($\Lambda_{(1, 119)} = 0.10$).

The relationship between the number of children and staff in CSRI classrooms to their classroom quality ratings was examined first by a series of simple bivariate Pearson r correlations. As shown in Table 17, CSRI classrooms with more staff and fewer children enrolled per staff member did better at providing the types of activities designed to promote children's academic school readiness. Furthermore, CSRI classrooms with fewer children present per staff member were able to attend better to the care, health and safety needs of the children.

Table 17
Bivariate Correlation between Various Measures of the Number of Children and Staff versus Classroom Quality

ECERS-R and CIS Domains	Number of Staff Present (n = 112)	Number Children Enrolled (n = 116)	Number Children Present (n = 119)	Children Enrolled per Staff Present (n = 118)	Children Present per Staff Present (n = 113)
ECERS-R DOMAIN SCORES					
Space & Furnishings	.10	.06	.07	-.17	-.12
Personal Care Routines	.13	.05	-.01	-.19	-.25*
Language-Reasoning	.20	.16	.10	-.16	-.16
Activities	.30*	.17	.17	-.29*	-.22
Interaction	.01	-.02	.02	-.04	-.08
Program Structure	.17	.09	.20	-.13	-.07
Parents & Staff	.11	.13	.08	-.02	-.01
ECERS-R TOTAL	.18	.11	.11	-.18	-.17
CIS DOMAIN SCORES					
Positive Interactions	.04	-.11	-.07	-.08	-.13
Not Overly Detached	.06	-.09	-.08	-.17	-.21
Not Overly Permissive	-.06	.02	-.10	-.10	-.06
Not Overly Punitive	-.07	-.05	-.07	-.02	-.08
CIS TOTAL	.00	-.08	-.10	-.11	-.15

Note. Statistical outliers were omitted from analyses.
* $p < .05$, with standard Bonferroni correction.

Graphic examination of the relationship between the ECERS-R Activities score and the number of staff and child-staff ratio suggested some logical categorization points in order to better illustrate the relationship between these variables. Activities scores were examined with the number of staff present grouped into four categories (1 staff, 2 staff, 3 staff, and 4 or more staff). Likewise, staff-child ratio was dichotomized into two groups (2 to 6 children enrolled per staff; 7 or more children enrolled per staff). As presented in Table 18, classrooms with only one teacher present during the observation (regardless of the number of children enrolled or present) scored significantly lower in terms of providing developmentally appropriate school readiness activities, as compared to classrooms with 3 or more teachers present ($p < .05$). In fact, of the 10

CSRI classrooms with only one staff member, 50% scored in the "inadequate" range in this important area of classroom quality, and all but one classroom (90%) failed to achieve a rating of "good." Classrooms with 2 or 3 staff were far less likely (15% and 13%, respectively) to score in the "inadequate" range. Classrooms where 4 or more staff members were present, however, never scored in the "inadequate" range, and in most cases (56%) scored in the "good" or "excellent" range.

Table 18
Activities Scores on the ECERS-R by Number of Staff and Child-Staff Ratio

			% of Classroom Scoring:	
	Mean	***SD***	**"Inadequate"**	**Below "Good"**
Number of Staff [1]				
1 Staff (n = 10)	3.50	1.01	50.00%	90.00%
2 Staff (n = 40)	4.36	1.23	15.00%	67.50%
3 Staff (n = 53)	4.72	1.17	13.21%	60.38%
4 or More Staff (n = 18)	4.99	1.04	0.00%	44.44%
Child-Staff Ratio [2]				
7 or More Children per Staff (n = 50)	4.16	1.25	26.09%	69.57%
2 to 6 Children per Staff (n = 70)	4.83	1.10	12.37%	60.82%

1. $F_{(3, 117)} = 4.37$; $p < .01$. Post hoc Scheffé: 1 staff < 3 staff and 4 or more staff ($p < .05$, both).
2. $F_{(1, 118)} = 9.61$; $p < .01$.

About 42% of the classrooms (n = 50) had child-staff ratios of 7 or more children per staff member, with the remaining classrooms having a more favorable ratio of 2 to 6 children per staff. Classrooms with the more favorable ratio achieved significantly higher scores on the Activities domain of the ECERS-R ($F_{(1, 118)} = 9.61$; $d = 0.58$; $p < .01$). Furthermore, 26% of the classrooms with 7 or more children per staff member scored in the "inadequate" range, whereas less than half that proportion (12%) scored in this range with a more favorable staff-child ratio.

Relationship between Quality and Other Characteristics of Classrooms and Teachers

Several additional characteristics of classrooms and teachers were addressed in this study. Many of these were described briefly in this report. These include access to support services; teacher training, experience, and compensation; and teacher feelings and perceptions. Relationships between these variables, as well as their potential relationship to classroom quality, are not examined in this report. These relationships are often rather complex and frequently mediated by other variables, such as the type of program and its administrative supports. Therefore, these important issues will be discussed in a separate report, where the complexity of these relationships can be addressed more fully.

SUMMARY OF MAJOR FINDINGS FROM FISCAL YEAR 1999

1. ***Overall, results of classroom observations indicated exceedingly wide variability in the quality of CSRI classrooms.*** Sixty percent of classrooms that received school readiness funding as of June 1999 received scores in the "good" to "excellent" range, and forty percent needed work to reach that level of quality. Indeed, the majority of CSRI classrooms appear to be doing a good job at providing high quality care and educational opportunities to young children, and some classrooms are truly exemplary. The degree of variability in quality observed in these CSRI classrooms, however, far exceeded that typically observed in other large-scale programs. Additionally, 24% of the CSRI classrooms scored in the "inadequate" range on at least one of the seven ECERS-R domains, and most classrooms (71%) scored below the threshold for "good" in at least one area. These findings indicate that many classrooms needed some or considerable help in at least one area.

2. ***Classrooms in programs accredited by the National Association for the Education of Young Children (NAEYC) significantly outscored their non-accredited counterparts on virtually every measure of program quality assessed.*** Furthermore, not even one of the 39 NAEYC-accredited classrooms scored in the "inadequate" range on the ECERS-R, and only four scored in the "minimal" range, overall. Unfortunately, only 32% of the classrooms in these four cities were accredited. This significant relationship between NAEYC accreditation and classroom quality existed across all major program funding types: public-funded, for-profit, non-profit agency.

3. ***Both the number of staff and the overall staff-child ratio was significantly related to classroom quality.*** Over 98% of all CSRI classrooms met or bettered the minimal adult-child ratios for classrooms serving four-year-olds recommended by NAEYC, Head Start, Connecticut child care licensing regulations, and most state-funded prekindergarten programs around the nation. Additionally, 82% of all classrooms exceeded the 1:8.5 ratio recommended for classrooms predominantly serving three-year-olds. Adult-child ratios were typically a favorable 1:6 to 1:7. Analyses indicated that classrooms with only one teacher in the room provided far less "school readiness" oriented activities than did classrooms with three or more staff in the room. Furthermore, 26% of the classrooms with 7 or more children per staff member scored in the "inadequate" range in terms of providing appropriate activities, whereas less than half that proportion (12%) scored in this range when a more favorable staff-child ratio of less than 7 children per staff member was provided.

4. ***Safety and health concerns were noted in many classrooms.*** In particular, 27% of the playgrounds were inadequate in size for the number of children utilizing them, and 31% of the playgrounds did not meet minimal levels of safety. Furthermore, 15% of the playgrounds were rated as being "very dangerous" (e.g., access requires crossing a busy street; children play in a busy parking lot; playground is not fenced; etc.). Also, 34% of classrooms evidenced *at least one* major safety hazard inside or outdoors that potentially could lead to a serious injury for children, and, in 13% of the classrooms, supervision of

children both inside and outdoors was rated as inadequate to protect children's safety. Indoors, 7% of classrooms were in *poor repair* (e.g., peeling paint on the walls and ceiling; rough and damaged floors), and another 7% had *several indoor hazards* that could result in serious injury (e.g., open electrical sockets and/or loose electrical cords; play areas in front of inward opening doors; poisonous materials within children's reach, etc.). Also, 11% of the classrooms showed clear evidence of *unsanitary practice* (e.g., *most* of the children and/or adults did not wash their hands before handling food), and in 6% of the classrooms an inadequate control of germs was observed. Classrooms both in public-funded and faith-affiliated programs were found to need particular help in providing a safe environment for children.

5. ***The area of greatest need for quality improvement was in the program aspects most consistent with CSRI's legislated goal of promoting "school readiness" through a developmentally appropriate learning curriculum.*** CSRI classrooms tended to struggle in providing a consistent and developmentally appropriate schedule of activities aimed at promoting "school readiness." Developmentally appropriate activities are designed to promote children's development in the areas of number skills, visual/spatial skills, fine motor control, natural science, and creative expression. In the Activities domain of the ECERS-R, where much of this is measured, only 37% of the classrooms achieved a rating of "good" or higher, and 15% were rated as being clearly "inadequate."

6. ***Across all measures, the single area of greatest weakness overall was in terms of implementing a preschool curriculum that actively promotes the acceptance of cultural diversity.*** The legislated intent for CSRI was to help bridge the socio-cultural gaps identified by *Sheff v. O'Neil*. Therefore, it was expected that materials, interactions, and curricula in CSRI classrooms would actively foster acceptance of cultural diversity and promote positive models for success across cultural groups. As many as 81% of classrooms, however, failed to achieve a rating of "good" in terms of promoting cultural acceptance, and more than one out of every five classrooms (21%) were rated as being "inadequate." For example, in 11% of the classrooms, all of the dolls, pictures, books, and other materials reflected only one ethnicity, even though children from a variety of cultures attended the program.

7. ***In many classrooms, teachers and assistant teachers needed enhanced opportunities to pursue formal credentials in early childhood education, and compensation and working conditions that better matched their level of training.*** Indeed, in many classrooms teacher and assistant teacher qualifications were weak, salaries were quite low, and working conditions were poor. Of staff completing our survey, only 56% of the lead teachers in CSRI classrooms possess a bachelor's degree or higher. 69% of all assistant teachers, however, possessed no more than a high school diploma. Furthermore, of the teachers employed full-time, full-year 13% earned an amount under the current federal poverty level for a family of four, and only 6½% earned enough for economic self-sufficiency in the city in which they live. These figures are far more alarming for full-time, full-year assistant teachers, of which 59% earned a salary under the current federal poverty level and none were able to achieve single income economic self-sufficiency. Furthermore, CSRI programs tended to struggle in their ability to provide

adequate working conditions for their staff. For example, teachers and assistants in 12% of the classrooms have no break time or moments away from the children during the entire day.

8. ***Teachers and assistant teachers reported a considerable amount of staff turnover at the classroom level.*** Specifically, 17% of the teachers and 21% of the assistants reported that this was their first year teaching in this particular classroom, and 58% and 65% respectively reported no more than one year of previous experience in this classroom. These figures raise considerable concerns regarding the stability of teaching teams, and may be related to the issue of weak salaries previously mentioned. Further research would be needed to better understand the cause of these findings.

9. ***Many classrooms do not have access to the appropriate support services necessary for comprehensive school readiness programming.*** Most all classroom teachers (96%) reported access to a nurse or pediatrician. However, about one-third of the classrooms had no access to a speech/language therapist or a licensed psychologist/psychiatrist, and over half of the classes reported no access to a dentist, dietitian, or physical/occupational therapist.

RECOMMENDATIONS

1. ***Efforts to improve the quality of CSRI classrooms through NAEYC accreditation should be increased.*** One very optimistic finding from the project was that classrooms in NAEYC accredited programs provided significantly higher quality care and education, relative to their non-accredited counterparts. Although the initial legislative intent was that only "nationally accredited programs" be provided CSRI funding, by far most programs do not meet this standard of acceptability and many appear to be far from achieving it. However, locally driven facilitation of appropriate accreditation strategies may be a highly efficient means of promoting and maintaining high-quality CSRI classrooms.

   Considerable research has supported the value of NAEYC accreditation, and a recent study has demonstrated that preschool classrooms in programs undergoing NAEYC accreditation significantly improve in quality during the accreditation process (Whitebook, Sakai, & Howes, 1999). Indeed, NAEYC accreditation is the standard benchmark for quality in the field of early childhood care and education, and classrooms in programs not accredited by NAEYC were far less successful in achieving the level of quality shown to be predictive of positive child outcomes. *However, it is worth stating that the findings in this evaluation are only applicable to accreditation through NAEYC, and the author knows of no research supporting the utility of accreditation through any alternative organization at the preschool level.*

2. ***Increased funding for quality improvement is critical to helping programs meet the legislative intent of CSRI.*** It is through evaluative projects such as this one that the classrooms and programs most in need of help can be identified and detailed plans for continuous program improvement be devised and implemented. In many instances quality enhancement is most needed in the areas directly associated with the legislated intent of CSRI, and in the areas of basic health and safety practices. This process of data-driven accountability and support has already begun in South-central Connecticut, and the data generated by this project has been essential to efficiently targeting quality enhancement efforts in a way that can result in measurable improvement. To meet the demand for targeted program improvement, we advocate establishing a quality enhancement line item budget of at least 10% of the total capacity funding for each priority school district. In addition, we recommend that local school readiness councils be permitted to utilize carry-over funds to build a system of quality care and education.

   It seems likely that the need for quality monitoring and enhancing efforts will increase significantly as the number of children and families served by CSRI increases. Currently, local school readiness councils are responsible for deciding which child care programs within their respective municipalities will participate in CSRI. Potentially, as the need for participating child care programs increases, local councils may have to resort to placing children in classrooms of increasingly lower quality. Therefore, funds to enhance quality may need to be increased at a rate higher than commensurate increases in program capacity.

3. ***Efforts to measure classroom quality and hold program administrators accountable for continuous improvement should be supported.*** This project demonstrates the utility of measuring classroom quality using well-validated instruments administered by well-trained, outside, objective raters. These methods are the most promising for promoting accountability for providing high-quality services, helping to facilitate improvement, and documenting the impacts and judicious use of quality enhancement funds. In the absence of NAEYC accreditation in many CSRI classrooms, it seems reasonable to support quality through increased objective monitoring of classroom quality and coordinated quality enhancement efforts.

4. ***CSRI classrooms need to be provided increased access to services that support their work and promote the overall development of children and families.*** These services include educational consultants for curricular development; psychologists, psychiatrists, and licensed clinical social workers for mental health concerns; speech/language therapists and physical/occupational therapists for the promotion of language and motor development; and pediatricians, nurses, dietitians, and dentists for promoting physical health and hygiene. These services are useful for all classrooms in order to better facilitate children's overall development and well being and are essential for the integration of children with special needs. Among the recommendations recently made by the Governor's Blue Ribbon Commission on Mental Health (2000) was an increased focus on early prevention of mental health problems through better mental health collaborations with the public schools. Furthermore, the urgent need for greater focus on the mental health needs of preschoolers recently has been identified by a multidisciplinary task force of leaders in the fields of early intervention and mental health (Shonkoff & Phillips, 2000). Further research should focus on the mental health, developmental, and physical health needs of children and families being supported by CSRI, so recommendations regarding efficient service delivery can be generated. State-level CSRI policy development should include other state agencies responsible for the health, safety and care of young children.

5. ***Teachers and assistant teachers (and some directors) need to be compensated at a level more commensurate with the importance of their duties in order to attract and maintain a viable workforce of professionals.*** Full-time salaries are quite low, staff turnover rates are alarming, and it seems likely that poor compensation may be related to both staff turnover and classroom quality. Further research may better elucidate this for CSRI classrooms. Relatedly, efforts to support the professional development of teachers and assistant teachers should be supported, including their attainment of higher education, specific training in early childhood care and education, and active membership in professional organizations for early childhood educators. This increased professionalization of early childhood staff may lead to increased classroom quality.

CONCLUSIONS

CSRI classrooms vary greatly in terms of classroom quality. The majority of classrooms are quite good and some are exceptional. Others, however, are clearly inadequate as a form of safe child care and apparently ineffectual as a program to promote "school readiness." Indeed, the very areas of quality most directly associated with the legislative intent of the CSRI ("school readiness" oriented activities and promoting the acceptance of cultural diversity) are the areas of greatest concern in CSRI classrooms. Rather than focusing on issues of how to promote school readiness and provide a program responsive to the needs of the children and families it is intended to serve, some classrooms struggled with the basic issues of providing a safe and sanitary environment for children.

Although the legislative intent was that only "nationally accredited programs" be provided CSRI funding, by far most programs do not meet this standard of acceptability and many appear to be far from achieving it. These findings argue for the need to locally monitor the quality of CSRI classrooms, at least in South-central Connecticut, and to continue to fund mechanisms for enhancing the quality of these classrooms. At present the surest indicator of quality in these classrooms is NAEYC accreditation. Unfortunately, over two-thirds of the classrooms in this year-one study were in non-accredited programs, and the need for CSRI classrooms far exceeds the number of accredited classrooms available. Therefore, alternative methods for assuring the quality of preschool placements need to be utilized, such as this evaluation's use of independent objective raters. At present, some funding is available for the enhancement of CSRI quality; however, it is not clear that this funding is adequate to meet the present needs of these classrooms.

High-quality early childhood care and education is not easy to provide, and any large program like the CSRI needs time and focused effort to mature. The data in this study represent a good first step toward the goal of providing a safe and developmentally appropriate preschool program. Any program worth doing is worth doing well – especially when Connecticut's youngest and most vulnerable children are concerned.

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APPENDIX A

Teacher: _____ **Observer:** _____

Center: _____ **Date:** _____

Arnett Caregiver Interaction Scale

		Not at all	Some what	Quite a bit	Very much
1.	Speaks warmly with the children.	□	□	□	□
2.	Seems critical of the children.	□	□	□	□
3.	Listens attentively when children speak to her.	□	□	□	□
4.	Places high value on obedience.	□	□	□	□
5.	Seems distant or detached from the children.	□	□	□	□
6.	Seems to enjoy the children.	□	□	□	□
7.	When the children misbehave, explains the reason for the rule they are breaking.	□	□	□	□
8.	Encourages the children to try new experiences.	□	□	□	□
9.	Tries to exercise a lot of control over the children.	□	□	□	□
10.	Speaks with irritation or hostility to the children.	□	□	□	□
11.	Seems enthusiastic about the children's activities and efforts.	□	□	□	□
12.	Threatens children in trying to control them.	□	□	□	□
13.	Spends considerable time in activity not involving interaction with the children.	□	□	□	□
14.	Pays positive attention to the children as individuals.	□	□	□	□
15.	Reprimands children when they misbehave.	□	□	□	□
16.	Talks to children on a level they can understand.	□	□	□	□
17.	Punishes the children without explanation.	□	□	□	□
18.	Exercises firmness when necessary.	□	□	□	□
19.	Encourages children to exhibit prosocial behavior (e.g., sharing).	□	□	□	□
20.	Finds fault easily with the children.	□	□	□	□
21.	Seems interested in the children's activities.	□	□	□	□
22.	Seems to prohibit many of the things children want to do.	□	□	□	□
23.	Supervises the children very closely.	□	□	□	□
24.	Expects children to exercise self-control.	□	□	□	□
25.	When talking to children kneels, bends or sits at their level to establish better eye contact.	□	□	□	□
26.	Seems unnecessarily harsh when scolding or prohibiting children.	□	□	□	□

APPENDIX B

CONNECTICUT SCHOOL READINESS INITIATIVE

TEACHER/DIRECTOR SURVEY

INSTRUCTIONS: Please complete the following survey and attached identification slip and mail it to us as soon as possible. We will remove the slip once we have received your completed survey. The information you provide will be kept in strict confidence and will not be released to anyone. If you have any questions regarding this survey, please contact your school readiness coordinator. Thank you for your help.

I. JOB TITLE:

Please check the box below that best describes your job title. Please check only one.

- ☐ Program Director
- ☐ Head or Lead Teacher (Supervises others) (Do not complete Part VI)
- ☐ Teacher (Does not supervise others) (Do not complete Part VI)
- ☐ Assistant Teacher/Paraprofessional/Aide (Do not complete Part VI)

II. DEMOGRAPHIC INFORMATION:

A. In what district (or city) do you teach?
(Meriden, Middletown, New Haven, Waterbury) _____

B. What is the official name of your program or employer?
(e.g., Head Start, Bright Horizons, Middletown Board of Education, etc.) _____

C. What is the name of the building (or street address) in which you teach?
(e.g., Farm Hill School, 500 Central Avenue, etc.) _____

D. What is your gender? ☐ Male ☐ Female

E. How would you describe your race or ethnicity? _____

F. What is your age in years? _____

G. Do you belong to any professional teaching organizations (e.g., NAEYC)?
☐ Yes ☐ No If so, please list them here. _____

III. PROFESSIONAL QUALIFICATIONS:

A. Please check all of the following credentials or degrees you now have.

- ☐ High School Diploma or GED
- ☐ Child Development Associate (CDA)
- ☐ Associate Degree (2-years college)
- ☐ Bachelor Degree (4-years college)
- ☐ Master Degree
- ☐ Other Child Care Certificate (specify) _____

B. Please check all of the credentials you are now working toward or programs in which you are enrolled.

- ☐ Working toward a CDA
- ☐ Working toward a college degree
- ☐ Enrolled in TAB-approved courses
- ☐ Registered with *Connecticut Charts a Course*

C. Please check the field of your highest college degree?

- ☐ I do not have a college degree
- ☐ Child Development
- ☐ Elementary Education
- ☐ Other (please specify) _____
- ☐ Early Childhood Education (birth to 5)
- ☐ Early Childhood Special Education
- ☐ Elementary Special Education

D. How many years (not counting this one) have you taught children birth to 5-years old? _____

E. How many years (not counting this one) have you taught children 6- to 8-years old? _____

F. How many years (not counting this one) have you taught children older than 8-years? _____

G. How many years (not counting this one) have you taught children of any age? _____

IV. CURRENT JOB DESCRIPTION:

A. About how many months per year do you teach/direct? (Please check only one.)

☐ About 9 to 10 months per year ☐ Summers only
☐ About 12 months per year ☐ Other. Specify number of months: _____

B. Typically, how much time per week do you teach/direct in this program? (Please check only one.)

☐ Full-time (at least 35 hours per week)
☐ Part-time (at least 15 hours per week)
☐ Less than Part-time (less than 15 hours per week)

C. How many years (not counting this one) have you taught for this particular program? _____

D. How many years (not counting this one) have you taught in this particular classroom? _____

E. About how much is your gross annual earnings from this job? _____

F. Do you receive health benefits from this job? ☐ Yes ☐ No

G. Do you receive retirement benefits from this job? ☐ Yes ☐ No

H. Do you work at another job? ☐ Yes ☐ No

V. AVAILABILITY OF SERVICES: Please indicate the availability of the following services by placing a check in the appropriate boxes. (Please place only one check per service.) "On-Site" means that the professional is employed by your program and has an office in your building, "Regular Visits" means that the professional has a predictable schedule of visits (at least monthly) to your site, and "On-Call" means that the professional is available only by request.

Service/Professional	On-Site & Full-Time	On-Site & Part-Time	Off-Site & Regular Visits	Off-Site & On-Call	No Access or Don't Know
A. Educational Consultant	☐	☐	☐	☐	☐
B. Social Worker	☐	☐	☐	☐	☐
C. Psychologist/Psychiatrist	☐	☐	☐	☐	☐
D. Dietitian	☐	☐	☐	☐	☐
E. Nurse/Pediatrician	☐	☐	☐	☐	☐
F. Physical/Occupational Therapist	☐	☐	☐	☐	☐
G. Speech/Language Therapist	☐	☐	☐	☐	☐
H. Dentist	☐	☐	☐	☐	☐

VI. PROGRAM DESCRIPTION (TO BE COMPLETED BY PROGRAM DIRECTORS ONLY):

A. Please check the boxes that best describe your program. (Check all that apply.)

- ☐ Head Start Funded
- ☐ Public School Funded
- ☐ Private School Funded
- ☐ Faith Community Affiliated
- ☐ University/College Affiliated
- ☐ For-Profit Child Care Program
- ☐ Non-Profit Child Program (e.g., United Way)
- ☐ Other. Specify: _____

B. What other sources of funding does your program use? (Check all that apply.)

- ☐ State funds or grants (other than school readiness)
- ☐ Federal funds or grants
- ☐ Private grants (e.g., United Way, religious organizations, etc.)
- ☐ Department of Social Services
- ☐ Parent fees
- ☐ Employer subsidized (e.g., higher education facilities, private companies, etc.)
- ☐ Child and Adult Care Food Program (CACFP) or National School Lunch Program
- ☐ Other. Specify: _____

C. About how many of your families are subsidized by Connecticut school readiness funds?

- ☐ 100% school readiness funded
- ☐ 75% to 99% school readiness funded
- ☐ 50% to 74% school readiness funded
- ☐ 25% to 49% school readiness funded
- ☐ Less than 25% school readiness funded

D. How many years (not counting this one) has your program been at its current location? _____

E. How many years (not counting this one) have you been a child care program director? _____

F. Is your program NAEYC accredited?

☐ No ☐ Completing Self-Study ☐ Submitted Self-Study ☐ Yes

THANK YOU FOR COMPLETING OUR SURVEY.

YOUR RESPONSES WILL HELP US BETTER SERVE YOU AND OUR CHILDREN AND FAMILIES.

APPENDIX C

Teacher Thoughts and Feelings Survey

Teaching children is a challenging endeavor, and different teachers experience this challenge in many different ways. The following statements reflect different thoughts and feelings you may have about your work as a teacher. Please read each statement carefully and decide if you EVER FEEL THIS WAY ABOUT YOUR JOB. If you have NEVER had this feeling, circle "0." If you have had this feeling, indicate HOW OFTEN you feel this way by circling the appropriate number (from 1 to 6) best describing how frequently you feel this way.

	Never	A few times a year or less	Once a month or less	A few times a month	Once a week	A few times a week	Every day
1. I feel emotionally drained from my work.	0	1	2	3	4	5	6
2. I feel used up at the end of the work day.	0	1	2	3	4	5	6
3. I feel I am positively influencing children's lives through my work.	0	1	2	3	4	5	6
4. I feel fatigued when I get up in the morning and have to face another day on the job.	0	1	2	3	4	5	6
5. I feel I treat some students very impersonally.	0	1	2	3	4	5	6
6. Working with children all day is really a strain for me.	0	1	2	3	4	5	6
7. I deal very effectively with the problems of my students.	0	1	2	3	4	5	6
8. I feel burned out from my work.	0	1	2	3	4	5	6
9. I feel very energetic.	0	1	2	3	4	5	6
10. I worry that this job is hardening me emotionally.	0	1	2	3	4	5	6
11. I feel frustrated by my job.	0	1	2	3	4	5	6
12. I feel I'm working too hard on my job.	0	1	2	3	4	5	6
13. I don't really care what happens to some students.	0	1	2	3	4	5	6
14. Working with children directly puts too much stress on me.	0	1	2	3	4	5	6
15. I can easily create a relaxed atmosphere with my students.	0	1	2	3	4	5	6
16. I feel exhilarated after working closely with my students.	0	1	2	3	4	5	6
17. I have accomplished many worthwhile things in this job.	0	1	2	3	4	5	6
18. I feel like I'm at the end of what I can tolerate.	0	1	2	3	4	5	6
19. In my work, I deal with emotional problems calmly.	0	1	2	3	4	5	6
20. I've become more callous toward children since I took this job.	0	1	2	3	4	5	6
21. I feel students blame me for some of their problems.	0	1	2	3	4	5	6
22. I can easily understand how my students feel about things.	0	1	2	3	4	5	6

APPENDIX D

ECERS-R Scores for All CSRI Classrooms (*N* = 123) across All Domains and Items

	N	Mean	*SD*	.25 Quartile	.75 Quartile
Space & Furnishings	**123**	**5.06**	**1.21**	**4.00**	**6.13**
1. Indoor space	123	5.33	2.05	4.00	7.00
2. Furniture for routine care, play, & learning	123	6.46	1.25	7.00	7.00
3. Furniture for relaxation	123	4.19	2.20	2.00	6.00
4. Room arrangement for play	123	5.35	1.75	4.00	7.00
5. Space for privacy	123	5.53	1.98	4.00	7.00
6. Child-related display	123	4.46	1.56	3.00	6.00
7. Space for gross motor	123	3.93	2.11	2.00	6.00
8. Gross motor equipment	122	5.15	2.24	4.00	7.00
Personal Care Routines	**123**	**5.16**	**1.54**	**4.00**	**6.50**
9. Greeting/departing	121	6.26	1.55	7.00	7.00
10. Meals/snacks	123	4.80	2.32	2.00	7.00
11. Nap/rest	104	4.90	2.15	4.00	7.00
12. Toileting/diapering	122	4.98	2.41	2.00	7.00
13. Health practices	122	5.42	2.06	4.00	7.00
14. Safety practices	122	4.52	2.68	2.00	7.00
Language-Reasoning	**123**	**5.18**	**1.51**	**4.25**	**6.25**
15. Books and pictures	122	4.98	1.76	4.00	7.00
16. Encouraging children to communicate	122	5.35	1.75	4.00	7.00
17. Using language to develop reasoning skills	122	4.77	1.99	3.00	7.00
18. Informal use of language	123	5.59	1.87	4.00	7.00
Activities	**123**	**4.55**	**1.20**	**3.70**	**5.50**
19. Fine motor	123	5.08	1.76	4.00	7.00
20. Art	123	4.75	2.01	3.00	7.00
21. Music/movement	123	3.83	1.71	2.00	5.00
22. Blocks	123	4.52	1.66	4.00	6.00
23. Sand/water	123	5.06	1.73	4.00	7.00
24. Dramatic play	123	4.59	1.48	4.00	6.00
25. Nature/science	123	4.41	2.24	2.00	7.00
26. Math/numbers	123	4.63	1.82	4.00	7.00
27. Use of TV, video, and/or computers	97	4.73	2.33	3.00	7.00
28. Promoting acceptance of diversity	123	3.76	1.87	3.00	4.00
Interaction	**123**	**5.49**	**1.76**	**4.20**	**7.00**
29. Supervision of gross motor activities	123	5.06	2.14	4.00	7.00
30. General supervision of children	123	5.50	2.01	4.00	7.00
31. Discipline	123	5.28	1.97	4.00	7.00
32. Staff-child interactions	123	5.88	2.03	6.00	7.00
33. Interactions among children	123	5.75	1.91	4.00	7.00
Program structure	**123**	**5.52**	**1.44**	**4.50**	**7.00**
34. Schedule	123	4.77	2.33	2.00	7.00
35. Free play	123	5.53	1.92	4.00	7.00
36. Group time	123	5.95	1.66	6.00	7.00
37. Provisions for children with disabilities	51	6.39	1.31	6.00	7.00
Parents & Staff	**123**	**5.28**	**1.14**	**4.67**	**6.00**
38. Provisions for parents	123	5.96	1.40	5.00	7.00
39. Provisions for personal needs of staff	123	3.82	1.89	2.00	5.00
40. Provision for professional needs of staff	123	4.90	2.03	4.00	7.00
41. Staff interaction and cooperation	117	6.05	1.83	6.00	7.00
42. Supervision and evaluation of staff	123	5.65	1.88	4.00	7.00
43. Opportunities for professional growth	123	5.35	1.72	4.00	7.00
ECERS-R TOTAL	**123**	**5.09**	**1.13**	**4.22**	**6.00**