

REVIEW OF RESEARCH ON QRIS STANDARDS

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Review of Research on Child Care Quality

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TABLE OF CONTENTS

Introduction	1
Review of the Literature	7
References	31
Appendices	38

INTRODUCTION

The Commonwealth's Quality Rating and Improvement System (QRIS) is a key tool, which Massachusetts is developing to help families, communities, and policymakers understand what constitutes quality in early education and care settings. Building on a strong foundation of licensing regulations, the Massachusetts QRIS is designed to support all children and youth (birth to 13) served in settings across the Commonwealth's mixed delivery system. To foster the integration and use of child development principles and practices linked to quality, a set of QRIS Standards were adopted by Board of the Massachusetts Department of Early Education and Care (EEC) on December 14, 2010. The QRIS Standards incorporate learning standards, curriculum, assessment, educator preparation, and family and community engagement to ensure the strongest outcomes for children. The QRIS Standards are a central component to the Massachusetts QRIS.

To inform the revision of the standards that were adopted in late 2010, EEC contracted with the Education Development Center, Inc. (EDC) to engage in a rigorous process to review the provisional QRIS standards and propose standards that were evidence-based and aligned with best practices as perceived by those in the field. EDC researchers produced briefings and a final report that informed the revised standards (Schilder, Young, Anastasopoulos, Kimura, & Rivera, 2011).

Since the revised standards were adopted, additional research has been published on the association between specific aspects of child care and quality as well as aspects of quality and child outcomes. EDC was asked to produce this report to update the review of literature linked with QRIS standards. This report presents the updated review of the literature. We begin with a brief description of the Massachusetts QRIS.

A Quality Rating & Improvement System (QRIS) is a method to assess, improve, and communicate the level of quality in early education and care as well as after-school settings.^{1,2}

The Massachusetts QRIS is designed to enhance quality for the approximately 275,000 children who participate in the estimated 12,000 licensed programs statewide as well as children and youth who participate in licensed-exempt programs.

About the Massachusetts QRIS

The Massachusetts Department of Early Education and Care (EEC) formally began developing a QRIS during the spring of 2007, and launched a QRIS Pilot in March 2010. During the fall of 2010, EEC revised the QRIS Provisional standards based on feedback from QRIS Pilot participants, interested stakeholders, and an outside evaluation of the QRIS. Members of the early education and care and out of school time field were key partners in the initial design phase of the development of the system. They were involved in facilitating the development, concept and scope of the original drafts of standards and revision process. Below the system characteristics and details about the standards are presented.

System Characteristics

The Massachusetts QRIS is one of the most important tools, among many, that Massachusetts is developing to help families, communities, and policymakers understand what constitutes quality in child care settings. Positioned as a method to assess, improve, and communicate the level of quality in early education and care as well as after-school settings, the ultimate goal is to ensure that child care providers improve their quality so that children experience high quality care and, as a result, enter preschool, kindergarten or first-grade with improved developmental growth trajectories.

The Massachusetts Board of Early Education and Care adopted the current EEC QRIS in December 2010. The system and its standards were developed for all programs and educators serving children across the Commonwealth's mixed delivery system.

Massachusetts Licensing Regulations serve as a foundation for comprehensive QRIS Standards developed through examination of child development, early education, and after-school program quality research. The system is customized for use in different contexts, with varying numbers of standards associated with center-based and school-based (78), family/home child care (61), and after-school programs and out-of-school-time (72) programs (Massachusetts Department of Early Education and Care, 2012)

Across all QRIS program types, four levels of quality ratings are fully articulated and in place. Plans are in place to articulate a higher level – Level 5 –and to implement this level at a later date. The Massachusetts QRIS Standards are organized around five key indicators of quality, three of which encompass sub-categories, as presented in Table 1.

Table 1: Map of Key QRIS Measures

Massachusetts QRIS: Key Indicators of Quality
1. Curriculum and Learning · Curriculum, Assessment, and Diversity · Teacher-child Relationships and Interactions
2. Safe, Healthy Indoor and Outdoor Environments
3. Workforce Development and Professional Qualifications · Designated Program Administrator Qualifications and Professional Development · Teacher-child Relationships and Interactions · Program Staff Qualifications and Professional Development
4. Family and Community Engagement
5. Leadership, Administration and Management · Leadership, Management, and Administration · Supervision

A key source of evidence of meeting the QRIS standards is data from well-validated instruments that are specific to the child care contexts within which quality is typically measured. The validated instruments include environmental rating scales (ERS), including Infant/Toddler Rating Scale-Revised (ITERS-R), Early Childhood Environment Rating Scale-Revised (ECERS-R), Family Child Care Environment Rating Scale-Revised (FCCERS-R), and the School-Aged Care Environment Rating Scale-Revised (SACERS-R). Other validated instruments that are used in the Massachusetts QRIS to provide evidence of meeting standards include the Business and Program Administration Scales (BAS and PAS), and instruments that assess caregiver interactions. The caregiver interaction scales include the Arnett Caregiver Interaction Scale (Arnett-CIS), the Classroom Assessment Scoring System (CLASS), and the Strengthening Families Self-Assessment Tools (SFSAT).

About the Study and Report Structure and Format

The EDC Study Team conducted an extensive review of the existing research literature to gather evidence linking each standard to existing peer reviewed research and to provide recommendations regarding evidence-based standards. The Study Team examined literature published in peer-review journals, reviewed existing databases and websites and reached out to child care research organizations across the country to seek out manuscripts in press. The search criteria, the databases searched, and other resources are described below, along with examples of the type of research in our review of the literature.

The Study Team considered the following primary factors in conducting the literature review:

1. Date of the publication: The Study Team included the most current information except in the case of older nationally known seminal resources.

2. Source and funder of the report/study/brief/article: The Study Team gave priority to studies funded by the federal government that have strict peer review criteria for publication. For example, the Office of Planning Research and Evaluation (OPRE) and the Institute of Education Sciences (IES) are vetted sources known for strict attention to research protocols.
3. Methodology: We developed criteria to rate the research methodology as one measure of the evidence related to each standard. We included random control trial (RCT) studies, quasi-experimental studies, survey research including self-assessments, and literature reviews, policy briefs, etc.
4. Existing knowledge base: We include resources that were both peer-reviewed but in instances in which the research base is slim or non-existent we sought out resources through interviews with content specialists, organization websites, etc.

For each QRIS standard, the Study Team searched the existing literature using the key words associated with the standard and used *expanded* as well as *narrowed* search criteria. Using Boolean search logic we searched for studies specific to child care and also expanded our searches to find evidence from the early education literature.

The Study Team developed a rating scale to note the quality and comprehensiveness of evidence related to that standard. For example, a QRIS Standard for Nutrition and Food Service requires that “Meals and/or snack are planned to meet the child’s nutritional requirements as recommended by the Child Care Food Program of the United States Department of Agriculture” (Area 8. B7). Research shows strong experimental evidence that high-quality comprehensive service programs lead to improvements in child outcomes (e.g. Abecedarian Project, Perry Preschool Project)³⁻⁵ and correlational research shows an association between participation in U.S. Department of Agriculture Food and Nutrition Program and observed child care quality.⁶ Rather than simply noting that data exists on these standards, the Study Team included information on the nature of the data (e.g. experimental versus correlational). Table 2 below presents the criteria used to assess the existing research evidence.

Table 2. Literature Review Criteria

Methodology	Evidence	Status of Review
Experimental	Positive evidence	Early education and care evidence
Quasi-experimental	Mixed evidence	No evidence found
Qualitative study	Negative evidence	Evidence from other fields of study only
Case study		Evidence from non-ECE education only

The Study Team also reviewed a number of literature reviews and meta-analyses such as the U.S. Department of Health and Human Services, Administration on Children and Families literature review on family child care and review of new research findings.⁷ These materials summarize findings from years of research in child care and after school and present findings on the strength of the evidence related to many of the QRIS criteria.

The existing standards are tailored for the following types of programs:

- › Center and School-Based (for use by center based and school based programs, including non-licensable and license-exempt center based programs, i.e. public school preschools, Montessori schools, or religiously affiliated programs)
- › Family Child Care (for all family child care homes)
- › Afterschool and Out of School Time (for all afterschool and out of school time programs serving school-aged children and youth outside of the regular school day, even if the program is physically located in a school building)

The Study team systematically examined research related to each of the 5 broad categories of the existing QRIS standards:

- › Curriculum and learning
- › Environment
- › Workforce qualifications
- › Family involvement
- › Administration

The report is organized around the five broad categories. Each section begins with a summary of key findings highlighting new and compelling research. In some instances, research findings from a single article had implications for multiple categories of QRIS standards. For example, much of the research on mentoring and coaching has

implications for administration in that programs that have the capacity to offer such professional development to staff have strong administrative structures. In instances in which research findings had implications across categories, we present the key themes in one section and reference the research in related sections.

REVIEW OF THE LITERATURE

The Study Team analyzed the literature and summarized the evidence related to each category in the provisional standards for each program type. The Study Team found positive research evidence for the majority of existing standards: 60 center and school-based standards, 44 family child care standards, and 52 after school and out of school time standards

The majority of standards have positive research evidence and most have strong evidence based on experimental studies and correlational evidence from multiple studies. Across all three categories of standards, peer review research supports most of the curriculum and learning standards and most of the safe and healthy indoor and outdoor standards. (The one exception to the curriculum standard is the existence of paid time for curriculum planning, which logically is helpful for teachers as they plan curriculum.)

The workforce development and professional qualifications standards, for which no peer-reviewed research was found, are nonetheless indicators of engagement in activities that the research supports. For example, no research was found on individualized professional development plans, per se and multiple standards across categories require professional development plans. Logically, the existence of a professional development plan is an indicator of professional development. Similarly, limited research was found on the specific mechanisms that lead to family and community engagement but the mechanisms offer an indicator that providers are providing family and community engagement services. Finally, some peer review research on leadership, administration and management was found in the early care and education research databases but many of these standards lacked specific peer-reviewed early childhood research studies. For example, although the U.S. Government Accountability Office (GAO) requires recipients of federal funds to have auditing systems in place that include a review of financial records by a qualified professional, no specific early childhood or after school research was found showing a link between financial oversight and quality.

In some instances, the evidence supported part, but not all aspects of the standard, and in other instances the evidence was strong but the context differed. For example, evidence exists on the importance of supervision for quality teaching practice but the study team did not find research evidence for the frequency of supervision as articulated in the standards. In these instances, the study team did not include the standard in the total count of those with positive peer-reviewed evidence.

Most of the standards that do not have direct positive peer-reviewed research are nonetheless either aligned with best practice or have indirect research evidence. For example, for the child care and school-based standards, seven are based on best practice. An example of a standard that is articulated by stakeholders or national organizations is “Program has a written admissions policy that promotes an awareness of and respect for differences among children and families, a respect for the child and their family’s culture and language, and is responsive to the inclusion of a variety of learning needs.” In addition, five of the center and school-based standards are aligned with research. For example, research supports the importance of family engagement but no specific research has been conducted on the specific ways that programs engage families. Thus, the standard “Program has developed informational materials on the program that are in the language of the community, are available for staff to use in the community and are given to prospective families” is aligned with research but there is no direct peer-reviewed research on this narrow standards. The remaining standards for which there is no peer reviewed researcher are aligned with other measures or are used in other state’s QRIS’s.

Similarly, five of the family child care standards that do not have direct positive peer-reviewed research are based on best practice and five have indirect research support. An example of a family child care standard that is based on best practice is the existence of a schedule that reflects regular curriculum planning time. An example of a standard that has indirect research evidence is the standard that providers have a list of comprehensive service providers.

Five of the after-school standards that are not directly aligned with research are based in best practice, four are aligned with existing measures and four are listed in other states’ QRIS’s. An example of a standard that is based in best practice is the existence of a schedule that allows for paid curriculum planning time. An example of a standard that is aligned with existing measures is “staff are given feedback on instructional practices.” And, an example of a standard used by another state is “program administrator has an Individualized Professional Development Plan.” And an example of a standard that is indirectly aligned with research is “program has an incentive system that awards each educator that achieves the next step on a career ladder.”

Below the key themes that emerged from the literature for each provisional standard category are presented. For detail on the key research reports and articles that were reviewed and for a listing of each revised standard that has research evidence, see Appendix E.

- › **Category 1: Curriculum and Learning.** Research on curriculum and learning strongly suggests that quality programs must provide enriched curriculum that is

- developmentally and culturally appropriate. Moreover, research in this area reveals that the teacher and child relationship, the use of appropriate assessments, and the availability of after-school programs are important factors in ensuring quality learning environments. Research and policy positions point to the importance of evidence regarding the quality of supervision, which suggests a relationship between the quality of supervision and teacher quality.
- › **Category 2: Environment.** Research on safe and healthy indoor and outdoor environments demonstrates that quality programs must provide indoor and outdoor environments that promote children’s development. Environment rating tools such as the Early Childhood Environment Rating Scale Revised edition (ECERS-R) have been shown to be valid and reliable measures of safe, healthy, indoor and outdoor environments. Numerous studies have shown a strong relationship between scores on these environment measures and program outcomes. Moreover, research on health care consultation reveals that regular consultation from outside experts can be an important method of ensuring quality environments.

 - › **Category 3: Workforce Qualifications and Professional Development.** Research on workforce qualifications and professional development suggests that higher levels of educational attainment are linked with improved quality, but specialization is important for desired child outcomes. In addition, recent experimental studies find that the quality of the professional development is critical to achieve desired outcomes. In addition, professional development within specific content areas has been shown to be beneficial when combined with mentoring/ coaching.

 - › **Category 4: Family Involvement.** Research on family and community engagement has found that parental involvement is beneficial for child outcomes and child care programs’ engagement with the community. Parental involvement has been found to be particularly important to improvements in quality when parents engage in collaboration with care providers around service delivery. Research reveals that in order to enhance the involvement of families, there is a need for programs and staff to initiate culturally appropriate and directed communication with children’s parents and/or guardians. While limited experimental studies have been conducted, numerous published articles and reports have shown a link between family engagement, community collaboration and quality of early education and care programs.

- › **Category 5: Leadership, Management, and Administration.** Research reveals that specific aspects of program leadership, management and administration are correlated with quality environments and child outcomes. For example, staff wage is a factor in teacher turnover and quality. Research also suggests that specific professional development learning experiences are important to effective teaching. Furthermore, key factors have been identified for supporting successful partnerships and supervision.

In the last few years research has explored specific factors that lead to program quality and satisfaction. Literature has supported the importance of particular factors such as leadership skills and education level of directors to program quality. Lastly, more recent research points to the unique attributes of administrative and financial domains of ECE centers.

CATEGORY 1: CURRICULUM AND LEARNING

Research on curriculum and learning strongly reveals that quality programs must provide enriched curriculum that are developmentally and culturally appropriate. Moreover, research in this area reveals that the teacher and child relationship, the use of appropriate assessments, and the availability of after-school programs are important factors in ensuring quality learning environments. We begin by presenting the most recent articles.

In the last few years research has shown that there is a need for culturally and developmentally appropriate curriculum. Moreover, literature continues to support the complexities of assessment use in order to enhance curriculum, as well as the complexities of understanding the impact of after school programs. Lastly, more recent research reveals the importance of teacher and child interactions in the quality of curriculum.

Additional research in this area has examined kindergarten readiness and teacher and parent preparation practices for the transition to kindergarten, the importance of allocating public and private resources, the role of national accreditation programs in addressing diversity and quality, the need for tailored instruction, social competence, peer conflict, and leadership among children, teacher use of conversation with children, implications of teacher turnover, the validity, and appropriate use and benefits, of assessments, and general trends among instruction practices over time. Details from the most compelling literature review are presented below.

Enriched Curriculum: Developmental and Cultural Appropriateness

Bredekamp and Copple's (2009) book *Developmentally Appropriate Practice in Early Childhood* (rev ed.) highlights the need for enriched curriculum, mentoring, and engagement through language. It spells out the principles underlying developmentally appropriate practice and guidelines for classroom decision making for all engaged in the care and education of infants, toddlers, 3-5 year-olds and primary grade children. It includes an overview of each period of development and extensive examples of practices appropriate and inappropriate for children in those age groups.⁸ In addition, the National Association for the Education of Young Children (NAEYC)'s position statement on *Developmentally Appropriate Practice in Early Childhood Programs Serving Children from Birth through Age 8* (adopted 2009) is grounded in the research on child development and learning and in the knowledge base regarding educational effectiveness.⁸ This position statement outlines which types of developmentally appropriate practice promotes young children's optimal learning and development. This position statement is well aligned with the MA Guidelines for Preschool Learning Experiences. Current research supports the use of enriched curriculum components and professional development including mentoring to produce improvements in multiple domains of preschool teaching including teachers engaging in conversations with children more frequently and in more complex ways, and creating a more positive classroom climate.⁹

Moreover, Fuligni, Huang, Hong, Howes, and Lara-Cinisomo (2012) support the same in underlining the importance of culturally appropriate enriched curriculum and engaging children in language, as well as structure in daily routines. This study explored activity settings and daily classroom routines experienced by low-income pre-school children in public and private centered-based programs and in family child care homes. The results revealed that daily routine profiles were associated with program type and curriculum use but not with measures of process quality. Additionally, children in structured-balanced classrooms had more opportunities to engage in language, literacy and math activities, whereas children in high free-choice classrooms had more opportunities for gross motor and fantasy play. Fuligni et al. (2012) suggest that being in a structured-balanced classroom may be associated with children's language scores but not necessarily with measures of children's math reasoning or socio-emotional behavior. These results suggest that how teachers structure daily routines plays an important role in young children's learning experiences and must be considered in determining and implementing developmentally appropriate practices.¹⁰

Implications for Assessment Use

NAEYC's (2003)¹¹ position statement on assessment makes key recommendations for the field of early childhood education. Their key recommendation is for early childhood

programs to engage in ethical, appropriate, valid, and reliable assessment as a central part of all early childhood programs. In addition, in order to assess young children's strengths, progress, and needs, programs should use assessment methods that are developmentally appropriate, culturally and linguistically responsive, tied to children's daily activities, supported by professional development, inclusive of families, and connected to specific, beneficial purposes including: (1) making sound decisions about teaching and learning, (2) identifying significant concerns that may require focused intervention for individual children, and (3) helping programs improve their educational and developmental interventions. Research supports the benefits of assessing the indoor and outdoor space, curriculum and activities, teacher and child interactions, materials, equipment, nutrition and health factors in order to yield critical information for parents and center administrators, teachers and staff and improve program quality. A study by Fontaine and colleagues (2006) provides outcome information in regard to an enhancement project where early childhood educators were provided with professional development to assist them in evaluating and assessing their early care and learning programs. The programs that received the professional development and learned how to assess their program's quality showed a significant improvement in several areas critical to high quality care for young children after the intervention.¹²

Furthermore, Chen and McNamee (2006) also contend the importance of developmentally appropriate assessment. They suggest that in order for early childhood teachers to serve a student population that is diverse, teachers need assessment tools that help them to identify children's strengths and weaknesses in a wide range of learning areas. In order for the results to have meaning, the assessment must measure the skills and knowledge in areas similar to those used by teachers in planning the curriculum. Chen and McNamee (2006) suggest that teachers must understand specific content knowledge in order to effectively plan experiences that help children learn basic academic concepts and skills. In addition, linking assessment to the curriculum is the key way of ensuring that the curriculum meets every student's need, no matter how diverse. In their study of preservice early primary school teachers, Chen and McNamee (2006) found that by using a technique call "Bridging" which specifically links the curriculum with assessment, student teacher performance improved.¹³

Research in this area continues to support the need of "tailor-made" assessments. In a review of the literature on early childhood assessment practices Gullo (2006) suggests that children should be assessed within the context of the classroom as they are engaged in meaningful curriculum activities in order to determine children's curriculum needs.¹⁴ The primary purpose of the assessment should be to inform and improve teacher practice and it should inform teachers as to how well the curriculum is working for individual children. The literature review points out that traditional paper and pencil assessments of

young children are not developmentally appropriate, rather the review highlights several alternative means of assessing children's learning within the context of the early childhood curriculum. These include curriculum based assessment, play-based assessment, dynamic assessment, project assessment (observing the child while engaging in actual problem solving activities), and portfolio assessment. See Gullo (2006) for an in-depth review of each type of assessment. Currently, progress is being made in the development and validation of universal screening assessments and progress-monitoring methods that align early learning guidelines, assessment, and curricular practices.¹⁵

Nevertheless, research purports the complexities of using assessments. Fenech, Sweller, and Harrison (2010) examined results from two well-established quality rating observational measures and a self-study validation process for long day care centers. They found that correspondence over time and across measures was more consistent for centers identified as providing lower quality ECEC. However, high-quality centers were less consistently identified across measures. In contrast, results showed that variability in ratings of quality was more evident in lower quality centers, whereas high-quality centers showed less variability over time. These mixed-results highlight the complexities in understanding how centers of different quality levels respond to various quality rating measures and systems.¹⁶

The Teacher-Child Relationship Dynamic

Teacher behavior is one of the major influences on early childhood development (Shonkoff and Phillips, 2000) with seminal research highlighting the importance of child-adult relationships as a social context within which children develop social and academic skills.^{17,18} Research also highlights the importance of high quality sensitive and responsive teacher-child interactions for all children including children from diverse cultures. Pianta and Stuhlman (2004) found that preschool teacher-child relationship quality was associated with changes in academic skill levels in first grade and confirm that teacher-child relationships play a key role in children's ability to acquire the skills necessary for success in school.¹⁹ Burchinal and Cryer (2003) tested whether child care quality, alignment of culture and ethnicity between a child and the child's caregiver, and the match between the mother's and caregiver's beliefs about child-rearing, were related to the child's cognitive and social skills.²⁰ The results indicated that the sensitivity and responsiveness of the child's caregiver was the most important aspect for children from all ethnic groups in the study. Children cared for by sensitive adults demonstrated higher cognitive and social skill scores on standardized assessments than children whose caregivers were less sensitive and responsive. Additional research has shown that both sensitive and stimulating interactions with the teacher and the instructional quality within pre-Kindergarten classrooms predicted children's language acquisition, social skills and pre-academic skills through the end of the kindergarten year.²¹

The effect also appears to be more powerful in higher quality early childhood classrooms where the quality of teacher-child interactions was a stronger predictor of higher social competence and lower levels of behavior problems than in lower quality classrooms. Furthermore, the quality of instruction was related to greater language, reading and math skills for 3- and 4-year old low income children.²² The type of interactions that children engage in with their teachers and parents in preschool and kindergarten including language rich exposure, opportunities to be part of conversations using extended discourse, and environments that are cognitively and linguistically stimulating have also been found to be related to later literacy success.²³ Snow, Burns, and Griffin (1998) also point out in their review of the literature on preschool literacy environments that the quality of adult-child discourse is important to child outcomes, as is the amount of these interactions.²⁴

Research also highlights that though there are several contextual factors that can affect the quality of education of children, teacher-child interactions are yet an important factor in this quality. Mashburn, Pianta, Hamre, Downer, Barbarin, Bryant, Burchinal, Early and Howes (2008) studied the classroom quality of over 2,400 children enrolled in 671 pre-K classrooms in 11 states.²⁵ They found that even after controlling for children's prior skill levels, child and family characteristics, program characteristics, and the child's state, teachers' instructional interactions predicted academic and language skills. In addition, teachers' emotional interactions predicted children's social skills as reported by the teacher. The authors posit that the results of their study suggest that policies, professional development, and program development efforts that improve teacher-child interactions can facilitate children's school readiness.²⁵

Vitiello, Moas, Henderson, Greenfield, and Munis (2012) support the same by contending that though there are specific aspects of the child that affect their readiness for their beginning of education, the interactions of teachers in responding to the needs of each child inform this. They examined the effects of child temperament on academic school readiness among Head Start preschoolers, taking into account the quality of classroom interactions. Their results indicated that over-controlled children (compared to resilient children) made greater math gains in classrooms with higher instructional support, whereas under-controlled children (compared to resilient children) made lower math gains in classrooms with lower emotional support. Vitello et al. (2012) also found that resilient children's gains in language and literacy were more positively associated with high emotional support than were the scores of over-controlled children. This study adds to prior findings suggesting that over-controlled and under-controlled children need special attention in the preschool classroom. Moreover, it suggests that teachers and administrators may want to carefully consider the effect that classroom interactions and

instructional techniques have on individual children and attempt to tailor instruction to meet the individual needs of children within classrooms.²⁶

Teacher-child relationships not only encompass the interactions between teacher and child, but also the beliefs teachers have with regard to the children and work they conduct within the classroom. McCarty, Lambert, and Abbott-Shim (2001) explored Head Start teacher beliefs and reports of classroom quality. In examining differences between the beliefs of teachers in high, average, and low quality classrooms they found that teachers in the low quality group responded more favorably to statements about inappropriate beliefs and practices than did teachers in either high or average quality classrooms. These results suggest that professional development opportunities for Head Start teachers should focus on practices aimed at addressing teachers' beliefs about instructional practices.²⁷

Out of School Time as a Potential Protective Factor

Within the afterschool and out of school time literature, Cosden, Morrison, Albanese, and Macias (2001) found that homework does not always occur at home. Their examination of afterschool programs that provide homework assistance found that afterschool homework assistance programs can serve as a protective function for children at-risk for school failure, particularly those who do not have other structured after school activities or for children whose parents do not speak English at home.²⁸

In an effort to identify exemplary practices in afterschool and out of school time programs, a large-scale evaluation of the 21st Century Community Learning Center (CCLC) program was undertaken. Huang et al. (2010) noted that the common characteristics that were found across effective afterschool programs included strong leadership and established clear goals, as well as aligned program structures and contents to meet those goals. In addition to this, they set a schedule that allowed time for students to learn and practice, and established relationships with the day school. Moreover, their curriculum in general reflected a linkage to standards. Most of the programs used research-based strategies and maintained some form of evaluative structures. Furthermore, staff members had low turnover rates, related well to the students, and were able to build rapport, maintain high expectations, and keep students motivated and engaged.²⁹

In addition to this, London, Gurantz, and Norman (2011) illustrate the benefits of afterschool programs on students' academic performance, particularly for disadvantaged youth. Using data from an elementary school district and large afterschool program, they analyzed the effects of afterschool program participation on English language development of EL students. Consistent with the literature on the effects of afterschool programming on academic outcomes, they found that participation in the program's

various activities, and possibly at higher levels of engagement, was associated with improvement in English language development. However, though results showed improvements of English development overall, they did not appear to show improvements in specific content areas such as English proficiency, suggesting a need for more research in understanding the complexities of the impact of out of school time.³⁰

CATEGORY 2: SAFE, HEALTHY INDOOR AND OUTDOOR ENVIRONMENTS

Research on safe and healthy indoor and outdoor environments strongly suggests that quality programs must provide indoor and outdoor environments that promote children's development. Moreover, research on health care consultation reveals that regular consultation from outside experts can be an important method of ensuring quality environments. Details from the literature review are presented below. We begin by presenting the most recent articles.

In the last few years research has supported the positive effects of the structure of indoor and outdoor play and the areas associated. Moreover, literature has shown a need for tailored and developmentally appropriate play areas as well as how these factors affect the activity level of children.

Additional research in this area examined general health and safety guidelines, a need for the link of research and policy in order to promote health standards, and the role of health in child care in supporting a various health and safety outcomes particularly for low-income children.

Implications for Consultation

Alkon and colleagues (2009) maintain that consultation can be a useful tool in policy and practice improvement. In an intervention research model, they studied growth in health and safety policies and practices. At the start of the intervention, the 73 intervention child care programs and 38 comparison programs were not significantly different on the Health and Safety Checklist.³¹ Health consultants were provided to the intervention centers and at post-intervention, these centers had significantly more and higher-quality written health and safety policies including hand washing, cleaning and sanitizing, emergency preparedness, and daily health checks. In addition, intervention centers had improved their health practices in hand washing and emergency preparedness.³¹ The results indicate that child care health consultation programs can improve the written health and safety policies and may improve practices in child care centers.

Moreover, research also supports that consultation in specific areas such as mental health can have a positive impact on child outcomes in these specific domains. For instance, in a

recent research synthesis Brennan, Bradley, Allen and Perry (2008) reviewed the evidence base for mental health consultation in early childhood settings.³² There was evidence that early childhood mental health consultation helped increase staff self-efficacy/ confidence and competence in dealing with troubling or difficult behaviors of young children in their care. In several studies within the synthesis, staff that received consultation had improved sensitivity and lower job-related stress. In general, the researchers reported that consultation helped improve the overall quality of early care and education settings and was linked to reduced staff turnover (Brennan et al., 2008). The mechanism of change may be through the development of positive collaborative relationships between the mental health consultant and program staff members. This was found to be the most important aspect of an intervention that included mental health consultations in Head Start early childhood settings.³³

Positive Effects of Outdoor Environments

Elkind (2006) support the positive effects of outdoor play to learning outside of the classroom. They describe outdoor play as providing children with a solid foundation and central vehicle of knowledge about the real world. While outdoor play is important to all age levels, it is particularly important in the early childhood and elementary years. Elkind suggests that children's outdoor play is not a luxury but critical to children's ability to learn about the world, others, and themselves, and that it is through playful contact with that world that children create learning.³⁴ Fjørtoft (2001) found that a popular form of kindergarten in Scandinavia is the outdoor kindergarten where children ages 3-6 years spend all or most of the day outdoors in the natural environment. Playing in the natural environment was found to have positive effects on children, with more creative play, and indicated that absence due to sicknesses was lower among children in outdoor kindergartens than in traditional ones.³⁵

Furthermore, Boldmann et al. (2006) support these same positive effects. They examined the impact of outdoor environments regarding physical activity and exposure to ultraviolet (UV) radiation among preschool children. Boldmann et al. (2006) found that step count was higher and UV exposure lower in environments with trees, shrubbery, and broken ground compared to delimited environments with little vegetation. These results suggest that spacious preschool environments with more vegetation trigger more physical activity and yield sun protection in outdoor play.³⁶

In addition to this, Aziz and Said (2011) contend a need for developmentally appropriate and tailored outdoor areas for children. They synthesized several studies over time on children's use of outdoor environments and found that children's place preferences and play behaviors in the outdoor environment are influenced by their developmental needs, as well as individual, physical, and social factors.³⁷

In examining the implications of both outdoor and indoor play on activity levels, Sugiyama, Okely, Masters, and Moore (2010) explored characteristics of child care centers associated with preschoolers' physical activity and sedentary behavior levels while in child care, as well as outdoor play areas associated with the same behaviors during outdoor time. Sugiyama et al. (2010) found that children were mostly sedentary while in child care. Additionally, lower child-staff ratios and using indoor play areas for motor activity were associated with more moderate-to-vigorous physical activity and less sedentary behavior while in child care. Also, fixed play equipment in outdoor areas was conducive to more moderate-to-vigorous activity and less sedentary behaviors while outdoors. Sugiyama et al. (2010) suggest that preschoolers' physical activity levels can be enhanced by changing attributes of indoor and outdoor play areas.³⁸

Positive Effects of Indoor Environments

The structure and physical layout of early childhood centers' indoor environment is also crucial to child behavior. In a study of the number of activity areas in early childhood environments, the results showed that the ratio of children to the number of activity areas was positively correlated with off-task time. Specifically, the higher the ratio, or the more children per activity area, the greater the time children spent off-task.³⁹

Raustorp, Boldermann, and Johansson (2010) also support this importance with regards to activity instruction specifically. They examined the contribution of physical education classes to children's daily physical activity among 4th grade students. Raustorp et al. (2010) found that the contribution of PE class to moderate-vigorous physical activity was high in both boys and girls. These results suggest that PE class should be considered an important health factor, particularly for otherwise inactive children.⁴⁰

Health Screening as a Vehicle for Safety and Quality

In exploring the importance of school environments to the quality of education of children, research also makes note of the health and safety aspects of these environments in contending the need for health screenings in order to enhance this quality. In a review of the literature on vision and vision screenings, Ethan and Basch (2008) found that 1 in 5 children have a vision problem with low income children having a disproportionate amount of vision problems. Moreover, these low income children face many barriers to acquiring vision care. The authors maintain that early detection and treatment of vision problems is essential in optimizing children's health and development. The results of their study and review of the literature suggest that states and schools can take concrete steps to increase the number of children identified and treated for vision problems.⁴¹

Moreover, research supports the need for appropriate protocols in the screening process. In a feasibility study of screening for hearing loss in Early Head Start programs Eiserman et al. (2007) trained Early Head Start staff members to conduct hearing screenings. The

results indicated that the Early Head Start staff were able to identify children with hearing disorders in the outer, middle, and inner ear and that using their protocol was both practical (easy to use and implement) and effective.⁴²

Literature also supports that Head Start programs can be used as a vehicle for appropriate screenings. Children from low income families are also more likely to have dental disease and less likely to have access to dental care.⁴³ In a study of Head Start children in Ohio, Siegal, Marx and Cole (2005) found that 28% of the 2555 children screened had at least one decayed tooth. The results of the study indicated that many Ohio Head Start children do not receive dental care. Parents and caregivers reported that finding accessible dentists was a primary obstacle to receiving dental care. The authors concluded that Medicaid and patient age were primary dental office limitations (only 7% of general dentists and 29% of pediatric dentists surveyed reported accepting children aged 0 through 5 years of age as Medicaid recipients without limitation) however, these limitations were partly offset by the role Head Start plays in ensuring dental care.⁴⁴

Furthermore, recent research has also underscored the importance of food safety training for early childhood professionals as young children have little control of food safety risks because other people prepare their food. Enke, Briley, Curtis, Greninger, and Staskel (2007) conducted a multi-state study of food safety and noted that there is a continued need within early childhood environments for continual management and food safety training for both directors and staff in order to provide a safe environment for children.⁴⁵ In addition, Unusan (2007) found that a course on food and nutrition for preschool teacher candidates had a significant impact on teacher knowledge by increasing their nutrition knowledge and practices.⁴⁶

CATEGORY 3: WORKFORCE QUALIFICATIONS AND PROFESSIONAL DEVELOPMENT

Research on workforce qualifications and professional development reveals that higher levels of educational attainment are linked with improved quality but specialization is important for quality outcomes. Moreover, experimental studies have revealed that the quality of the professional development is important to achieve desired quality outcomes. Yet the mechanisms by which teacher quality improve with higher education and professional development training remains unclear. We begin by presenting the most recent articles.

In the last few years, research suggests that training through coursework can improve teacher performance in communication as well as teacher-child interactions. Moreover, literature has shown that various categories of professional development can be effective in producing specific child outcomes. This research also purports that the importance of

training teachers to work with children with disabilities and to facilitate social-emotional development.⁵⁸

Bachelors Degree

In a review of the literature on teacher qualifications for preschool and pre-Kindergarten teachers the major conclusion reached was that Bachelor's degrees (BA's) are best.⁴⁷ This research literature review on the quality of early education and care supports the position that teacher education and training relate to quality. Specifically, classrooms where the teachers have at least a Bachelor's degree are more likely to be of higher quality including richer language environments, enhanced literacy environments, and better teacher-child interactions. Moreover, the teachers themselves are more likely to appropriately approach instruction—they are more sensitive, less punitive, and more engaged.⁴⁷

Further examination of teacher quality and education level has begun to tease out possible third variables involved with classroom outcomes. In fact, Early et al., (2007) found contrasting results, in a secondary analysis of multiple datasets studying teachers' education, classroom quality, and 4-year-olds academic skills.⁴⁸ The findings indicated largely negative or null results in predicting classroom quality and children's academic outcomes from the educational attainment and major of early childhood teachers. The authors suggest that teacher quality is complex and that a simple measure of teacher level of education may not be sufficient in predicting teacher quality. The authors note however, that a comprehensive professional development system for pre-service and in-service teachers could provide the knowledge, skills, and supports for teachers to provide a high-quality early education experience that can positively impact children's development.⁴⁸

Fuligni, Howes, Lara-Cinisomo, and Karoly (2009) studied the diverse professional development pathways found in early childhood. They found that (in California) the greatest variation in education and training was observed in family child care, where educators ranged from having no education and training to having a specialized BA and graduate training. The authors suggest that the differences by program type were likely due to differences in the licensing regulations and employment qualification requirements in the different settings. Moreover, the authors found that family child care providers had fewer opportunities for day-to-day support from other educators or mentors and that they typically sought continuing professional development experiences primarily through workshops and conferences. The findings of the study by Fuligni et al. (2009) also point to the importance of the BA for family child care educators for developing more authoritative or democratic beliefs about children. In addition, the importance of training in child development at the BA level was highlighted in order to improve teachers'

provision of a positive emotional climate for children. Although the BA alone was not sufficient to produce large differences in outcomes, specialized training at the BA level or above did make a difference in the quality of teacher-child interactions. Fuligni et al. (2009) posit that “any policy that not only mandates BAs but provides tangible support for obtaining the BA in a child development major will raise the quality of the pool of educators serving the low income children who can most benefit from high-quality early childhood education.”⁴⁹

Professional Development and Coaching

Additional research suggests that professional development for teachers in specific content areas, such as language and literacy, has been shown to be most effective for teachers who also have a coach/ mentor. Specifically, professional development alone had negligible effects on improvements in quality language and literacy practices, however, coursework plus coaching showed substantial effect sizes for both center and home based educators.⁵⁰ Mohler et al. (2009) also found that an early literacy intervention model including a literacy curriculum for preK low income children and a professional development model that provided coaching was significantly more effective than two other experimental conditions. The findings indicated that the children in the curriculum plus coaching model significantly outperformed the children in the baseline condition on most of the literacy measures. Moreover, significant differences were also found for children in the intervention project when they were followed through kindergarten and compared to control children on end-of-year literacy assessments.⁵¹

Howes, James, and Richie (2003) showed that even after controlling for formal education levels, teachers’ responsive involvement and engagement with children was predicted by the extent to which they were supervised and mentored. Thus, teachers who more extensively supervised and mentored demonstrated higher quality interactions with children and engaged children more in language play.⁵²

The benefit of coaching also holds true for the professional development of family child care educators. Koh and Neuman (2007) randomly assigned family child care educators working in low-income communities to one of three groups: a language and literacy course plus coaching, the course only, and a control group. The findings revealed that providers who received the course plus the coaching showed statistically significant and educationally significant improvements in their literacy practice compared to the other two groups.⁵³

Contextual Issues

Recent research suggests that in addition to considering early childhood educators’ level of education when examining the influences of variations in professional development on classroom quality, an important component of teacher quality may also be related to the

effects of teacher supervision and auspice.⁵⁴ In addition, these researchers found that not only was the teachers' education and credential level important but the credential level of the program director also predicted classroom quality in private, non-profit and Head Start programs.⁵⁴ In this same study, however, findings suggest that at the preschool level, in classrooms sponsored by school districts or by the state, bachelor's degree were not as predictive of classroom quality. The authors note that school district and California state preschool programs (where the study took place) traditionally have required higher credentials and provide better salaries and working conditions for their teachers, which could explain why the lead teachers in these programs, regardless of credential/ degree level, do not have classrooms that differ in terms of sensitive teacher-child interactions and classroom materials.⁵⁴ The authors maintain that the effects of supervision and auspice are also important to classroom quality because their results showed that the school district and state sponsored preschools may have been providing more supervision and support for teachers with less formal education.⁵⁴ Although the school district and state sponsored programs tended to have higher quality classrooms, they also tended to have more funding for materials and resources than the private and non-profit centers. The authors also note that not only did the publicly funded classrooms have more materials but also the teachers were using those materials appropriately. Thus, in classrooms with fewer resources teacher training may make the difference in how teachers use the resources that they have, with the more experienced teachers using fewer resources and materials more effectively.⁵⁴

In another study of pre-kindergarten programs, including 238 classrooms and teachers, Pianta et al. (2005) assessed classroom quality using observational methods and found that the quality of specific teaching practices was lower in classrooms where more than 60% of the children were from homes below the poverty line, when teachers lacked formal training (or a degree) in early childhood education and held less child-centered beliefs.⁵⁵

NEW FINDINGS

Bachelor Degree

Efforts to understand optimal education and training for early childhood teachers have revealed some contradictions and challenges. While there is strong evidence to support Bachelor completion as a predictor of quality teaching, it remains unclear how higher education contributes to improved teacher quality. Moreover, access to and success in higher education can be a challenge for teachers already working in the field, who are interested in professional growth. Kipnis et al. (2012) focused on examining efforts to expand bachelor degree opportunities in ECE for adults currently working in the field. Over the four years followed, the cohort of students who were primarily women of color,

reported programs that offered sufficient financial and academic support helped them to become more effective teachers as well as access and succeed in higher education. New measures in development by The Center for the Study of Child Care Employment aim to deepen the understanding of how higher education and work environment are connected to teacher effectiveness and interest in further professional development.⁵⁶

Professional Development and Coaching

Recent literature focusing on Professional Development and classroom outcomes has begun to illustrate some of the potential benefits of early childhood teachers obtaining a bachelor's degree. Although seemingly separate, experience in higher education and motivation for continued Professional Development have been linked in research.⁸⁵ The exploration for optimal models of professional development to improve teacher quality has unveiled multiple pathways for training including individual consulting or coaching, various modes of coursework, and scalable standardized trainings with the hope to address the education gap that exist in many family-run care centers or centers with high percentages of students below the poverty line.

To address the optima means of delivering Professional Development trainings, Howe et al. (2011), examined three different methods: a consultant model, workshops, and a reading group. Global classroom quality measured with the ECERS-R, found that the consultant model was associated with an increase in promoting children's learning and development over time.⁵⁷

While exploring other means of professional development training through coursework, Piasta et al. (2012) examined how professional development affected teacher's performance in the classroom. Specifically, they examined conversational responsivity, defined as teacher's ability in communication-facilitation strategies and language-development strategies. In addition, the following outcomes on proximal language were also measured. Piasta et al. (2012) found that trained teachers utilized significantly more communication-facilitation strategies across the year, but found no difference for language-developing strategies. Overall, children in classrooms with trained teachers demonstrated greater linguistic productivity and complexity in verbal communication.⁵⁸

The coursework model for Professional Development has also addressed non-academic classroom outcomes. Hamre et al. (2012) investigated the effects of a 14-week course on effective teacher-child interactions. Teachers trained in the course demonstrated greater knowledge and skills in identifying effective interactions with children. In addition, those teachers were assessed as utilizing more effective emotional and instructional interactions.⁵⁹

Lastly, online support and training as professional development has been explored as a method for teachers to more effectively work with students with challenging behaviors. Gebbie, Ceglowski, Taylor and Miels (2012) examined how instructional support to teachers of preschool children with disabilities can affect three classroom practices. Following the online interaction with their colleagues, the teachers felt more competent in managing challenging behaviors. The online interactions in particular were highly effective in their influence on improving teacher efficacy, suggesting preschool programs serving children with special needs should consider providing more opportunities for the teachers to build their own learning communities to interact and support one another.⁶⁰

Contextual issues

In order to address some of the challenges of accessing effective professional development and succeeding in higher education for the diverse population working in early childhood, researchers have explored the benefits and drawbacks of standardized, scalable training models. Scott-Little et al. (2011) explored the implementation of professional education models to facilitate effective teaching practices. By utilizing the CLASS observation measure, the results indicate that professional development as a standardized course “may be an effective means for presenting content related to language and literacy instruction within the context of information about effective teaching practices.”⁶¹

In addition, LoCasale-Crouch et al. (2012) evaluated the scalability of early childhood professional development. The intervention was effective in changing teachers’ beliefs, knowledge and skills. The researchers suggest potential scalability of professional development trainings may address the education gap found among early childhood professionals.⁶²

CATEGORY 4: FAMILY AND COMMUNITY ENGAGEMENT

Research on family and community engagement has found that parental involvement is particularly beneficial for child outcomes and programs’ engagement with the community. Parental involvement has been found to be essential in collaboration with care providers around service delivery to improve quality. Research reveals that in order to enhance the involvement of families, there is a need for programs and staff to initiate culturally appropriate and directed communication with children’s parents and/or guardians. We begin by presenting the most recent articles.

In the last few years research has continued to purport that family and community environments can have significant impacts on learning outcomes as well as other social-emotional outcomes for children. Additional research examined how several family factors can impact children on various educationally relevant outcomes.⁷⁰

Impact of Family and Community

Parent involvement in early childhood is an important component of early childhood education and helps to promote beneficial long term effects (Barnard, 2004) and is also important to children's achievement in 1st and 3rd grade.^{63,64} In addition, for children of immigrants, parental involvement decreases the achievement gap in kindergarten for both English and non-English speakers.⁶⁵ Moreover, parent involvement has been shown to be particularly beneficial for preschool boy's positive development and academic performance (Marcon, 1999).⁶⁶ Parents also feel more positively about the early childhood program their children are participating in when they are more involved in the program and have higher levels of satisfaction with the program (Jinnah & Walters, 2008). Parental involvement in early intervention curricula, such as parents' involvement in preschool and kindergarten activities has also been found to be beneficial for children at risk and was significantly associated with higher reading achievement, lower rates of grade retention at age 14, and with fewer years in special education.⁶⁷

Leviten-Reid's recent study (2012) also supports the positive impact of parental involvement. They examined characteristics of parental involvement in operations, governance, and quality of care among cooperative child day care centers and for-profit and independent non-profit centers. Their results revealed that cooperative centers feature greater parental involvement in operational aspects, such as fundraising and care of center grounds, compared to for-profit and non-profit centers. Additionally, cooperative centers were more likely to have parents on their governing boards. Moreover, the Leviten-Reid (2012) study suggests that having parental involvement on governing boards is a predictor of quality.⁶⁸

Anders et al. (2012) examined the influence of the quality of home and preschool learning environments on the development of early numeracy skills among children. Their results revealed that child and family factors, such as gender, parental native language status, socioeconomic status, and mother's educational level, predicted numeracy skills in the first year of preschool. Additionally, the quality of the home learning environment was strongly associated with numeracy skills in the first year of preschool, and this advantage was maintained at late ages. Anders et al. (2012) suggest that these results underline the impact of family and home environment on preschool children's academic skills.⁶⁹

Coulton et al. (2007) reviewed literature on the relationships between neighborhoods and child maltreatment. This review concluded that a number of socio-economic characteristics of neighborhoods have been shown to correlate with child maltreatment rates as measured by official reports of child protective service agencies. Additionally, only a few studies examined direct measures of parenting behaviors associated with

maltreatment, and these revealed a weaker relationship with neighborhood disadvantage. Moreover, Coulton et al. (2007) suggest that the processes that link neighborhood conditions to either maltreatment reports or parenting behaviors are not yet confirmed by the research literature.⁷⁰

Programs and Teachers as Leaders in Family and Community Engagement: Culturally Appropriate Practice

As the United States becomes increasingly diverse, early childhood educators are often among the first to work with families whose primary language is other than English (Cellitti, 2010). Often parents and caregivers do speak English but not fluently enough to feel comfortable communicating with teachers and administrators. Cellitti (2010) maintains that early childhood programs and school systems can be more responsive to diversity by providing effective translation and interpretation services.⁷¹

Research even outside of the United States has supported this same need for culturally appropriate communication between teachers and families. In Australia, a research study conducted on the quality improvement system (QIAS) for early childhood programs focused on the mandate that early childhood educators communicate with parents in written form.⁷² Results from the study suggest that early childhood educators prefer verbal two-way communication practices, as they are better able to build a shared understanding with parents in this form. Participants in the study were clear that formal means of communicating with parents (e.g. written communications), as required in QIAS, did not guarantee a shared understanding of the child and so many staff dismissed the formal communication requirements. The authors suggest that the quality of parent involvement at a center should be assessed according to the center's efforts to: 1) create time for meaningful face to face communication, 2) negotiate differences between parents and staff about appropriate child behavior and 3) discover methods of communication that "worked" both for parents and staff.⁷² Recent research also underscores the importance of early childhood educators and parents practicing an ongoing dialogue, which allows for more opportunities for clarification and collaboration with families.⁷³

Douglass and Klerman (2012) investigated the influence of an early care and education initiative directed toward families on a selection of child care programs in the state of Illinois. They discovered that this particular initiative influenced learning networks, the quality of training, the engagement of program directors, and the organizational climate of programs. The results from this study suggest that quality improvement and professional development efforts are likely to be more effective in promoting real change when they target multiple levels of context in and around child care programs. They also purport that quality improvement efforts in the area of family engagement may be more effective when specific attention is given to strategies for creating a supportive

organizational climate and collegial relationships among staff. Lastly, Douglas and Klerman (2012) contend that a focus on organizational cultural competence may provide the workplace environment necessary to support culturally competent practice among program staff.⁷⁴

Research on collaboration has found that community engagement—especially around service delivery is related to improvements in classroom quality. Research by Schilder and her colleagues (2005 and 2009) found that child care programs that collaborate with Head Start are more likely than non-partnering programs to offer a range of comprehensive services. Moreover, programs that offer more services were also more likely to provide higher classroom quality as measured by the ECERS-R.^{75,76} Seldon found in a case study of early education programs that collaboration around service delivery is related to improvements in quality. Finally, Hicks et al. found that the level and type of collaboration is related to the quality of outcomes.^{75,77-79}

CATEGORY 5: LEADERSHIP, MANAGEMENT, AND ADMINISTRATION

Research on leadership, management, and administration has shown that staff wage is a factor in teacher turnover and quality. Additionally, research has supported that on-the-job learning experiences, mentoring, and communication are important to effective teaching. Key factors have been identified which support successful partnerships, and reveals that supervision and involvement of leaders is correlated with positive outcomes. We begin by presenting the most recent articles.

In the last few years research has explored specific factors that lead to program quality and satisfaction. Literature has supported the importance of particular factors such as leadership skills and education level of directors to program quality. Lastly, more recent research points to the unique attributes of administrative and financial domains of ECE centers.

Additional research in this area examined the overall impact of high turnover in ECCE centers, psychometric characteristics of the Program Administration Scale, and factors involved in quality coaching and supervision (e.g. Sciarra & Dorsey, 1998; Taylor & Bryant, 2002; Whitebook et al., 2009) These articles suggest that strong administration is an important aspect of child care quality. Details from the most compelling literature review are presented below.

Administration

For program administration, Sciarra and Dorsey (1998) suggest that effective administration skills are not sufficient for effective program operation unless they are combined with good interpersonal communication skills. Sciarra and Dorsey (1998)

presents administration information within an interpersonal framework in their guide for providing practical help with the ultimate goal of improving the quality of programs for young children and helping directors and teachers be more effective in their work.⁸⁰

Taylor and Bryant (2002) studied the strategies implemented by highly effective quality improvement initiatives for child care centers and family child care homes. They found the key factors mentioned in the successful partnerships were: strong leadership, strategic planning for a system of quality improvement programs, support for the education and professional development of the work force, financial rewards for higher education and improved quality, on-site customized technical assistance, and effective collaborations with multiple community agencies.⁸¹

Management

Whitebook et al.'s (2009) review of the research literature and policy report found that the work environment of early childhood professionals can support or hinder teacher performance and that compensation strongly affects teachers' willingness to enter and stay in the field. In ECE, given the particular problems of low compensation and high turnover, this review highlights the findings that students of higher-paid teachers achieve better outcomes. In addition, Whitebook and colleagues' findings suggest that opportunities and support for ongoing, on-the-job learning is critical to helping teachers become more effective. Short term interventions however, are unlikely to be effective. The skills and training of the mentor or coach are also critical to determining the effectiveness of the services, but Whitebook points out that the current research base has not determined exactly what qualities the mentor/ coach should possess.⁸²

In Phillips, Howes, and Whitebook's (1991) seminal work on child care as an adult work environment, the researchers found that staff wages were the most important predictor of staff turnover and were also a positive predictor of the quality of care provided to the children. Job satisfaction was significantly, but modestly, associated with wages, paid preparation time, reduced-fee child care, and the quality of provisions for adult needs.⁸³

Leadership

In 2003, Howes and colleagues reported a correlation between teachers who more extensively supervised and higher quality interactions with children.⁵² This study implicitly addresses issues of supervision and reflective practice but does not examine multiple aspects of quality teaching. Supervision that supports reflective practice is embedded in many observation protocols and therefore is implicitly examined in many studies of quality child care and early education.

In Dawson and D'Amico's (1985) seminal work on increasing the use of program evaluation information in early childhood, researchers encouraged potential users of the

program evaluation information to be more engaged and involved in the evaluation activities. In the study, program staff participated directly in the evaluation of the program as interviewers (one person even became a co-evaluator) and less directly during informal interactive feedback activities. The findings showed that the program staff used the evaluation information primarily to identify technical assistance needs and to modify the program. However, increased use of the evaluation findings resulted in improved communication, staff perceptions of evaluation relevance and credibility, and staff commitment to the study. In addition to increasing information use, involving staff expanded the evaluation knowledge base at a relatively low cost.⁸⁴

NEW FINDINGS

Administration

Effective administration of early childhood centers allows researchers to look holistically at the educational and work environment where children are able to learn and develop. Ang (2012) examined the perspective of early childhood setting leaders and identified various factors influencing the quality of their professional practice. These factors include an integrated and multi-agency collaboration, reflective learning and practice, and professional status and pay.

Wagner and French (2010) utilized the framework of Deci and Ryan's (1985) self-determination theory to explore how the interactions of early childhood teachers and work contexts influence motivation for professional growth and change in practice. Three facets of work satisfaction were significant predictors of intrinsic interest in professional development: 1) supervisor support, 2) the nature of the work itself, and 3) co-worker relations. Statistical analysis demonstrates how interactions between professional development activities and work environment support or undermine change.⁸⁵

Management

Stoney and Blank (2011) addressed the important factors in promoting financial stability in ECE centers. The authors described the consequences of failing to attend to the business side of ECE centers, often leading to closures. Given the small-business nature of many ECE centers, the authors encourage the connection between a sound business management and quality education and care. Stoney and Blank (2011) outline the challenges, training, strategies and solutions towards effectively running the business side of ECE to support education and childcare outcomes.⁸⁶

Leadership (and Coaching Connection)

There also is strong evidence that a supervisor with effective administration and leadership skills is crucial for developing and sustaining an early learning and care

(ELCC) program that enhances children's development (Best Start Expert Panel on Quality and Human Resources, 2007)⁸⁷

One study found that centre administrative quality accounted for 26% of the variance in program quality in 452 child care classrooms after controlling for factors such as lead teacher qualifications (McCormick Center for Early Childhood Leadership, 2010).⁸⁸

McCormick Center for Early Childhood Leadership (2012) described the high need for well-qualified early childhood administrators who are able to provide a fiscally sound, nurturing learning environment while also developing, supporting and retaining skilled teachers. The authors emphasized on the range and quality of leadership skills related to ECCE outcomes, including education level of the director as a strong predictor of overall program quality.⁸⁹

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LITERATURE REVIEW: SELECTED EXCERPTS FROM LITERATURE REVIEW DATABASE

Below we present excerpts from the database that the Study Team developed that summarized the alignment between the standards and existing research. We present a brief summary of research articles, reports, briefs, chapters, and books that the Study Team reviewed.

Authors	Document Title	Abstract	Citation Year Source
Abbott-Shim, M. Lambert, R., McCarty, F.	Structural model of head start classroom quality	The purpose of this research study was to develop, test, and validate a model that identifies the characteristics and beliefs of teachers and aides, and the classroom structural dimensions associated with Head Start classroom quality. The quality of classroom teaching practices was collected using the Assessment Profile for Early Childhood Programs: Research Version. Classroom structural characteristics were collected by observers. Teachers and teacher aides completed three self-report instruments: Teacher Beliefs Scale, Instructional Activities Scale, and Family Involvement Survey. Data analyses were conducted using structural equation modeling with the Lisrel VII computer program. The model was tested with Year I classroom level data and validated with Year 2 data. Education Level was shown to directly affect Inappropriate Beliefs, which impacted Inappropriate Instructional Activities, which influenced Classroom Quality. Neither Education Level nor Teacher Beliefs had direct effects on Classroom Quality; but they had indirect effects through Instructional Activities. Classroom Structure was associated directly with Quality. Education Level and Classroom Quality were associated directly with Attitudes Toward Families.	2000, Early Childhood Research Quarterly
Aina, O. E.	Maximizing learning in early childhood multiage classrooms: child, teacher, and parent perceptions.	This study was designed to examine what it means to have a child in a multi-age classroom, especially from the child's and the parents' perspectives. In an effort to gain perspective from several sources, the researcher spoke with children, parents, and the teacher involved in the program. Although multi-age classrooms seem to have several benefits, there are some concerns: the parents' and communities' lack of understanding of the program, the lack of training of multi-age teachers, and the teachers' fear of more preparation time and more materials. Nevertheless, the multi-age class allows for children to progress at their own pace. Individuality is also valued in the class, and labels are not used to describe the more or less advanced students. Children also feel less competition as opposed to a traditional classroom because they are all on different levels and have different expectations set for themselves. Since the children spend more than 1 year in a class they have more time to develop caring relationships with other classmates and the teacher. As schools progress toward more developmentally appropriate programs, multi-age and non-graded environments will flourish.	2001, Early Childhood Education Journal
Alexander, N.P.	Turning on the light: thinking about lighting issues in child care.	This article discusses the importance of planning lighting in childcare centers. Ideas for organizing lighting in efficient and developmentally appropriate ways are offered. Suggestions are made for provisions that will ensure children's gradual transition from bright to dimly-lit rooms. Guidelines for assessing light quality in a facility and	1995 Child Care Information

		the degree to which it is appropriate for its purpose are proposed. (AA)	Exchange, n 105 p 65-68 Sep-Oct 1995.
Alfassi, M.	The efficacy of a dialogic learning environment in fostering literacy.	This comparative study examines the role of contextual features embedded in a dialogic environment in fostering literacy. The study, implemented by language arts teachers in a middle school setting, investigates the effectiveness of an instructional program designed to create a collaborative dialogic learning environment that imparts literacy. The program is compared to a traditional learning environment in which reading and writing are imparted through direct teacher instruction. Results indicate that embedding literacy instruction in communities of discourse is superior to traditional methods in fostering reading comprehension and writing competence. Findings suggest that a dialogic environment creates the context within which students develop cognitive tools to achieve literacy.	2009 Reading Psychology; Nov/Dec2009, Vol. 30 Issue 6, p. 539-563
Alhassan, S., Sirard, J.R., & Robinson, T.N.	The effects of increasing outdoor play time on physical activity in Latino preschool children.	Objective. A randomized controlled pilot study to test the hypothesis that increasing preschool children's outdoor free play time increases their daily physical activity levels. Methods. Physical activity was assessed by accelerometers for four consecutive school days in thirty-two preschool-aged Latino children attending a preschool for low-income families. After two days of baseline physical activity assessment, participants were randomly assigned to an intervention or control group. The recess group received two additional 30-minute periods of outdoor free play time per day for two days. The control group followed their normal classroom schedule. Between group differences in physical activity variables were tested with a Wilcoxon rank-sum test. Results. There were no statistically significant differences between groups in changes from baseline in average total daily activity levels. The authors conclude that substantially increasing preschoolers' outdoor free play time did not increase their physical activity levels.	2007 International Journal of Pediatric Obesity; Jul2007, Vol. 2 Issue 3, p153-158
Alkon, A., Bernzweig, J., To, K., Wolff, M., & Mackie, J. F.	Child Care Health Consultation Improves Health and Safety Policies and Practices	To evaluate the effects of county-level child care health consultation intervention programs on child care centers' health and safety policies and practices the authors conducted a 3-year experimental study in 5 California counties. A total of 111 licensed child care centers (73 intervention, 38 comparison) participated at the baseline and postintervention times. Trained research assistants conducted objective observations with a Policies Checklist and Health and Safety Checklist, which were composed of key national health and safety standards. At baseline, both groups were not significantly different on the Policies Checklist and the Health and Safety Checklist. At the post-intervention time, intervention centers had significantly more and higher-quality written health and safety policies on 9 of the 10 policies rated (medication administration, care of mildly ill children, exclusion of ill children, cleaning and sanitizing, handwashing, daily health checks, inclusion of children with special needs, emergency preparedness, staff health) than comparison centers. At the postintervention time, intervention centers improved their health and safety practices in the areas of emergency preparedness and handwashing, controlling for consultation model, time in study, and director turnover. Both groups improved their indoor and outdoor facilities and overall Health and Safety Checklist means. The authors conclude that child care health consultation programs can improve the written health and safety policies and may improve practices in child care centers.	2009 Academic Pediatrics vol 9(5) September- October 2009, pp.366-370
Anders, Y., von Maurice, J., Weinert, S., Kuger, S., Ebert, S., Lehrl, S., & Rossbach, H.	Home and preschool learning environments and their relations to the development of early numeracy skills	This study examined the influence of the quality of home and preschool learning environments on the development of early numeracy skills in Germany, drawing on a sample of 532 children in 97 preschools. Latent growth curve models were used to investigate early numeracy skills and their development from the first (average age: 3 years) to the third year (average age: 5 years) of preschool. Several child and family background factors (e.g., gender, maternal education, socioeconomic status), measures of the home learning environment (e.g., literacy- and numeracy-related activities), and measures of preschool structural and process quality (e.g., ECERS-	2012 Early Childhood Research Quarterly

		E, ECERS-R) were tested as predictors of numeracy skills and their development. The analyses identified child and family background factors that predicted numeracy skills in the first year of preschool and their development over the three points of measurement—particularly gender, parental native language status (German/other), socioeconomic status, and mother’s educational level. The quality of the home learning environment was strongly associated with numeracy skills in the first year of preschool, and this advantage was maintained at later ages. In contrast, the process quality of the preschool was not related to numeracy skills at the first measurement, but was significantly related to development over the period observed. The results underline the differential impact of the two learning environments on the development of numeracy skills. Interaction effects are explored and discussed	
Aziz, N. F. and Said, I.	The trends and influential factors of children’s use of outdoor environments: a review	In the past two decades, there has been a raft of research on children’s behavior and their interaction with outdoor environment. The aim of this paper is to present a synthesis of 30 studies from 1985 to 2010 on children’s use of outdoor environments. The aspects taken into consideration include methodological issues and factors that influence the use of outdoor environments. The trends of the studies are discussed. In summary, the children’s place preferences and play behaviors in the outdoor environments are influenced by their developmental needs, individual, physical and social factors.	2011, Frank Porter Graham Child Development Institute
Banghart, P., & Kreader,	What can CCDF learn from the research on children’s health and safety in child care.	Research underscores the role of health and safety in child care in supporting children’s physical, cognitive, and social-emotional development, all of which contribute to their school readiness.	2012 U.S. Administration for Children and Families
Barnard, W. M.	Parent involvement in elementary school and educational attainment	While educational success in high school can be linked to elementary school achievement, there is little evidence that parent involvement in elementary school provides lasting benefits to children through high school. Using data from the Chicago Longitudinal Study, this study investigated the association between parent involvement in elementary school and success in high school. Parent involvement in school (based on teacher and parent reports) and parent reports of home involvement were used to determine if greater reported parent involvement was associated with indicators of school success. Results indicated that even after controlling for background characteristics and risk factors, parent involvement in school was significantly associated with lower rates of high school dropout, increased on-time high school completion, and highest grade completed. This study suggests that parent involvement in school is an important component in early childhood education to help promote long-term effects.	2004 Children & Youth Services Review; Jan2004, Vol. 26 Issue 1
Barnett, W. S.	Better teachers, better preschools: Student achievement linked to teacher qualifications	Once they begin kindergarten, America’s children are taught by professionals with at least a four-year college degree. Prior to kindergarten, their teachers are far less prepared. Fewer than half of preschool teachers hold a bachelor’s degree, and many have never even attended college. Noting that new research finds that young children’s learning and development clearly depend on the educational qualifications of their teachers, this policy brief examines the relationship between student achievement and teacher qualifications, and offers recommendations for improving teacher qualifications. The brief summarizes the kinds of qualifications preschool teachers actually need, and reviews research indicating the relationship between teacher qualifications and program quality. The brief concludes with policy recommendations, including the following: (1) require preschool teachers to have a four-year college degree and specialized training; (2) design professional development programs enabling current early education teachers to acquire a four-year degree; and (3) pay preschool teachers salaries and benefits comparable to those of similarly qualified teachers in K-12 education.	2003, NIEER Preschool Policy Matters

Bella, J., & Bloom, P.J.	The impact of early childhood leadership training on role perceptions, job performance, and career decisions	Using the photographic concept of zoom as a metaphor for the goals of leadership training as well as the personal transformation that occurs within individuals who engage in professional development to enhance their leadership capacity, this study took a focused look at 182 individuals participating in two models of early childhood leadership training to assess the impact of such training on their role perceptions, job performance, and career decisions. The first model was a 2-year program involving 34 hours of coursework and on-site technical assistance to achieve NAEYC center accreditation. The second model entailed 110 clock hours of instruction and technical assistance over 10 months. Findings revealed that leadership training resulted in heightened empowerment and self-esteem that transformed perceptions of the administrative role. Perceptions of competency correlated more strongly with educational level than years of experience in the field or as an administrator. Individuals participating in both training models indicated that the experience gave them a new perspective on their administrative role and better enabled them to see themselves and their programs in the context of their community and their profession. Participants noted that four skill clusters had especially helped them in their management and leadership roles	2003 National-Louis Univ., Wheeling, IL. Center for Early Childhood Leadership
Boldeman, C., Dal, H.P., Wester, U.	Swedish pre-school children's UVR exposure – a comparison between two outdoor environments	Overexposure to ultraviolet radiation (UVR) in childhood is a major risk factor for skin cancer. Shady environments are recommended as one method of protection. Environmental exposure to UVR and environmental protection were assessed by dosimeter measurements on 64 children aged 1–6 years at two geographically close and topographically similar pre-schools outside Stockholm. Outdoor play constructions of site 1 (34 children) were mainly exposed to the sun, and those of site 2 (30 children) were mainly shaded. The difference can be explained by the children's outdoor pre-school environments, and the behaviors linked to these environments. The authors recommend that designers consider the attractiveness of shady environments in the design of children's preschool playgrounds, particularly if these are extremely exposed to the sun.	2004, Photo-dermatology, Photo-immunology & Photomedicine; Feb. 2004, Vol. 20 Issue 1
Boldemann C., Blennow M., Dal H., Mårtensson F., Raustorp A., Yuen K., & Wester U.	Impact of preschool environment upon children's physical activity and sun exposure	The physical qualities of outdoor environments are important to trigger healthy behavior in children. We studied the impact of outdoor environments upon spontaneous physical activity and exposure to ultraviolet (UV) radiation in 4- to 6-year-old children at 11 preschools in Stockholm county. To study the relationship between physical activity and activity the authors obtained pedometry and measurement of UV radiation from 197 children across 11 preschools in Stockholm. Outdoor environments differed regarding vegetation, topography, space, and education. Ambient global UV radiation data were collected, free sky, and ground surface assessed. Arrival, in- and outdoor stay, and departure were recorded. The researchers concluded that spacious preschool environments with trees, shrubbery, and broken ground trigger physical activity and yield sun protection in outdoor play. As many children attend preschool, access to such environments is recommended in community architecture.	2006 Preventive Medicine
Bowers, F.B.	Developing a child assessment plan: an integral part of program quality	The National Association for the Education of Young Children's Accreditations Criteria for Assessment clearly identifies the need for observation and assessment in early childhood programs. NAEYC also addresses the need to create an assessment plan and use appropriate assessment methods. Although practitioners agree that observation is important, they often do not have a plan for observation and assessment, knowledge of the various methods of assessment or an understanding of when and why the various methods should be used. In this article, the author discusses observation and identifies various types of assessment tools as well as ways preschool teachers might use to assess a child's development.	2008 Exchange: The Early Childhood Leaders' Magazine Since 1978, n184 p51-57 Nov-Dec 2008
Bredenkamp, S. & Copple, C.	Developmentally Appropriate Practice in Early Childhood Programs (Rev. ed.)	Expanding from the core ideas of the influential 1987 edition, this volume spells out more fully the principles underlying developmentally appropriate practice and guidelines for classroom decision making. The revised edition is explicit about the importance of the social and cultural context in considering appropriateness of practices. For all engaged in the care and education of infants and toddlers, 3- through 5-year-olds, or primary-	1997, National Association for the Education of Young Children

		grade children, this book offers an overview of each period of development and extensive examples of practices appropriate and inappropriate with children in that age group.	
Bredenkamp, S. & Copple, C.	Developmentally appropriate practices in early childhood programs Serving Children from Birth through Age 8	The purpose of this position statement is to promote excellence in early childhood education by providing a framework for best practice. Grounded both in the research on child development and learning and in the knowledge base regarding educational effectiveness, the framework outlines practice that promotes young children's optimal learning and development. Since its first adoption in 1986, this framework has been known as developmentally appropriate practice.	2009, National Association for the Education of Young Children
Brennan, E.M., Bradley, J.R., Allen, M.D., & Perry, D.F.	The evidence base for mental health consultation in early childhood settings: research synthesis addressing staff and program outcomes	One strategy to support early childhood providers' work with children exhibiting challenging behavior is offering mental health consultation services in order to build staff skills and confidence and reduce staff stress and turnover. Through systematic search procedures, 26 recent studies were identified that addressed the effectiveness of early childhood mental health consultation with respect to staff- and program-level outcomes. Across the reviewed studies, there is some evidence that early childhood mental health consultation helped increase staff self-efficacy/confidence and competence in dealing with troubling or difficult behaviors of young children in their care. In several studies, staff receiving consultation had improved sensitivity and lower job-related stress. In addition, consultation generally helped improve overall quality of early care and education settings and was linked to reduced staff turnover.	2008, Early Education & Development, Vol 19 Issue 6
Brooker, L., & Woodhead, M. (Eds.)	Developing positive identities	This entire issue of the journal builds on theory and evidence about what makes for positive identity, how it can be affected by adversities, social exclusion and discrimination, and how young children's resilience can be promoted. The objective of this series is to provide reviews of recent research, information, and analysis on the Bernard van Leer Foundation's key policy issues on early childhood. It also aims to strengthen the care environment, successful transitions, and social inclusion and respect for diversity of children. This issue contains sections on the following three topics, the right to identity and the development of identity, developing positive identities and identities, friendships, and peer cultures.	2008, Developing Positive Identities; Milton Keynes, UK; The Hague, Netherlands: Child and Youth Studies Group; Bernard van Leer Foundation
Brown, W.H., Pfeiffer, K.A., McIver, K.L., Dowda, M., Addy, C.L., & Pate, R. R.	Social and environmental factors associated with preschoolers' nonsedentary physical activity	This article presents findings from an investigation into the influence of several indoor and outdoor preschool settings on children's engagement in sedentary and non-sedentary physical activities, based on observations of 476 children from 32 child care centers, Head Start centers, faith-based programs in a metropolitan area of South Carolina.	2009, Development, Volume Number: 80, Issue Number: 1
Bryson, C., Sibieta, L., Butt, S., & Brewer, M.	The role of informal childcare: A synthesis and critical review of the evidence: Full report.	This report documents what is and is not known about the quality of 'informal childcare' and its effects on child development.	2012 Nuffield Foundation
Bueno, M. & Darling-Hammond, L.	A matter of degrees: preparing teachers for the pre-k classroom	Teacher effectiveness is among the most important factors impacting the quality of pre-kindergarten programs. When teachers hold a bachelor's degree and have specialized training in early childhood education, they are better able to support children's healthy development and school readiness. State and federal leaders should implement	2010 The PEW Center on the State;

		policies to require and encourage a higher level of pre-k teacher preparation and provide support systems that help educators attain advanced qualifications.	Education Reform Series March 2010
Burchinal, M.	Differentiating among measures of quality: Key characteristics and their coverage in existing measures	With growing policy interest in improving access to high quality child care there is a need to operationalize the basic characteristics of quality irrespective of setting. this Brief discusses key characteristics that differentiate measures of quality, and the extent to which measures that vary on these characteristics predict child outcomes. quality is examined in terms of structural aspects including setting and classroom features and in terms of process such as how the caregiver interacts with the children. Characteristics that have shown to more strongly predict child outcomes include observations of caregiver interactions as opposed to classroom and teacher background variables, observations of caregiver sensitivity, and observations of the quality of instruction, especially when they are content-specific.	2011 Office of Planning, Research, and Education
Burchinal, M., Cryer, D., Clifford, R.M., & Howes, C.	Caregiver training and classroom quality in child care centers	Previous studies consistently indicate that caregivers with more formal education in early childhood tend to provide higher quality child care. Caregiver training in these studies was characterized by the highest level of formal education that the caregiver achieved. Nevertheless, many caregivers continue to receive further training such as attending workshops or classes, even if they have obtained higher levels of formal education previously. In this study of 553 infant, toddler, and preschool-center classrooms, the association between classroom quality and both the highest level of formal education and whether the caregiver had attended training workshops at the center, in the community, or at professional meetings was examined. Results indicated that caregivers with formal education in early children or who attended workshops were rated as more sensitive in interactions with children and as providing higher quality care than other caregivers, even after adjusting for the caregivers' experience and different	2002 Applied Developmental Science, Volume 6, Issue 1 January 2002, pages 2 - 11
Burchinal, M.R., Howes, C., Pianta, R., Bryant, D., Early, D., Clifford, R., & Barbarin, O.	Predicting child outcomes at the end of kindergarten from the quality of pre-kindergarten teacher-child interactions and instruction.	Publicly funded pre-Kindergartens are programs that most states use to promote school readiness, especially of 4-year-old children at risk for academic problems due to poverty. Despite large public expenditures, these programs have not been widely evaluated. The authors examined 240 randomly selected pre-kindergarten programs in six states with mature programs that serve large numbers of children, and evaluated specific aspects of classroom quality and children's academic achievement in both the pre-kindergarten and kindergarten year for over 700 children. Results showed that, on average, pre-kindergarten teachers were moderately responsive and sensitive, but were less successful in engaging children in learning specific skills. Both sensitive and stimulating interactions with the teacher and the instructional quality aspects of the pre-kindergarten classroom predicted the acquisition of language, pre-academic, and social skills through the end of the kindergarten year.	2008 Applied Developmental Science; 2008, Vol. 12 Issue 3, pages 140-153
Burchinal, M.R., Porter, F., Cryer, D., & Child, G.	Diversity, child care quality, and developmental outcomes.	It is widely accepted that high quality child care enhances children's cognitive and social development, but some question whether what constitutes quality care depends on the child's ethnic and cultural background. To address this question, secondary analysis of data from the two largest studies of child care experiences in the United States, Cost, Quality, and Outcomes Study and the NICHD Study of Early Child Care, tested whether standard measures of child care quality were less reliable or valid for African-American and English-speaking Latino children than for white children. Widely used measures of child care quality showed comparably high levels of reliability and similar levels of validity for white, African-American, and Latino children. Analyses tested whether cognitive and social skills were related to child care quality, the match between child's and caregiver's ethnicity, and the match between the mother's and caregiver's beliefs about child-rearing. Results indicated children from all three ethnic groups showed higher levels of cognitive and social skills on standardized assessments shown to predict school success when caregivers were sensitive and stimulating. Children's skills	2003 Early Childhood Research Quarterly, Vol 18(4), Win, 2003. pages. 401-426

		were not consistently related to whether the child's and caregiver's ethnicity matched or whether the mother's and caregiver's beliefs about child-rearing were similar. These two large studies suggest that children from all three ethnic groups benefit from sensitive and stimulating care on child outcomes related to school success. The results are interpreted as indicating that the global dimension of quality may be reflected in very different types of practices that reflect cultural differences.	
Burchinal, M.R., Vandergrift, N., Pianta, R., & Mashburn, A.	Threshold analysis of association between child care quality and child outcomes for low-income children in pre-kindergarten programs.	Over the past five decades, the federal government and most states have invested heavily in providing publicly-funded child care and early education opportunities for 3- and 4-year-old children from low-income families. Policy makers and parents want to identify the level or threshold in quality of teacher-child interaction and intentional instruction related to better child outcomes to most efficiently use child care to improve school readiness. Academic and social outcomes for children from low-income families were predicted from measures of teacher-child interactions and instructional quality in a spline regression analysis of data from an 11-state pre-kindergarten evaluation. Findings suggested that the quality of teacher-child interactions was a stronger predictor of higher social competence and lower levels of behavior problems in higher than in lower quality classrooms. Further, findings suggested that quality of instruction was related to language, read and math skills more strongly	2010 Early Childhood Research Quarterly; Jun2010, Vol. 25 Issue 2, pages 166-176
Cannon, J. S., Jackowitz, A., & Karoly, L. A.	Preschool and school readiness: Experiences of children with non-English-speaking parents	This report examines these questions by focusing on the early care and education experiences and the kindergarten readiness skills of four-year-old children in both California and the United States as a whole. We find that linguistically isolated children in California, observed in the year before they are eligible to enter kindergarten, have similar background characteristics as linguistically isolated children nationally. They are more likely than other subgroups of children to be disadvantaged, as evidenced by low family income and low maternal education levels, and they are predominantly Hispanic.	2012, Public Policy Institute of California
Cantrell, R., Parks-Savage, A., & Reh fuss, M.	Reducing levels of elementary school violence with peer mediation.	The effectiveness of an existing peer mediation program in a diverse, suburban elementary school was examined. Peer mediation was available to all students (N = 825). Three-year longitudinal data showed significant reductions in the school's out-of-school suspensions after implementation of the peer mediation program. Mediation training also resulted in significant mediator knowledge gains pertaining to conflict, conflict resolution, and mediation, which was maintained at 3-month follow-up. All mediation sessions (N = 34) were successful in resolving conflict, and mediators as well as participants viewed the peer mediation program as valuable.	2007 Professional School Counseling; Jun2007, Vol. 10 Issue 5, pages 475-481
Carroll, H.C.	The effect of pupil absenteeism on literacy and numeracy in the primary school	Although school psychologists are involved in dealing with the problem of pupil absenteeism at both the individual child and whole school level, one of the possible reasons for their involvement, namely the belief that significant absence from school has an effect on attainments, is actually founded on weak evidence. The literature review presented in this article revealed that, in order to determine the effect of absence on attainments, no satisfactory study had hitherto been conducted in which attainments had been measured before and after a period of absence. However, the results of longitudinal research partially conducted by the present author, reported in this article, do show that absence from school has a significant effect on primary school attainments. In particular, it was found that an absence of half a year between the ages of 7- and 11-years-of-age resulted in a reduction of 0.7 of a year and 1 year in reading and mathematics test scores respectively. The article ends with a consideration of the kind of research which still needs to be conducted in order to provide school psychologists with the information they need to deal successfully with pupil absenteeism problems.	2010 School Psychology International; Apr2010, Vol. 31 Issue 2, pages 115-130
Cassidy, Lower, Kintner-Duffy, Hegde, Shim	The day-to-day reality of teacher turnover in preschool classrooms:	The purpose of the study was to examine teacher turnover comprehensively by triangulating the experiences of teachers, directors, parents, and children through actual, "real-time" turnover transitions. The authors examined turnover with a small sample size (N = 13 classrooms) to facilitate comprehensive data collection utilizing	2011, Journal of Research in Childhood

	an analysis of classroom context and teacher, director, and parent perspectives	multiple qualitative and quantitative measures and to gain a rich understanding of the implications of teacher turnover on classroom quality, staff, and the parents and children with whom they work. The study utilized an interpretive paradigm to illuminate and juxtapose the experiences of teachers, directors, parents, and children through the turnover transition—as teachers departed and their replacements began. Strategies used to respond to turnover were identified at the program and classroom levels. Implications for early childhood classroom quality and policy are discussed.	Education
Chafouleas, S., Riley-Tillman, C., & Sugai, G.	School-based behavioral assessment: Informing intervention and instruction	This book is designed to help school practitioners go beyond putting a label on student behavior problems--it shows how to use assessment to partner with teachers and students to develop effective solutions. The authors provide a framework for determining the types of behavioral data that are needed in a given situation, selecting appropriate measures, and interpreting and organizing the results. Case examples tie it all together, demonstrating how different assessment strategies can be used to support positive behavior and monitor progress at the level of the individual, the classroom, or the entire school. In a large-size format with convenient lay-flat binding, the volume features 15 reproducible checklists and forms. This book may serve as a text in graduate-level courses such as School-Based Assessment, Behavioral Assessment, and Assessment for Special Educators. Its targeted audience includes school psychologists and special educators and advanced students in these fields. Contents include: (1) Introduction to School-Based Behavioral Assessment; (2) Behavioral Assessment within the Context of the Whole School; (3) Using Extant Data in Behavioral Assessment; (4) Systematic Direct Observation; (5) Direct Behavior Ratings; (6) Behavior Rating Scales; and (7) Putting It All Together: Selecting Behavioral Assessment Tools. An index; and appendix entitled, "Guidelines for Summarizing and Interpreting Behavioral Data," are also included.	2007, Guilford Press, New York
Chen, D. W.	Preventing violence by promoting the development of competent conflict resolution skills: exploring roles and responsibilities.	This article explores the relationship between conflict and violence through a review of the literature about young children's conflict with their peers. Information about the nature of young children's conflicts and how teachers respond is presented and discussed in relation to 3 questions. First, do conflicts between children lead to violence? Second, what constitutes competent conflict resolution behavior? Third, how do children develop competent conflict resolution skills? This review of the literature indicates that conflicts between children do not naturally lead to violence. Rather, it is when children are unable to resolve their own conflicts, and when they are not supported in their efforts at resolutions, that violence is likely to result. While conflicts with peers provide a natural opportunity for children to develop competent conflict resolution skills, teachers must provide assistance as needed. Suggestions for further reading on this topic are provided.	2003 Early Childhood Education Journal. 30. 4. 203-208.
Chen, D. W., Fein, G. G., Killen, M., Tam, H.	Peer conflicts of preschool children: Issues, resolution, incidence, and age-related patterns.	This study examined 2-, 3-, and 4-year-olds' peer conflicts in the naturalistic classroom setting during free-play time. 400 preschoolers from 25 classrooms were videotaped. Only the first conflict event generated by each target-child observation was included in the analysis. Of the 400 target-child observations, 322 generated a conflict event. In general, there was a shift in the issues of conflict from tangible material concerns to those that were more mental and social. 2-year-olds had a higher proportion of distribution of resources conflicts than did 3- and 4-year-olds. Conflicts about play and ideas significantly increased with age while those stemming from physical harm were low overall. Further, child generated resolutions increased while insistence decreased significantly with age. What changes with development appears to be the issues of conflict and the way they are handled; not the incidence of conflict per se. These findings support the proposal that conflicts are natural contexts in which children develop socially, morally and cognitively. Implications for teaching are discussed.	2001 Early Education and Development. 12. 4. 523-544.
Claessens, A.	Kindergarten child care experiences and child	Young children's experiences outside of both home and school are important for their development. As women have entered the labor force, child care has become an increasingly important context for child development.	2012 Early Childhood

	achievement and socio-emotional skills	Child care experiences prior to school entry have been well-documented as important influences on children's academic and socio-emotional development. However, less is known about the importance of non-parental, out-of-school care for young school-age children's development. Using a nationally representative sample of kindergartners (n = 16,888), this study examined the relationship between child care experiences during the kindergarten year and children's academic and socio-emotional skills. Given that the amount of time available for child care is related to the type of kindergarten a child attends, differences in the relationship between child care and child development were explored separately by full- and part-day kindergarten. Results showed that across both types of kindergarten, more hours of center care during the kindergarten year were associated with small improvements in math test scores for all children. Any center child care during the kindergarten year was associated with increased problem behavior and decreased pro-social skills, even after accounting for a large number of confounding factors. Differences by family income and child gender were also investigated. Implications for policy and practice are discussed.	Research Quarterly 27 (2012) 365–375
Clarke-Stewart, K. A., Vandell, D.L., Burchinal, M. O'Brien, M., McCartney, K.	Do regulable features of child-care homes affect children's development?	Data from the NICHD Study of Early Child Care were used to assess whether regulated features of child-care homes affect children's development. Care givers who were better educated and had received more recent and higher levels of training provided richer learning environments and warmer and more sensitive care-giving. Caregivers who had more child-centered beliefs about how to handle children also provided higher quality care giving and more stimulating homes. In addition, when settings were in compliance with recommended age-weighted group size cut-offs, caregivers provided more positive care-giving. Quality of care was not related to caregivers' age, experience, professionalism, or mental health, or to the number of children enrolled in the child-care home or whether the caregivers' children were present. Children with more educated and trained caregivers performed better on tests of cognitive and language development. Children who received higher quality care, in homes that were more stimulating, with caregivers who were more attentive, responsive, and emotionally supportive, did better on tests of language and cognitive development and also were rated as being more cooperative. These findings make a case for regulating caregivers' education and training and for requiring that child-care homes not exceed the recommended age-weighted group size.	2002 Early Childhood Research Quarterly; 2002 1st Quarter, Vol. 17 Issue 1
Coleman, B., & McNeese, M.N.	From home to school - the relationship among parental involvement, student motivation, and academic achievement	This research study investigated the interrelationships among fifth grade students' academic achievement, their parents' involvement, and their motivation. The 9,080 students and their parents were a nationally representative sample, whose responses were made available to us through the Early Childhood Longitudinal Program (ECLS) in the National Center for Education Statistics (NCES). The specific demographic information on the sample will be presented. Results of the analysis of these quantitative data showed that the interrelationship between academic achievement and student motivation was direct, meaning that rising student motivation was likely to be associated with rising academic achievement. By contrast, the interrelationship between parental involvement and student motivation was an inverse relationship, as was the interrelationship between parental involvement and academic achievement. These inverse interrelationships mean that an increase in parental involvement was usually associated with a decrease in both student motivation and academic achievement. These inverse relationships between parental involvement and student motivation and parental involvement and academic achievement were unexpected. It is possible that this can be explained by the students' ages and maturity levels. Several students are entering puberty at this age and becoming more and more independent. With this, children tend to depend less on their parents and often want them less involved. One might assume that the students both begin resisting the support their parents provide by volunteering at their schools and start to distance themselves. These results have implications for policy and practice, i.e. that parents of fifth grade students should consider the impact of their	2009 International Journal of Learning; 2009, Vol. 16 Issue 7

		involvement on their children. Additionally, participants will be encouraged to consider these variables from their respective experiences.	
Cosden, M., Morrison, G., Albanese A.L., & Macias, S.	When homework is not home work- after-school programs for homework assistance.	Homework does not always occur at home. With the perceived demand for higher academic performance has come an increase in the amount and complexity of assigned homework. Given the number of parents who work outside the home, and the need for safe and structured after-school activities, after-school programs have become a venue for helping students with their homework. This article examines the potential of after-school homework-assistance programs within the larger context of after-school programs in general. There is limited data on the outcomes associated with programs that offer homework assistance. The data suggest that after-school homework-assistance programs can serve a protective function for children at-risk for school failure, particularly those who do not have other structured after-school activities or those whose parents do not speak English at home. In general, the availability of homework assistance at home, the quality of the after-school homework program and the nature of the homework assigned will mediate the effect of these programs. Questions for future implementation and evaluation efforts are raised.	2001 Educational Psychologist; Summer2001, Vol. 36 Issue 3
Coulton C., Crampton D., Irwin, M., Spilsbury, J., & Korbin, J.	How neighborhoods influence child maltreatment: A review of the literature and alternative pathways	Objective: future directions for research in this area. To review the literature on the relationships between neighborhoods and child maltreatment and identify Method: geographically defined neighborhoods on child maltreatment. These studies were then critically reviewed by interdisciplinary research team. A search of electronic databases and a survey of experts yielded a list of 25 studies on the influence of Results: number of socio-economic characteristics of neighborhoods have been shown to correlate with child maltreatment rates as measured by official reports to child protective service agencies. Only a few studies examine direct measures of parenting behaviors associated with maltreatment, and these show a weaker relationship with neighborhood disadvantage. Moreover, the processes that link neighborhood conditions to either maltreatment reports or parenting behaviors are not yet confirmed by the research literature. Selection bias, neighborhood definitions and spatial influences are largely uncontrolled in the existing research. Numerous studies demonstrate that child maltreatment cases are concentrated in disadvantaged areas. Conclusions: addresses the gaps in the current literature. Neighborhood-based strategies to prevent and reduce child maltreatment propose a framework for pursuing further study of neighborhoods and child maltreatment that	2007, Child Abuse & Neglect
Curby, T., Rimm-Kaufman, S, & Ponitz, C.	Teacher-child interactions and children's achievement trajectories across kindergarten and first grade	This study examined the extent to which the quality of teacher-child interactions and children's achievement levels at kindergarten entry were associated with children's achievement trajectories. Rural students (n = 147) were enrolled in a longitudinal study from kindergarten through first grade. Growth trajectories (initial level and slope) were modeled with hierarchical linear modeling for 3 areas of achievement: word reading, phonological awareness, and mathematics. Cross-classified analyses examined the extent to which quality of teacher-child interactions and children's starting level predicted achievement growth rates over 2 years, and they also accounted for the changing nesting structure of the data. Results indicated that achievement at kindergarten entry predicted children's growth for all 3 outcomes. Further, first-grade teachers' strong emotional support related to greater growth in students' phonological awareness. Emotional and instructional support in first grade moderated the relation	2009, Early education and development, 20(2)
Curby,T., LoCasale-Crouch, J., Konold, T., Pianta, R.,	The relations of observed pre-k classroom quality profiles to children's achievement and social	Research Findings: Recent evidence suggests that children benefit from pre-K programs in terms of both academic and social skills and that this growth is predicted by the quality of the interactions teachers have with students. Prior cluster analysis revealed 5 distinct quality profiles of teacher-child interactions in pre-kindergarten based on classroom observations of 692 teachers. In the present study, the links between these 5 quality profiles of teacher-child interactions and pre-kindergarten children's (n = 2,028) academic growth and social competence	2009 Journal of Educational Psychology, v. 101 no4

Howes, C., Burchinal, M., Bryant, D., Clifford, R., Early, D., & Barbarin, O.	competence	were examined using multilevel modeling techniques. Results indicate that students in the profile with the highest levels of concept development showed the greatest gains for both PPVT Receptive Vocabulary and WJ-III Applied Problems. The profile with the highest levels of emotional support dimensions had children who were rated highest in social competence the next year. Practice or Policy: These findings suggest that teacher-child interactions targeting preschoolers' analysis and inference combined with moderate levels of emotional and organizational supports could play a role in fostering students' achievement gains during pre-kindergarten	(November 2009)
De Vita, C.J. & Montilla, M.	Improving child care quality: a comparison of military and civilian approaches. charting civil society: a series by the center on nonprofits and philanthropy	Information on early childhood learning and increasing demand for child care services have placed a spotlight on the need to improve the quality of early education and care in the United States. This report focuses on five factors tied to the success of military efforts to develop an exemplary model of quality and affordable care in the Military Child Care System (MCCS) that are relevant to civilian programs. The five factors discussed in the report are: (1) training and education of child care providers; (2) linkages between training and compensation; (3) subsidies to assure affordable costs for parents; (4) licensing and accreditation standards to improve quality; and (5) inspections and oversight to establish accountability within the system. The report notes that although revamping the MCCS was not easy, effective change strategies were accomplished based on four basic tenets: (1) child care is a fundamental workforce issue; (2) standards are established and enforced; (3) the child care workforce is train	Urban Institute, Washington, DC 2003
Denham, S. A., Bassett, H. H., & Zinsser, K.	Early childhood teachers as socializers of young children's emotional competence	Young children's emotional competence—regulation of emotional expressiveness and experience when necessary, and knowledge of their own and other's emotions—is crucial for social and academic (i.e., school) success. Thus, it is important to understand the mechanisms of how young children develop emotional competence. Both parents and teachers are considered important in helping children regulate emotion, providing children experiences that promote or deter the development of emotional competence. However, compared to parents, early childhood teachers' roles in socializing young children's emotional competence have not been examined. In this theoretical review the authors explore possible teacher roles in the development of young children's emotional competence. Additionally, the authors suggest future research focusing on early childhood teacher socialization of emotion, and discuss theoretical and practical benefits of such research.	2012, Early Childhood, Volume 40, pages 137–143
DiCarlo, C. F., Harris, M. E., Pierce, S. H., Ota, C., & Baumgartner, J.	Whole-group instruction practices and children's attention: A preliminary report.	This study developed a typology of recommended teacher practices related to whole-group instruction in preschool classrooms and examined the relationship between teachers' use of the practices and children's attentiveness. Thirty-nine classrooms in 31 schools (15 public and 16 private) were observed during regularly scheduled whole-group instruction sessions. Bi variate correlations indicated a positive relationship between children's attentiveness and number of practices that teachers used, but not between attentiveness and length of activity. Regression analyses suggested a set of eight specific practices that are related, with length of activity, to children's attentiveness.	2012 Journal of Research in Childhood Education,
Dickinson, D. K. & Tabors, P.O.	Fostering language and literacy in classrooms and homes	Part of a special section on supporting children's language learning. A study examined parents' and teachers' support of language development in young children from low-income families. Data were obtained from 74 children in Massachusetts who were participants in the Home-School Study of Language and Literacy Development. Results revealed that dimensions of children's experiences during the preschool and kindergarten years both at home and at school that were related to later literacy success were exposure to varied vocabulary, opportunities to be part of conversations that used extended discourse, and environments that were cognitively and linguistically stimulating. Further results relating to home and school activities that supported language development and their benefits are presented, and implications of the results for policymakers and preschool teachers are outlined.	2002 YC Young Children, v. 57 number 2 (March 2002)

Dinehart, L. H., Manfra, L., Katz, L. F., & Hartman, S. C.,	Associations between center-based care accreditation status and the early educational outcomes of children in the child welfare system	Given the corpus of studies demonstrating the positive effects of high quality early care and education (ECE) experiences on the development and early academic outcome of children who attend ECE centers, the current study aims to expand on the literature by exploring the effects of quality, as measured by accreditation status, on the developmental and early academic outcomes of children in the child welfare system. More specifically, the authors focus on children in the child welfare system, receiving childcare subsidies and enrolled in community-based ECE centers. Findings indicate that attending an accredited center results in better outcomes for both children in child welfare and a comparison group of low-income children not in child welfare. Moreover, children in child welfare system are far less likely to attend accredited ECE centers than their non-child welfare counterparts. Finally, children in the child welfare system demonstrate poorer performance at the end of pre-k than children not in the child welfare system. Implications for research, practice, and policy are discussed. (2012 Children and Youth Services Review, 34(5), 1072-1080
Dodge, L. J., Colker, C., Heroman, C.	The creative curriculum for preschool	The Creative Curriculum balances teacher-planned and child-initiated learning, emphasizing responsiveness to children's strengths, interests, needs, and learning styles. Nationally known for being forward-thinking, comprehensive, and rigorously researched, it helps teachers plan and implement content-rich, developmentally appropriate programs that support active learning and promote children's progress in all developmental areas.	2002 Florida Department of Education
Doherty, Gillian	The mentoring pairs for child care project: Final outcome report	As demonstrated in this report, MPCC successfully achieved all eight project goals. In doing so it enhanced the quality of a sub-sample of mentee graduates' centers to a degree that could not have happened simply by chance (p <.01) as measured on the total score for the Early Childhood Environment Rating Scale – Revised (Harms et al., 1998). There were also enhancements in mentors' centers that were not statistically significant. Demonstrating significant gains on the ECERS-R less than two months after the completion of the program is a remarkable achievement given the opinion expressed by experts that enhanced service delivery after administrator training takes time and may not be demonstrable for a year or more (Gursky, 1990, Knapp-Philo et al. 2006).	2011, Ministry of Children and Youth Services and to the Ministry of Education
Domitrovich, C.E., Gest, S. D., Gill, S., Bierman, K.L., Welsh, J.A., Jones, D.	Fostering high-quality teaching with an enriched curriculum and professional development support : the Head Start REDI program.	This randomized controlled trial tested whether teaching quality in Head Start classrooms could be improved with the addition of evidence-based curriculum components targeting emergent language or literacy and social-emotional development and the provision of associated professional development support. Participants were lead and assistant teachers in 44 Head Start classrooms. Teachers received 4 days of workshop training along with weekly in-class support from a mentor teacher. End-of-year observations indicated that compared with the control group, intervention teachers talked with children more frequently and in more cognitively complex ways, established a more positive classroom climate, and used more preventive behavior-management strategies. Results supported the conclusion that enriched curriculum components and professional development support can produce improvements in multiple domains of teaching quality.	2009 American Educational Research Journal, Vol. 46 Issue 2, pages 567-597
Douglass, A., Klerman, L.	The strengthening families initiative and child care quality improvement: how strengthening families	This study investigated how the Strengthening Families through Early Care and Education initiative in Illinois (SFI) influenced change in 4 child care programs. Findings indicate that SFI influenced quality improvements through 4 primary pathways: (a) Learning Networks, (b) the quality of training, (c) the engagement of program directors, and (e) the organizational climate at programs. SFI's multilevel model of implementation was key to its effectiveness. Two barriers to improving family partnership practices were identified: lack of cultural competence	2012, Early Education and Development, Number, 23, pages 373-392

	influenced change in child care programs in one state	and a negative organizational climate. Practice or Policy: First, quality improvement and professional development efforts are likely to be more effective in promoting real change when they target multiple levels of the context in and around child care programs. SFI's multilevel implementation approach is a model. Second, quality improvement efforts in the area of family engagement may be more effective when specific attention is given to strategies for creating a supportive organizational climate and collegial relationships among staff. Relationships within programs set the tone for relationships with families. Third, cultural competence requires increased attention to efforts to improve the quality of family partnership practices. A focus on organizational cultural competence may provide the workplace environment necessary to support culturally competent practice among program staff.	
Downer, J. T., Lopez, M., Howes, C., Pianta, R. C., Grimm, K. J., & Hamagami, A.	Observations of teacher-child interactions in classrooms serving Latinos and dual language learners: applicability of the classroom assessment scoring system in diverse setting	With the rising number of Latino and dual language learner (DLL) children attending pre-k and the importance of assessing the quality of their experiences in those settings, this study examined the extent to which a commonly used assessment of teacher-child interactions, the Classroom Assessment Scoring System (CLASS), demonstrated similar psychometric properties in classrooms serving ethnically and linguistically diverse children as it does in other classrooms. Specifically, this study investigated: (1) whether CLASS observations of teacher-child interactions are organized in three domains across classrooms with varying ethnic and language compositions (measurement invariance) and (2) the extent to which CLASS-assessed teacher-child interactions (emotional support, classroom organization, and instructional support) predict children's social, math, and literacy outcomes equally well for Latino and DLL children (predictive validity). CLASS observations of teacher-child interactions were conducted in 721 state-funded pre-k classrooms across 11 states. Direct assessments and teacher ratings of social, math, and literacy outcomes were collected for four randomly selected children in each classroom. CLASS observations factored similarly across pre-k classrooms with different Latino and DLL compositions and predicted improvements in school readiness regardless of a child's Latino or DLL status. Results suggest CLASS functions equally well as an assessment of the quality of teacher-child interactions in pre-k settings regardless of the proportion of Latino children and/or the language diversity of the children in that setting.	2012 Early Childhood Research Quarterly, 27(1), 21-32
Downs, A., Strand, P. S.	Using assessment to improve the effectiveness of early childhood education	Despite the successes, there are concerns that ECE/ECSE programs are not as effective as they could be (Ramey & Ramey, 1998, 2004). It is our belief that maximizing the potential of such programs requires a rethinking of the relationship between assessment and intervention. The purpose of this paper is to examine that relationship by reviewing the different approaches to assessment within ECE/ECSE. Based on that review, we propose a framework for organizing assessment so that it may most effectively serve intervention.	2006, Journal of Child and Family Studies
Dyck, J.	The built environment's effect on learning: applying current research. Spotlight: Updating our agendas.	This article reviews current literature--noting limitations--and provides observations regarding the impact on learning of six physical attributes of the Montessori prepared environment: aesthetics, spatial factors, light, noise, color, and temperature. The authors provide suggested guidelines for Montessori classrooms. The authors conclude by asserting that considering these six environmental factors in classroom design will result in a setting more conducive to flow and concentration.	2002, Montessori Life, v14 n1, Winter 2002
Early D., Maxwell, K., Burchinal M., Alva S., Bender R., Bryant D, Cai K., Clifford	Teachers' education, classroom quality, and young children's academic skills: Results from seven studies of preschool programs	In an effort to provide high-quality preschool education, policymakers are increasingly requiring public preschool teachers to have at least a Bachelor's degree, preferably in early childhood education. Seven major studies of early care and education were used to predict classroom quality and children's academic outcomes from the educational attainment and major of teachers of 4-year-olds. The findings indicate largely null or contradictory associations, indicating that policies focused solely on increasing teachers' education will not suffice for improving classroom quality or maximizing children's academic gains. Instead, raising the effectiveness of early childhood education	2007, Child Development, number 78, pages 558-580

R., Ebanks C., Griffin J., Henry G., Howes C., Iriondo-Perez J., Jeon H., Mashburn A., Peisner-Feinberg E., Pianta R., Vandergrift N., & Zill N.		likely will require a broad range of professional development activities and supports targeted toward teachers' interactions with children.	
Early, D., Bryant, D., Pianta, R., Clifford, R., Burchinal, M., Ritchie, S., Howes, C., & Barbarin, O.	Are teachers' education, major, and credentials related to classroom quality and children's academic gains in pre-kindergarten?	Abstract: To date, few studies of state-funded pre-kindergarten have fully addressed questions about the association between teachers' education, major, and credentials with classroom quality or children's academic gains. The current paper uses data from the National Center for Early Development and Learning's (NCEDL) Multi-State Study of Pre-Kindergarten, involving 237 pre-kindergarten classrooms and over 800 children, randomly selected from six states with well-established state-funded pre-kindergarten programs. The study includes multiple days of classroom observation, direct child assessments of children's early academic skills in the fall and spring of the pre-kindergarten year, and questionnaires from teachers. For the current paper, teachers' education has been operationalized in three different ways (years of education, highest degree, and Bachelor's versus no Bachelor's). Additionally, the paper considers the role of college major, state teaching certification, and CDA credential. Consistent with findings in the K-12 literature, this study finds few associations between any of the measures of education, major, or credentials and classroom quality or children's outcomes. Teachers' education, regardless of how it is operationalized, is linked to gains in children's math skills across the pre-k year, and the CDA credential is linked to children's gains in basic skills; however, education, training, and credentialing are not consistently related to classroom quality or other academic gains for children.	2006 Early Childhood Research Quarterly, 21, pages 174–195
Egeland, B., Englund, M.M., Luckner, A. E., & Whaley, G.L.	Children's achievement in early elementary school: Longitudinal effects of parental involvement, expectations, and quality of assistance	A longitudinal study exploring the relationship between children's academic achievement and parents' involvement in their children's school experience, their expectations regarding their children's achievement, and quality of instruction prior - In this prospective, longitudinal study, the authors examined the relations among parental behaviors, parental expectations, and children's academic achievement. Participants were 187 low-income children and their mothers, studied from birth of the child through 3rd grade. Mothers' quality of instruction prior to school entry had significant direct effects on IQ and indirect effects on achievement in 1st and 3rd grades. Parental expectations in 3rd grade had significant direct effects on parental involvement in 3rd grade. Children's achievement in 1st grade had significant direct effects on parental involvement and expectations in 3rd grade. Parental involvement in 3rd grade had a significant direct effect on achievement in 3rd grade. Results suggest that early parenting factors are important for children's academic achievement.	2004 Journal of Educational Psychology, Volume 96, Issue 4, December 2004, pages 723-730
Eiserman, W.D., Shisler, L., Foust, T., Buhrmann, J., Winston, R., & White, K.R.	Screening for hearing loss in early childhood programs.	This study assessed the feasibility of doing hearing screening in Migrant, American Indian and Early Head Start programs using otoacoustic emissions (OAE) technology. Staff members were trained to screen 0–3-year-old children for hearing loss using hand-held OAE equipment and a multi-step screening and referral protocol. Of the 3486 children screened as a part of the study, 77% passed an OAE screening at the first step, 18% more passed an OAE screening at the second step, and 5% were ultimately referred for medical or audiological follow-up. Eighty children were identified as having a hearing loss or disorder of the outer, middle or inner ear requiring treatment.	2007 Early Childhood Research Quarterly; Mar2007, Vol. 22 Issue 1, pages

		Of these 80, six had permanent bilateral or unilateral hearing loss. Although the protocol suggested that the multi-step screening procedure should be completed within a 4-week time period or less, analysis of the data showed that for children requiring more than an initial OAE screening, the length of time over which the screening was completed ranged from 7 to 12 weeks. The median time required to complete a single OAE screening session was 4 minutes per child. The results demonstrate that OAE screening of young children using this protocol is practical and effective. The implications for conducting periodic hearing screening throughout early childhood are discussed.	105-117
Elkind, D.	The values of outdoor play	This article describes outdoor play as a solid foundation and a central vehicle of knowledge about the real world. Outdoor play is important to all age levels, but particularly in early childhood and the elementary years. Children's outdoor play is not a luxury. It is critical in children's ability to learn about the world, others, and themselves. It is through playful contact with that world that they create learning.	2006 Exchange, n 171 pages 6-8
Enke, A.A., Briley, M.E., Curtis, S.R., Greninger, S. A., & Staskel, D. M.	Quality management procedures influence the food safety practices at childcare centers	Childcare in the United States (US) has become a necessary part of life for most working parents with the increased use of center-based childcare over the past three decades. Approximately 13 million preschoolers attend some form of childcare. Literature indicates the main predictors of quality childcare programs are adequate experience and specialized training of childcare staff. A growing concern among researchers, however, is the limited training among childcare professionals in the area of food safety. Children have minimal control of food safety risks because other people prepare their meals. A questionnaire was developed and mailed to childcare center directors in Texas and Iowa to identify the demographic, food safety and other practices that influence the training and decisions made by childcare center directors. Results indicate the need of continual management and food safety training for both directors and staff in order to provide a safe environment for young children.	2007 Early Childhood Education Journal, volume 35, number 1, pages 75-81
Erickson, L.	Informal mentors and trajectories of antisocial behaviors	Mentors, or influential non-parental adults, are beginning to receive more attention in studies of adolescence and young adulthood, though empirical studies are often limited by their dependence on small cross-sectional samples of at-risk youth. This paper contributes to knowledge of informal mentors by using a nationally representative sample of youth, The National Longitudinal Study of Adolescent Health (Add Health). A longitudinal group-based trajectory analysis suggested four patterns of adolescent antisocial behavior were present across the study period. Informal mentors, specifically relatives and teachers were more likely among youth who never engaged in antisocial behaviors while community and friend mentors were likely among those who followed desistance paths. Instrumental support from a mentor was key in facilitating desistance. Young people who felt close to their mentor were also less likely to engage in antisocial behaviors.	Conference Papers -- American Sociological Association, Annual Meeting, Montreal
Ethan, D. & Basch C.E.	Promoting healthy vision in students: progress and challenges in policy, programs, and research	Early detection and treatment of vision problems is therefore essential in optimizing children's health and development. Federal-, state-, and school-based prevention efforts continue to evolve to identify and serve children with vision problems. The authors of this study conducted a review of current literature on (1) major vision problems among children, (2) unique problems faced by low-income children with poor vision, and (3) the rise in health policy and program efforts to support the goal of healthy vision for each child. The preliminary relationship established between vision and academic performance is also discussed. The authors found that low-income children have a disproportionate amount of vision problems and face several barriers to acquiring vision care. Varied actions among states include legislation requiring screening and follow-up before entry into elementary school. The authors argue that states and schools can take concrete steps to increase the number of children identified and treated for vision problems. Health policy and programs should also address common barriers to children receiving and wearing their glasses at home and in the classroom. Further research is necessary to assess the relationship between children's vision and educational outcomes. To the extent that vision	2008 The Journal Of School Health; Vol. 78 (8), pages 411-416

		is associated with academic success, policies and programs can be shaped to address the achievement gap that exists among our nation's youth and to support the goal of healthy vision for each child.	
Fahlman, M. M., Dake, J. A., McCaughtry, N., & Martin, J.	A pilot study to examine the effects of a nutrition intervention on nutrition knowledge, behaviors, and efficacy expectations in middle school children.	This was a pilot study to determine the impact of the Michigan Model (MM) Nutrition Curriculum on nutrition knowledge, efficacy expectations, and eating behaviors in middle school students. Methods: The study was conducted in a large metropolitan setting and approved by the Institutional Review Board. The participants for this study were divided into an intervention group (n = 407) and a control group (n = 169). An MM instructor trained health teachers in the use of the curriculum, and the teacher subsequently taught the curriculum to students in the intervention group. A valid and reliable questionnaire was used to determine pre-post differences. It consisted of 3 subscales assessing eating habits, nutrition knowledge, and efficacy expectations toward healthy eating. Subscale scores were analyzed using a 2 groups (intervention vs control) × 2 times (pre vs post) analysis of variance. Results: The intervention group increased their nutrition knowledge at post. There was also a significant main effect for groups in the subscales "Eating Behaviors" and "Efficacy Expectations Regarding Healthy Eating." Subsequent post hoc analysis revealed that the intervention group was significantly more likely to eat fruits and vegetables and less likely to eat junk food than the control group. Students in the intervention group also felt more confident that they could eat healthy. Conclusions: The results of this pilot study suggest that the MM Nutrition Curriculum delivered by trained professionals resulted in significant positive changes in both nutrition knowledge and behaviors in middle school children. Further research needs to be conducted to determine the long-term impact.	2008 Journal of School Health; Apr2008, Vol. 78 Issue 4, pages 216-222
Falk, B., Ort, S. W., Moirs, K.	Keeping the focus on the child: supporting and reporting on teaching and learning with a classroom-based performance assessment system	This article describes the findings of studies conducted on a large-scale, classroom based performance assessment of literacy for the early grades designed to provide information that is useful for reporting, as well as teaching. Technical studies found the assessment to be a promising instrument that is reliable and valid. Follow-up studies of the assessment's use point to its positive impact on teachers' practice and on school and district policies. The studies' findings suggest that classroom-based performance assessment can be a viable accountability, as well as instructional, tool, capturing a range of students' abilities in a range of formats, and that use of such an assessment has the potential to enhance teachers' knowledge about literacy and their abilities to effectively support students' learning.	2007, Educational Assessment
Fees, B. et al.	Physical activity programming in family child care homes: Providers' perceptions of practices and barriers	The study was designed to examine family child care home providers' perceptions of appropriate physical activity, current practices, and perceived barriers to inclusion of physical activity within their programs. A trained facilitator lead 4 focus group sessions of family child care providers. Questions addressed providers' planning for physical activity, resources and barriers, and perceptions of children's engagement. Authors coded and analyzed transcriptions based on a socio-ecological framework using qualitative data analysis software. The authors found that a majority of providers reported running and dancing to music as the most common physical activity, generally in an unstructured context. Frequency varied from none to twice a day. Few providers reported planning intentionally for physical activity; any plans followed children's interests. Barriers to inclusion of physical activity included personal, programming, parent, environmental, and financial reasons. Providers requested training on physical activity, particularly ideas for experiences in mixed-age groups.	2009, Journal of Nutrition Education and Behavior
Fenecha, M., Swellerb, N., Harrisonc, L.	Identifying high-quality centre-based childcare using quantitative data-sets: What the	Quantitative approaches to defining and measuring quality in early childhood education and care (ECEC) have provided a key platform for policy development. Yet their strengths and limitations as informants of high-quality ECEC have not been tested. In this study we examine two sources of quantitative data collected over a five-year period for 74 long day care centers: (1) the Early Childhood Environment Rating Scale-Revised and Infant-	2010, International Journal of Early Years Education

	numbers do and don't tell us	Toddler Environment Rating Scale instruments which are well-established observational measures; and (2) Australia's nationally administered Quality Improvement and Accreditation System which involves a self-study and validation process. Correspondence over time and across measures was more consistent for the centers identified as providing lower quality ECEC. Variability in ratings of quality was more evident in lower quality centers, whereas high-quality centers showed less variability over time. High quality, however, was less consistently identified across measures. Discussion focuses on the strengths and limitations of these measures of quality, and the implications these have for policy development and future research.	
Fjørtoft, I.	The natural environment as a playground for children: The impact of outdoor play activities in pre-primary school children	In Scandinavia it has become popular for kindergartners to spend more time outdoors in the natural environment. Some kindergartens are organized as outdoor schools, where the children, aged 3-6 yrs, spend all or most of the day outdoors in a natural environment. Playing in a natural environment seems to have positive effects on children; they become more creative in their play, and play activities and play forms are increasing. It is also indicated that absence due to sicknesses is lower among children in outdoor kindergartens than in the traditional ones. At the very least it is evident that children's motor fitness is improved in such an environment. They move easily around in a rugged terrain and cope with physical challenges, which improve their motor ability. Although few in number, these studies indicate that the natural environment is a stimulating arena for learning in general, and for motor fitness training in particular. The present research corroborates the main findings.	2001, Early Childhood Education Journal, Vol 29(2), Win, 2001. pages 111-117
Fontaine, N.S., Torre, L. D., Grafwallner, R., & Underhill, B.	Increasing quality in early care and learning environments	High-quality care is essential to the optimal development of young children. While many children attend childcare away from the home for an average of six hours per day, the environment is not necessarily of the highest quality. An assessment of the indoor and outdoor space, curriculum and activities, teacher and child interactions, materials, equipment, nutrition and health factors can yield critical information for parents and center administrators, teachers and staff. This study provides outcome information in regard to a state-funded Enhancement Grant project in which childcare facilities' personnel were provided with professional development activities to assist them in evaluating their early care and learning programs, and planning and implementing enhancement activities. After three years, a significant improvement resulted in several areas critical to high-quality care for young children.	2006, Early Child Development and Care, volume 176, number 2, pages 157-169
Ford, R.M., Evans, D., & McDougall, S.J.	Progressing in tandem: a sure start initiative for enhancing the role of parents in children's early education	The Tandem Project is an educational program, targeting preschoolers. It aims to encourage parents from low-socio economic status backgrounds to take a greater role in preparing their children for school. Parents are given a series of games to play with their children designed to develop basic pre-reading and numerical skills. Pre-reading games include listening to stories, learning about the representational qualities of print, reciting nursery rhymes, recognizing and discriminating shapes and letters, and analyzing the sounds of words. Numerical games include learning about length, size, and quantity, linking concepts about quantity with the number system, counting, and recognizing written numerals. A preliminary study found the program was successful in developing children's skills although outcomes were moderated by family socio-economic status. The implications for involving parents in the education of their preschool children are discussed.	2003, Educational and Child Psychology, Vol 20(4), 2003. pages. 80-95
Fowell, N., Lawton, J. T.	An alternative view of appropriate practice in early childhood education	The National Association for the Education of Young Children (NAEYC) and the Association for Childhood Education International (ACEI) have both published position papers espousing developmentally appropriate practice in early childhood education programs. Such programs are usually based upon varying interpretations of Piaget's developmental theory and frequently focus upon child-directed learning and informal learning practices. This article sets forth an alternative view that programs which serve young children may need to be concerned with both developmental and instructional theory and that children can benefit from some structured learning. A program incorporating these views is carefully described in	1992, Early Childhood Research Quarterly

		terms of its theoretical perspectives and classroom practices. This program is then compared to the NAEYC description of appropriate and inappropriate practice. The match/nonmatch is noted and discussed.	
Fram, M. S., Kim, J., & Sinha, S.	Early care and pre-kindergarten care as influences on school relatedness	Child care is increasingly viewed as an opportunity to enhance children's development and school readiness, with prekindergarten programs and early intervention programs targeting children at different moments of development. Results of existing research are mixed, and although many children experience different child care arrangements at different ages, little is known about the joint influence of early and later child care experiences. Using Early Childhood Longitudinal Study-Kindergarten Cohort data, the authors estimate a series of regression models, examining the unique and additive contributions of initial child care experiences and prekindergarten experiences on children's school readiness. The authors find that early use of non-parental care is associated with negative socio-behavioral outcomes; pre-Kindergarten center-based and Head Start care add to this negative association. Early participation in center-based care is associated with enhanced reading and math scores; those relationships are fully mediated by prekindergarten center-based care participation. Implications for policy, practice, and research are discussed.	2012, Journal of Family Issues
Fulgini, A., Huang, Y., Hong, S., Howes, C., & Lara-Cinisomo, S.	Activity settings and daily routines in preschool classrooms: Diverse experiences in early learning settings for low-income children	This paper examines activity settings and daily classroom routines experienced by 3- and 4-year-old low-income children in public center-based preschool programs, private center-based programs, and family child care homes. Two daily routine profiles were identified using a time-sampling coding procedure: a High Free-Choice pattern in which children spent a majority of their day engaged in child-directed free-choice activity settings combined with relatively low amounts of teacher-directed activity, and a Structured-Balanced pattern in which children spent relatively equal proportions of their day engaged in child-directed free-choice activity settings and teacher-directed small- and whole-group activities. Daily routine profiles were associated with program type and curriculum use but not with measures of process quality. Children in Structured-Balanced classrooms had more opportunities to engage in language and literacy and math activities, whereas children in High Free-Choice classrooms had more opportunities for gross motor and fantasy play. Being in a Structured-Balanced classroom was associated with children's language scores but profiles were not associated with measures of children's math reasoning or socio-emotional behavior. Consideration of teachers' structuring of daily routines represents a valuable way to understand nuances in the provision of learning experiences for young children in the context of current views about developmentally appropriate practice and school readiness.	2012, Early Childhood Research Quarterly, 27(2), pages 198-209
Gebbie, D. H., Ceglowski, D., Taylor, L. K., & Miels, J.	The role of teacher efficacy in strengthening classroom support for preschool children with disabilities who exhibit challenging behaviors	Challenging student behaviors are a prominent factor in the development of teacher stress and burnout. When classroom-based teachers of preschool children with disabilities were surveyed to identify their training needs in one North Carolina county, the most frequent request was how to address behavior challenges of preschool children with disabilities. This study examined how instructional support to teachers of preschool children with disabilities and challenging behaviors affected three teachers' classroom practices. The teachers received training and mentoring in classroom behavior management strategies and engaged in an online community of learners discussion group. Interviews and interactions from an online learning community were used to disclose whether the participants had implemented effective intervention strategies in their classrooms following the training. Teachers felt more competent in managing challenging behaviors after the online interaction with their colleagues. Teachers' online interactions were a highly effective way to impact teacher efficacy. Therefore, special education preschool programs should consider providing more opportunities for the teachers to build their own learning communities to interact and support one another.	2012, Early Childhood Education Journal, 40(1), pages 35-46
Georgiou, S., Demetriou, A.,	Attachment style and mentoring relationships	This study examined the relationship between adolescents' attachment style and their decision to enter mentoring relationships. The participants were 569 Greek Cypriot high school students. It was found that adolescents who	2008, Educational

& Stavrinides, P.	in adolescence.	have a mentor are more secure in their attachment than those who do not. Girls with low scores in secure attachment do not enter easily into mentoring relationships. Older adolescents are more anxious in their attachments, probably because they can better appreciate the possible difficulties if something goes wrong; thus, they are more reluctant to take the risk of starting a mentoring relationship than younger students. Furthermore, secure attachment was found to be positively correlated to the perceived impact of the whole experience: the more secure the attachment, the stronger the mentoring bond seems to be.	Psychology. Oct 2008, Vol. 28 Issue 6, pages 603-614
Gillespie, L.	Key area of learning: outdoor education	This article looks at the value of outdoor environment learning in physical education and says that students who get the opportunity for this experience develop stronger personal and social skills, become safer in the outdoors and learn to protect and care for the environment. These programs can and should make use of the school grounds and the local environment to create learning programs.	2007 Journal of Physical Education New Zealand; Vol. 40 Issue 3, pages 22-22,
Goshorn, G.	Light fantastic.	The article focuses on the effects of lighting on the well-being of children and staff at a nursery facility. According to Wendy Monaghan, owner of Bedlington Bears Day Nursery in Northumberland, England, lighting is part of their unique selling point that attracts parents who are looking for nursery unit. Paul Morrey of lighting system supplier Aura Corp. believes that quality of lighting systems that schools used is important because young children's eyes are still developing and may be affected by poor lighting.	2009, Nursery World, Vol. 109 Issue 4188, Special section
Green, B. L., Malsch, A. M., Kothari, B. H., Busse, J., & Brennan, E.	An intervention to increase early childhood staff capacity for promoting children's social-emotional development in preschool settings	This article describes the development, implementation, and outcomes of a pilot intervention designed to enhance preschool programs' ability to support children's social-emotional development. Working with two Head Start programs, the intervention included (1) restructuring existing early childhood mental health consultation services; (2) engaging programs in a mental health-specific strategic planning; (3) providing training to program staff in early childhood mental health best practices; and (4) implementing staff wellness activities to promote a healthy organizational culture. Research Findings: Results from quantitative staff surveys found significant improvement over time in terms of reduced staff stress, increased levels of understanding of best practices in early childhood mental health, and more evidence of a shared understanding of how best to meet children's mental health needs. Results were strongest for management and teaching staff, compared to other staff types. Practice Implications: Head Start and preschool programs may benefit from institutionalizing strategies to ensure that continued attention is paid to their program's mental health services through ongoing strategic planning, supporting staff wellness, and by effective use of mental health consultants. Mental health consultants may be most valuable when they focus on capacity-building activities such as staff coaching and training, and working with management teams to ensure a collective "mental health perspective."	2012 Early Childhood Education Journal
Green, B.L., Everhart, M., Gordon, L. & Gettman, M.G.	Characteristics of effective mental health consultation in early childhood settings: multilevel analysis of a national survey	In response to (a) an increasing need to support children with emotional and behavioral challenges in childcare settings and (b) the high rates of expulsion among preschool children, mental health consultation in early childhood settings is becoming an increasingly popular intervention strategy. At the same time, there is little agreement or empirical evidence to help early childhood program managers and other professionals make decisions about the most important characteristics and services that mental health consultants should provide. The current study presents findings from a nationally representative survey of 74 Head Start programs and 655 Head Start directors, staff members, and mental health consultants to use in addressing this gap. Using Hierarchical Linear Modeling (HLM), the authors present results suggesting that the single most important characteristic of mental health consultants is their ability to build positive collaborative relationships with program staff members.	2006 Topics in Early Childhood Special Education, volume 26, pages.142-152

		The frequency of consultant activities was important, primarily because consultants who provided more frequent services were reported to have more positive relationships with staff members. These results were significant even after controlling for program-level characteristics, such as program size, budget for mental health services, and ratio of consultant hours to number of children.	
Greenwald, R., Hedges, L., & Laine. R.	The effect of school resources on student achievement	A universe of education production function studies was assembled in order to utilize meta-analytic methods to assess the direction and magnitude of the relations between a variety of school inputs and student achievement. The 60 primary research studies aggregated data at the level of school districts or smaller units and either controlled for socioeconomic characteristics or were longitudinal in design. The analysis found that a broad range of resources were positively related to student outcomes, with effect sizes large enough to suggest that moderate increases in spending may be associated with significant increases in achievement. The discussion relates the findings of this study with trends in student achievement from the National Assessment of Educational Progress and changes in social capital over the last two decades.....Thus there is evidence of positive coefficients associated with each of these input variables in the combined significance analyses. This result appears to be quite robust. It holds for both the full analysis of studies and the robustness (trimmed) sample, for both the entire collection of studies and the more recent (post-1970) studies, and for the subsamples created for the variables teacher education, teacher experience, and school size.	1996, Review of Educational Research
Hamre, B. K., Pianta, R. C., Burchinal, M., Field, S., LoCasale-Crouch, J., Downer, J. T.	A course on effective teacher-child interactions: Effects on teacher beliefs, knowledge, and observed practice	Among 440 early childhood teachers, half were randomly assigned to take a 14-week course on effective teacher-child interactions. This course used the Classroom Assessment Scoring System (CLASS) as the basis to organize, describe, and demonstrate effective teacher-child interactions. Compared to teachers in a control condition, those exposed to the course reported more intentional teaching beliefs and demonstrated greater knowledge of and skills in detecting effective interactions. Furthermore, teachers who took the course were observed to demonstrate more effective emotional and instructional interactions. The course was equally effective across teachers with less than an associate's degree as well as those with advanced degrees. Results have implications for efforts to improve the quality of early childhood programs through the higher education system.	2012 American Educational Research Journal, 49(1), pages 88-123
Harford, MacRuairc, & Gerry	Engaging student teachers in meaningful reflective practice	This paper examines the use of peer-videoing in the classroom as a tool to promote reflective practice among student teachers. Twenty pre-service teachers from a variety of subject disciplines participating in a Post-Graduate Diploma in Education program in an Irish university participated in the study. The practice of encouraging student teachers working in the same school to participate in structured video analysis avoids the impact of external observers whose role is largely evaluative and endorses a collaborative model that promotes dialogue and shared learning. This practice promotes a culture of observation and critical dialogue in a profession which has traditionally been characterized by isolation, while at the same time fostering and validating the voice and experience of the student teacher. Locating the discussion within the framework of the theoretical literature on reflective practice, the purpose of this paper is to contribute to the international debate over best practice in supporting, encouraging and scaffolding reflective practice. It comments on the implications of reflective dialogue for the modernization of teacher education and offers guidelines on how best to scaffold and promote reflectivity.	2008 Teaching & Teacher Education; Oct2008, Vol. 24 Issue 7, pages 1884-1892
Horton, C. & Bowman, B.T.	Child assessment at the preprimary level: Expert opinion and state trends	In spring 2001, Erikson Institute conducted two surveys to provide practical information on the current state of expert opinion and public practice with regard to the assessment of prekindergarten children. The first survey questioned a select group of 25 national leaders in the early childhood field regarding the most important components of a child assessment system for four-year-olds enrolled in Head Start or similar programs. The second study surveyed state-funded prekindergarten programs across the country regarding specific assessment	2002, Erikson Institute

		practices mandated, recommended, or commonly used in their classrooms. The national leader survey found strong agreement that the most important aspect of an assessment system is the link between curriculum and the assessment of child skills and knowledge. Weekly teacher meetings where assessment can be discussed and annual or semiannual program self evaluations ranked next highest in importance.	
Howe, N., Jacobs, E., Vukelich, G., & Recchia, H.	In-service professional development and constructivist curriculum: Effects on quality of child care, teacher beliefs, and interactions.	The purpose of this study was to assess three methods of delivering in-service professional development regarding constructivist curriculum for early childhood educators. Educators in 44 not-for-profit child care centers in three Canadian cities were studied; 94 educators with formal preservice training participated. The three methods were (a) a consultant model, (b) workshops, and (c) a readings group. Global classroom quality was assessed with the Early Childhood Environment Rating Scale-Revised ([ECERS-R], Harms, Clifford, & Cryer, 2005), educators were interviewed about their beliefs regarding curriculum, and modified running record observations of educator-child interactions (i.e., guidance, directives) were assessed before and after the 15-week intervention. Over time the consultant model was associated with an increase in guidance interaction (i.e., promoting children's learning and development). A number of findings related to site were evident for quality of child care and educator beliefs, and highlight the challenges associated with conducting multi-site research studies. Implications for providing in-service professional development regarding curriculum are discussed.	2011, Alberta Journal of Educational Research 57(4), pages 353-378
Howes, C., James, J., & Ritchie, S.	Pathways to effective teaching	The authors used classroom observations to assess effective teaching, and clinical interviews and participant observation to understand pathways. Less than one-quarter of the teachers had bachelors degrees or higher and only 20% of the teachers had had preservice training, and almost all of the teachers with preservice experiences were the bachelors level teachers. Over half of the teachers had been mentored as they began teaching either as a mother volunteer or as a beginning teacher. About 40% of the participants talked of staying in the field because of feeling responsible to and for a community and the remainder reported staying for the children. Approximately 40% of the participants experienced reflective supervision. The participants in this study, even those with less formal education than a bachelors degree, were more responsive and more engaged with children than participants in two more representative studies. In this sample, after controlling for formal education, responsive involvement could be predicted by staying in the field for the community, being mentored and being supervised.	2003, Early Childhood Research Quarterly
Howes, C. & Hamilton, C.	The changing experience of child care: Changes in teachers and in teacher-child relationships and children's social competence with peers	Examined the influence of changes in child-care teachers and changes in teacher-child relationships on children's social competence with peers. Both changes in primary teachers and changes in teacher-child relationships were associated with changes in children's social competence with peers.	1993, Early Childhood Research Quarterly
Howes, C. & Hamilton, C.	Children's relationships with child care teachers: stability and concordance with parental attachments	In order to examine care giving relationships of children enrolled in childcare, two longitudinal samples of children, n = 72 and n = 106, were followed from infancy through preschool. Maternal attachment as assessed by the Strange Situation, 4-year-old reunion behavior, and by the Attachment Q-Set tended to be stable across time. Children's teacher-child relationship quality, as measured by the Attachment Q-Set, was stable if the teacher remained the same. When the teacher changed, teacher-child relationship quality tended to be unstable until the children were 30 months old. After 30 months, relationship quality with teachers tended to be stable regardless of whether or not the teacher changed. Maternal and teacher relationships were non-concordant. There were few interactions between adult caregiver relationship quality and age of entry into child care or intensity of child care.	1992, Child Development

Hurd, N. & Zimmerman, M.	Natural mentors, mental health, and risk behaviors: a longitudinal analysis of african american adolescents transitioning into adulthood	In this study, the authors tested whether having a natural mentor affected the growth trajectory of health outcomes among adolescents transitioning into adulthood (5 years post-high school). Participants in this study included 615 African American emerging adults. Outcomes assessed in this study included depressive symptoms, sexual risk behavior, and substance use. The authors hypothesized that participants who possessed natural mentors would demonstrate greater declines over time across all outcome variables in comparison to their counterparts who did not possess natural mentors. Using Hierarchical Linear Modeling, the researchers found that having a natural mentor was related to less depressive symptoms and less sexual risk behavior over time. The results suggest that natural mentors may protect youth from the negative outcomes associated with the risks they face.	2010, American Journal of Community Psychology; Sep2010, Vol. 46 Issue 1/2, pages 36-48
Hyson, M.	Preparing early childhood professionals: NAEYC's standards for programs	This guide offers the latest standards by the National Association for the Education of Young Children (NAEYC) for the higher education programs that will prepare the next generation of early care and education teachers. The professional standards from NAEYC, the Council for Exceptional Children (CEC) and Division for Early Childhood (DEC), and the National Board for Professional Teaching Standards (NBPTS) represent a broad vision of what early childhood professionals should know and be able to do at various points along a coherent and connected path. This path includes: associate degree, baccalaureate or initial master's degree, and advanced master's and doctoral degrees, as well as specialized preparation as an early childhood special educator or as a National Board Certified Teacher. Through discussing, reflecting on, and applying the standards and the real-life examples that accompany them, early childhood teachers and other professionals will gain the key tools, knowledge, and capabilities to provide what young children need to develop and learn to their full potential. References are included at the end of each chapter.	2003, National Associate for the Education of Young Children, Washington, DC
Institute of Medicine (U.S.), & National Research Council (U.S.)	The early childhood care and education workforce: Challenges and opportunities: A workshop report	Early childhood care and education (ECCE) settings offer an opportunity to provide children with a solid beginning in all areas of their development. The quality and efficacy of these settings depend largely on the individuals within the ECCE workforce. Policy makers need a complete picture of ECCE teachers and caregivers in order to tackle the persistent challenges facing this workforce. The IOM and the National Research Council hosted a workshop to describe the ECCE workforce and outline its parameters. Speakers explored issues in defining and describing the workforce, the marketplace of ECCE, the effects of the workforce on children, the contextual factors that shape the workforce, and opportunities for strengthening ECCE as a profession.	2012 Institute of Medicine (U.S.), & National Research Council (U.S.).
Jinnah, H.A., & Walters, L. H.	Including parents in evaluation of a child development program-relevance of parental involvement	Program evaluation practices in early childhood care and education have been underdeveloped compared to the larger field of educational evaluation. The inclination not to include parental views in evaluation is mainly a result of the problem of positive response bias. Researchers who study client satisfaction with educational or child care programs find that parental satisfaction ratings are mostly positive. This study helps address the problem by considering the influence of parental involvement and underscores the importance of considering parental satisfaction ratings in program evaluation. Purposive sampling was used. Parents of children in a child development program were given questionnaires assessing parental satisfaction with the program and their perceived involvement in the program. Regression analysis revealed that parental involvement positively predicted a parent's level of satisfaction with the program. To explore the specific areas of satisfaction in greater depth, cluster analysis was used to identify two distinct groups of parents based on their involvement. The differences and similarities between clusters are discussed. Results have implications for researchers, practitioners, administrators, and policy makers.	2008 Early Childhood Research & Practice (ECRP); Mar2008, Vol. 10 Issue 1
Johnson-Staub, C.	Charting progress for babies in child care project: Promote access	The Charting Progress for Babies in Child Care project highlights state policies that support the healthy growth and development of infants and toddlers in child care settings, and provides online resources to help states implement these policies. The foundation of the project is a policy framework comprised of four key principles	2012, Center for Law and Social Policy,

	to early, regular, and comprehensive screening	describing what babies and toddlers in child care need and 15 recommendations for states to move forward. The project seeks to provide information that links research and policy to help states make the best decisions for infants and toddlers.	Washington, DC
Johnston, k. & Brinamen, C. F.	The consultation relationship-from transactional to transformative: Hypothesizing about the nature of change	Increasing numbers of young children with significant social and emotional difficulties are being identified in childcare settings. Early Childhood Mental Health (ECMH) Consultation has been identified as a promising practice in stemming the tide of this troublesome trajectory. While ECMH Consultation is credited with promoting children's positive development, diminishing difficult behaviors, and reducing expulsion rates, the mechanisms of this transformative process are only beginning to be investigated. Recent research cites the salience of the relationship between a consultant and consultee as the central contributor to positive change in childcare-center climate and child outcomes. This article delineates characteristics of a beneficial consultative relationship and postulates the clinical process by which change in childcare providers' behavior occurs as a result of having experienced such a relationship. Paralleling the traits of contingent caregiving, the consultative stance, a posture of mutuality, reciprocity, and positive regard creates an inter-subjective space for reflection, repair, and, when necessary, adaptation. Based on perceptual shifts or expansions, the providers' attitude and approach toward children in their care is amended, in turn promoting positive change in the child and classroom atmosphere.	2012, Journal of Infant Mental Health
Kahn, R., Stemler, S., & Berchin-Weiss, J.	Enhancing parent participation in early intervention through tools that support mediated learning	The Ready to Learn parent-infant education program of the Lexington School for the Deaf in New York is a family-centered early intervention program. The staff used two new measurement instruments to scaffold their efforts to establish a collaborative relationship with parents who represent a variety of cultures and socioeconomic levels. The results demonstrate that these instruments can effectively measure changes in parents' interactive behavior with teachers and with their children, as well as their active participation as mediators of their children's learning opportunities over time. Specifically, the results indicate that parents contributed to setting goals for their children and the domains of the goals were consistent with the cognitive and family-centered focus of the program. Further, parents made significant gains in their ability to share information with staff, address their children's hearing and communication needs, participate in meetings, and collaborate during assessment and team meetings over time.	2009, Journal of Cognitive Education & Psychology; 2009, Vol. 8 Issue 3, p269-287
Kantrowitz, E.J.& Evans, G.W.	The relation between the ratio of children per activity area and off-task behavior and type of play in day care centers	Given the explosion in growth of out-of-the-home child care, increasing attention is being focused on the developmental consequences of early childhood environments. The authors show that the ratio of children to the number of activity areas in the classroom is positively correlated with off-task time. There is also a marginal, negative correlation to engagement in constructive play. Use of hierarchical linear modeling allowed the authors to examine these processes in a repeated measures design, with controls for center and for family income.	2004 Environment and Behavior, volume 36 number 4 pages 541-557
Karcher, M.	Increases in academic connectedness and self-esteem among high school students who serve as cross-age peer mentors	The study in this article compared changes on connectedness, attachment, and self-esteem between 46 teen mentors and 45 comparison classmates. The results revealed an association between serving as a cross-age peer mentor and improvements on academic self-esteem and connectedness.	2009 Professional School Counseling; Apr2009, Vol. 12 Issue 4, pages 292-299
Karoly, L. A.	Toward standardization of benefit-cost analyses	A growing body of benefit-cost analyses (BCAs) of early childhood programs has been prompted by the increased demand for results-based accountability when allocating public and private sector resources. While the	2012 Journal of

	of early childhood interventions	BCAs of early childhood programs serve to make such investments more compelling, there are limitations in the current state of the art, including a lack of standardization in the BCA methods used, from discount rates to shadow prices. The objective of this paper is to delineate a set of standards for conducting BCAs of early childhood programs. The paper reviews the existing evidence of the economic returns from early childhood programs that serve children and families in the first five years of life, discusses the challenges that arise in applying the BCA methodology such programs, highlights the variation in current methods used, and proposes a set of standards for applying the BCA methodology to early childhood programs. The recommendations concern issues such as the discount rate to use and the age to which costs and benefits should be discounted; stakeholder disaggregation; outcomes to value, the associated values, and projections of future outcomes; accounting for uncertainty; sensitivity analysis; and reporting of results. The proposed standards can guide the choices that analysts need to make about the methods to use when performing BCAs for one or more early childhood programs and they can support greater transparency in the results the analysts provide. The standards can also support consumers of the BCA results in their need to understand the methods employed and the comparability across different studies.	Benefit-Cost Analysis, Vol. 3, No. 1, Article 4
Karoly, L. A.	A golden opportunity: advancing California's early care and education workforce professional development system	Recent studies suggest that many members of workforce knowledge to be effective in their work with young California has taken a number of steps to build an ECE workforce professional development system (PDS), but further work is needed to achieve a coherent system. Data gaps mean that we know little about how used. California can implement policies to ensure that PDS are deployed as effectively as possible. The state can also undertake reforms to improve the ability of the current PDS to pre-prepare and support an effective ECE workforce.	2012, Rand Corporation
Karoly, L. A., Zellman, G.	How would programs rate under California's proposed quality rating and improvement system? evidence from statewide and county data on early care and education program quality	The aim of this study was to conduct an initial examination of some key aspects of the proposed QRIS design. By capitalizing on two existing data sets that included several of the quality elements in the proposed QRIS rating design, the work highlights some relationships among these quality elements, examines the ways in which different measures of these elements proposed in the QRIS design relate to each other, and provides information about the likely distribution of program-level ratings across the proposed rating tiers. This work provides California QRIS planners and other stakeholders with important information about some fundamentals of the proposed QRIS rating scheme that could inform California's QRIS design in advance of field-based pilot efforts.	2012, RAND Corporation
Khandekar, R., Al Harby, S., & Mohammed, A.J.	Eye and vision defects in under-five-year-old children in Oman: A public health intervention study	The purpose of the study was to identify under-five-year-old children with vision or ocular defect in two provinces of central Oman in 2006. Authors reported that the preferential looking test suggested that half of the children had defective vision. The study concluded that eye and vision screening of under-five kids helped in detection of eye problems in early stages. Instead of universal screening, high risk population or children of three to four years for vision and one to two years for ocular abnormalities is proposed. The existing health services could not detect some children with eye problems and they were identified during such screening.	2010, Oman Journal of Ophthalmology; Jan2010, Vol. 3 Issue 1, pages 13-17
Kipnis, F., Whitebook, M., Almaraz, M., Sakai, L., & Austin, L. J. E.	Learning Together: A study of six B.A. completion cohort programs in early care and education: year 4	This report discusses the results of a fourth round of interviews, in which the study team asked graduates to assess how various structural features of their bachelors degree cohort programs had contributed to their educational success, the value of their general education courses, and the extent to which their programs had addressed leadership development and working with adults. Graduates were asked about the impact of the bachelors degree on their professional and personal lives, and their perceptions of how their workplace environments affected	2012, University of California, Berkley

		teaching practices with children.	
Klein, H., & Weaver, N.A.	The effectiveness of an organizational-level orientation training program in the socialization of new hires	This quasi-experimental field study examined the impact of attending a voluntary, organizational-level new employee orientation training program on organizational socialization. Six content dimensions of socialization were measured before and 1 to 2 months following orientation training for a sample of 116 new employees in a variety of occupations. Results revealed that employees attending the orientation training were significantly more socialized on 3 of the 6 socialization content dimensions (goals/values, history, & people) than employees who did not attend the training. Employees attending the orientation training also had significantly higher levels of affective organizational commitment than non-attendees, a relationship that was fully mediated by the socialization content dimensions, primarily goals/values, and history.	2000 Personnel Psychology; Spring 2000, Vol. 53 Issue 1, pages 47-66
Koh, S., & Neuman, S.B.	the impact of professional development in family child care: a practice-based approach	The purpose of this mixed methods study was to examine the efficacy of a practice-based approach to professional development for family child care providers working in low-income communities. This approach included a literacy coaching component that anchors knowledge in practice. One hundred and twenty-eight family child care providers were randomly assigned to three groups: a language and literacy course plus coaching, the course only, and control. Quantitative results revealed that providers who received the course plus coaching experienced statistically and educationally significant improvements in their literacy practice compared to the other two groups. Qualitative data described specific areas in early literacy that were improved as a result of this professional development intervention. Practice or Policy: Implications of these findings for child care policy and professional development programs for family child care providers are discussed.	2009, Early Education and Development, v 20 n 3 pages 537-562 2009
Kotch, J. Isbell, P., Weber, D., Nguyen, V., Savage, E., Gunn, E., Skinner, M., Fowlkes, S., Virk, J., & Allen, J.	Hand-washing and diapering equipment reduces disease among children in out-of-home child care centers	This investigation examined the impact of the installation of equipment for diaper-changing, hand-washing, and food preparation that is specifically designed to reduce the transmission of infectious agents on the rate of diarrheal illness among children and their teachers in child care centers.	2007, American Academy of Pediatrics, Pediatrics, Volume Number: 120, Issue Number: 1
Kotloff, L. & Burd, N.	Building stronger non-profits through better financial management	The Strengthening Financial Management in Out-of-School Time (OST) initiative (SFM) grew out of The Wallace Foundation's long-standing commitment to improving the quality of services for youth during non-school hours and the realization that even successful nonprofits face financial management challenges that have an impact on their ability to achieve their missions. The four-year initiative seeks to improve the financial management systems of 26 well-respected OST-providing nonprofit organizations in Chicago. It is offering their key staff training and support, while also working to reform funder (both public and private) practices that strain OST organizations' financial management capacity. Participating organizations are receiving financial management training and peer-networking opportunities, using one of two models that vary in intensity and in the balance of individual vs. group-based training and support. The report presents early lessons for OST funders and nonprofit leaders that have emerged from SFM's first 12 to 18 months.	2012, Public/Private Ventures
Lahaie, C.	School readiness of children of immigrants -does parental	Using data from the Early Childhood Longitudinal Survey—Kindergarten Cohort, this article analyzes the link between parental involvement and the school readiness of children of immigrants. Methods. Multivariate regression models estimate the association between parental involvement and the school readiness in English	2008 Social Science Quarterly

	involvement play a role	proficiency and math scores of children of immigrants. Results demonstrate that parental involvement is associated with an increase in the level of English proficiency for children of immigrants. Parental involvement also is associated with a decrease in the gap in math scores between immigrant children from English- and non-English-speaking backgrounds. Parental involvement decreases the gap in math scores between children of immigrants and children of the native born by a third of a standard deviation. The authors conclude that given that parental involvement appears to benefit children of immigrants and given that they have lower academic achievement than children of the native born, these findings suggest that parental involvement policies and practices targeting children of immigrants could help decrease the academic achievement gap between children of immigrants and children of the native born.	(Blackwell Publishing Limited); Sep 2008, Vol. 89 Issue 3, pages 684-705
Lakshman, R.R., Sharp, S.J., Ong, K.K., & Forouhi, N.G.	A novel school-based intervention to improve nutrition knowledge in children	The authors engaged in a novel intervention to improve nutrition knowledge in children. Twelve intervention and 13 control schools (comprising 1133 children) completed the trial. Total nutrition knowledge score at follow-up, adjusted for baseline score, deprivation, and school size, was higher in intervention than in control schools. At follow-up, more children in the intervention schools reported that they 'are currently eating a healthy diet' (39.6%) or 'would try to eat a healthy diet' (35.7%) than in control schools (34.4% and 31.7% respectively; chi-square test $p < 0.001$). The authors conclude that a nutritional card game facilitated the enjoyable delivery of nutrition education in a sample of primary school age children.	2010 BMC Public Health; 2010, Vol. 10, pages 123-131
Larkin, E., Kaplan, M., & Rushton, S.	Designing brain healthy environments for intergenerational programs	Intergenerational relationships are at the center of programs designed to bring younger and older populations together for their mutual benefit. The physical spaces used for intergenerational interactions should be designed in such a way as to promote the development of positive relationships among people of different ages. Research in the neurosciences provides a basis for creating environments that are conducive to intergenerational interactions that stimulate cognitive interest and rewarding social engagement. This article will bring elements of environmental design together with brain research principles to outline appropriate applications for intergenerational programming, including arranging spaces and planning activities with a participant-centered approach. The goal is to provide a scientifically based rationale for organizing environments that are safe and welcoming for all age groups and also support multisensory experiences that stimulate positive human interaction.	2010 Journal of Intergenerational Relationships; 2010, Vol. 8 Issue 2, pages 161-176
Larose, S., Cyrenne, D., Garceau, O., Brodeur, P., & Tarabulsy, G. M.	The structure of effective academic mentoring in late adolescence	This chapter reports findings from the evaluation of an academic mentoring program for late adolescents that highlight the role of exposition to structured activities and mentors' use of some behavioral strategies. Specifically, different types of interactions in mentoring (such as discussing personal projects, resolving academic problems, and participating in social activities) and different mentors' behaviors (such as emotional involvement, directivity, and reciprocity) were examined in relation to the quality of the mentoring relationship and mentees' adjustment at the end of the program. The findings generally support the initial assumption. Mentoring that focused more on activities produced significant and positive effects on mentee adjustment, whereas mentoring that focused almost exclusively on problem solving or mostly involved open discussion did not produce significant effects. Findings also indicate that mentors who expressed some directivity coupled with high emotional involvement and reciprocity were more likely to connect with their mentees and improve their academic adjustment.	2010 New Directions for Youth Development; Summer 2010, Vol. 2010 Issue 126, pages 123-140
Lee, S., Recchia, S., & Shin, M.	Not the same kind of leaders: four young children's unique ways of influencing others	This qualitative multi-case study explored four young leaders' idiosyncratic leadership styles manifested within the context of their classrooms (toddler and preschool). In order to gain a deeper understanding of the complexity and variety of early childhood leadership and provide holistic descriptions of young leaders' emerging leadership behaviors, the data were collected through teacher interviews and two kinds of observations (natural observations	2005 Journal of Research in Childhood

		and videotaped observations) in a university-affiliated child care center. Although there were some common characteristics across all four young leaders, each of the young leaders was quite unique in his or her leadership characteristics and ways of enacting leadership in the classroom. Interestingly, each of them also was quite powerful in his or her particular way. Findings also suggested that differences in age group and classroom dynamics influenced children's enactment of leadership and responses from others in their respective classrooms. Recognizing individual differences in young children's leadership styles and strengths, this study encourages educators and researchers to broaden their perspectives and assumptions about early childhood leadership and young leaders, and to create classroom environments that support the emergence of different leadership styles.	Education
Leviten-Reid, C.	Organizational form, parental involvement, and quality of care in child day care centers	This research study compared cooperative child day care centers to for-profit and independent nonprofit centers in terms of parental involvement in operations (such as fundraising and classroom participation), parental involvement in governance (specifically, serving on the board and attending the annual meeting), and quality of care. It also tests whether parent control of the board is associated with quality. Findings show that cooperative centers feature greater parental involvement in operational aspects, including fundraising and care of the center or grounds compared to for-profits and independent nonprofits. Cooperatives are also more likely to have parents on their boards and feature boards with parent majorities compared to independent nonprofits, although more than half of these nonprofit centers also have parent-controlled boards. Results also show that while the cooperative form, tested as a distinct organizational type, is not a predictor of quality, parent control of the board is a positive predictor of this outcome.	2012, Nonprofit and Voluntary Sector Quarterly, 41(1), pages36-57.
Lim, Y., Schilder, D., Chauncey, B.	Supporting parents through head start child-care center partnerships	This article found that child care providers engaged in partnership with Head Start were significantly more likely than comparison providers to offer comprehensive screenings, referrals and services to children and parents. Previously published research suggested that such services are predictive of children's later school success and parents' workforce participation.	2007 International Journal of Economic Development
LoCasale-Crouch, J., Kraft-Sayre, M., Pianta, R. C., Hamre, B. K., Downer, J. T., Leach, A.	Implementing an early childhood professional development course across 10 sites and 15 sections: Lessons learned.	In this article we describe the design and implementation of the National Center for Research on Early Childhood Education's (NCRECE's) college-level course and its delivery to teachers across 10 settings and 15 instructional sections. This professional development intervention, found effective in changing teachers' beliefs, knowledge, and actual classroom practices (Hamre, et al., in press), has the potential to be scalable through existing delivery systems for teacher preparation (i.e., higher education) and may also address a critical gap created by policies requiring early childhood educators to earn a college degree. Specifically, we describe challenges associated with conducting an experiment of this kind, strategies and supports necessary to implement the NCRECE course well across multiple settings, and evidence regarding course instructors' implementation of the course as intended.	2012 NHSA Dialog, 14(4), pages275-292.
London, R., Gurantz, O., & Norman, J.	The effect of afterschool program participation on English language acquisition	In the past quarter century, the nation's K-12 public schools have experienced a large influx of students who speak languages other than English. In the 2008-09 school year, California public schools served 1.5 million children (24 percent of the student population) whose primary language was not English (California Department of Education, 2010). This percentage represents a substantial increase from 25 years earlier, when just 8 percent of California's public school students were English learners	2011, After School Matters
Lyon, A. R., Gershenson, R.A., Farahmand, F. K., Thaxter,	Effectiveness of Teacher-child interaction training (tcit) in a preschool setting.	This research addressed the need for trained child care staff to support optimal early social-emotional development in urban, low-income, ethnic minority children. We evaluated effectiveness of Teacher-Child Interaction Training (TCIT), an approach adapted from Eyberg's Parent-Child Interaction Therapy (PCIT). TCIT focuses on increasing preschool teachers' positive attention skills and consistent discipline in order to enhance children's psychosocial functioning and prevent mental health problems. A total of 12 teachers participated in	2009 Behavior Modification; Nov2009, Vol. 33 Issue 6, pages

P.J., Behling, S., & Budd, K.		small-group workshop sessions with in vivo coaching on their use of skills in the classroom. A multiple-baseline design across four classrooms (3 teachers each) evaluated effects of training on teacher behaviors during weekly classroom observations. Findings indicated systematic increases in trained skills during intervention, and consumer evaluations showed that the training was rated positively. Our results suggest that TCIT is a promising approach for enhancing positive teacher-child interactions in a preschool setting and should receive further investigation.	855-884
Macintosh, A., Schroth, R., Edwards, J., Harms, L., Mellon, B., & Moffatt, M.	The impact of community workshops on improving early childhood oral health knowledge.	Purpose: The purpose of this study was to evaluate the effectiveness of community workshops designed to equip participants with early childhood oral health (ECOH) knowledge and early childhood caries (ECC) prevention. Methods: Convenience sample of individuals working with infants and preschool children attending an ECOH training workshop completed a questionnaire before the workshop. One month later, participants completed a follow-up questionnaire. A P-value $\leq .05$ denoted significance. Results: One hundred eight participants from southern Manitoba, Canada, completed the initial survey, while 67% completed the post workshop questionnaire. Initially, many were unfamiliar with the recommended age of a first dental visit, assessing caries-risk, and identifying early stages of decay. Following the workshop, there was a 16% increase in the proportion of correct answers and a significant improvement in the number of correct choices. Some questions showing considerable improvement included: when children should first visit the dentist; mother having active decay placing their infant at high risk for caries ($P < .001$); and age until caregivers should supervise tooth-brushing. Self-reported data suggests participants changed behaviors as a result of what they learned. The authors conclude that capacity-building workshops increased oral health knowledge and self-reported behaviors.	2010 Pediatric Dentistry; Mar/Apr 2010, Vol. 32 Issue 2, pages 110-107
Marcon, R. A.	Positive relationships between parent school involvement and public school inner-city preschoolers' development and academic performance	Teacher ratings were used to identify the extent of parent involvement for 3 cohorts of predominantly low-income, urban 4-yr-olds attending public prekindergarten or Head Start programs. The classroom edition of the Vineland Adaptive Behavior Scales was used to measure preschoolers' language, self-help, social, motor, and adaptive development. Mastery of early basic school skills was measured by the school district's Early Childhood Progress Report. Increased parent school involvement and more active types of parent involvement were both associated with more positive development in all Vineland domains and greater mastery of early basic school skills in all subject areas. Although girls outperformed boys in all measures except 4 Vineland sub domains (expressive language, domestic skills, play and leisure, and gross motor skills), increased parent school involvement was associated with especially positive development and academic performance in preschool boys. Previous research had not identified a differential relationship between parent involvement and outcomes for preschool boys and girls.	1999 School Psychology Review, Vol 28(3), Special issue, pages 395-412
Massey, S.	Teacher-child conversation in the preschool classroom	This article explores conversations between preschool children and their teachers in the classroom environment. Teachers have an opportunity to engage students in cognitively challenging conversations at critical times during the day: book reading, playtime, and mealtimes. The article provides examples of the types of conversations preschool educators can model and facilitate in order to further develop a child's oral language and subsequent literacy skills during the school day.	2004, Early Childhood Education Journal
Mathers, S., Singler, R., & Karemaker, A.	Improving quality in the early years: A comparison of perspectives and measures	The aim of the research was to compare different quality measures used in England, focusing particularly on the report of the regulatory body Ofsted, the Environment Rating Scales (ECERS and ITERS), and quality assurance schemes. The University of Oxford and A+ Education Ltd compared the grades awarded by Ofsted for over 1,000 nurseries with their scores on the research-validated ECERS and ITERS rating scales. Daycare Trust carried out focus groups with parents, providers and local authorities to explore how these different measures of quality are understood and used	2012, Daycare Trust

Maude, S., Catlett, C., Moore, S., Sánchez, S. Y., Thorp, E. K., & Corso, R.	Infusing diversity constructs in preservice teacher: preparation the impact of a systematic faculty development strategy	The article discusses the Crosswalks Intervention, a U.S. Department of Education-funded program which created a faculty development strategy aimed at making early childhood preservice programs more culturally and linguistically diverse. The author notes that as the U.S. becomes more ethnically and culturally diverse faculty training programs need to ensure that educators can work effectively with children from different cultures and backgrounds. Evidence-based practices were used to create the educational content of the Crosswalks Intervention and the evaluation tools used to assess the program's effectiveness. Participants in the program reported a significant change in their cultural knowledge and their ability to incorporate it into their educational practice.	2010 Infants & Young Children: An Interdisciplinary Journal of Special Care Practices, Vol. 23 Issue 2
Maxwell, K. L., Lim, C.-I., & Early, D. M.	Early childhood teacher preparation programs in the United States: National report.	The purpose of this report was to provide basic descriptive information about early childhood teacher preparation programs that prepare individuals to work with children younger than age 5. This report focused primarily on programs offered the child development associate credentials or other certification, Associate's degrees, Bachelor's degrees, and Master's degrees.	2006, Frank Porter Graham Child Development Institute
McCarty, F., Lambert, R., & Abbott-Shim, M.	The relationship between teacher beliefs and practices, and Head Start classroom quality, paper presented at the Annual Meeting of the American Educational-Research Association	Within early childhood research considerable emphasis has been placed on examining teachers' beliefs about developmentally appropriate practices in the classroom. The purpose of this study was to describe Head Start teacher beliefs and self-reported practices as they relate to classroom quality and examine the potential differences in the beliefs of those teaching in high, average, and low quality classrooms. Scores on two subscales, appropriate and inappropriate, for both self-reported beliefs and practices were used as the dependent variables. Analysis of variance was used to examine differences between the self-reported beliefs and practices of teachers in classrooms of differing quality. The results for both the appropriate beliefs and appropriate activities subscales were statistically non-significant. However, the results for the two inappropriate subscales were statistically significant. These results would seem to indicate that teachers in the low quality group tended to respond more favorably to statements about inappropriate beliefs and practices than did those teachers in either the high or average quality classrooms. These findings provide important information about offering professional development opportunities for Head Start teachers that focus on providing theoretical perspectives on children's development and instructional practices aimed at changing beliefs about teaching practices.	2001, Early Education & Development
McConnell, S., McEvoy, M., & Priest, J.	"Growing" measures for monitoring progress in early childhood education: A research and development process for individual growth and development indicators	this article provides a brief overview of general outcome measurement and its potential for assessment of continuous progress in early childhood education. it describes an eight-step research and development process for the generating and evaluating of individual growth and development indicators. these indicators are adaptable across children, programs, and purposes	2003, Assessment for Effective Intervention, v27 n4 p3-14 Sum 2002
McCormick Center for Early Childhood Leadership	Head Start administrative practices, director qualifications, and links to program quality	An emerging body of research confirms practical wisdom from the field that center directors are the gatekeepers to quality. Through the teachers they hire, the administrative practices they put into place, and their ability to promote a shared vision, directors create professional environments that enable teachers to provide enriching learning environments for children. Recognizing the importance of program leadership, an increasing number of state initiatives are including a measure of administrative practices in their approaches to assessing and improving program quality across early learning settings. To help inform these initiatives, this research examined how administrative practices in Head Start programs are related to classroom quality. The research also looked at	2010, Research Notes, Wheeling, Illinois, National-Louis University

		director qualifications in Head Start programs to understand how specific dimensions of director qualifications are related to the quality of Head Start administrative practices and the quality of the classroom learning environment.	
McCormick Center for Early Childhood Leadership	Leadership matters	To ensure school readiness and help prepare children for successful participation in work and civic life, our nation has committed to providing a comprehensive and coordinated system of early learning and development. As more community-based programs provide publicly funded preschool, the need for well-qualified early childhood administrators has greatly increased. To create fiscally sound early childhood programs with learning environments that nurture and challenge young children and with work environments that develop, support, and retain skilled teachers, program directors capable of strong leadership are essential.	2012, QRIS Network
McFarland, L., Saunders, R., & Allen, S.	Reflective practice and self-evaluation in learning positive guidance: experiences of early childhood practicum students	This paper examines the role of self-reflection and self-evaluation in early childhood practicum students' development of positive guidance skills with children. We examine how helpful students find self-reflection and self-evaluation exercises and how their thoroughness of reflection relates to their progress in acquiring positive guidance skills. Self-reflection also plays a role in students' attitudes towards positive guidance and their confidence in using guidance skills. This paper explores the extent to which reflection and evaluation affect the attitudes and confidence of future early childhood educators, which could have an impact on the children and families they work with. Participants were 63 university students (60 female and 3 male) in their junior or senior years in a Human Development and Family Sciences undergraduate program at a university in the southern region of the United States. They were enrolled in an undergraduate class focused on learning "positive guidance" interaction skills and classroom management with young children. Students generally found the self-ratings and goal setting helpful in learning guidance skills. The authors not find that thoroughness of self-reflection was related to guidance skills or amount of improvement.	2009, Early Childhood Education Journal, volume 36, number 6, pages 505-511
McLean, M. E. & Odom, S. L.	Practices for young children with and without disabilities: A comparison of DEC and NAEYC identified practices	A comparison of best practices in early childhood special education accepted by the National Association for the Education of Young Children (NAEYC) and the Division for Early Childhood (DEC) Task Force on Recommended Practices	1993, Pro-Ed, Topics in Early Childhood Special Education, Volume: 13 Issue Number: 3
Mezey, J., Neas, K., & Irish, K.	Coming together for children with disabilities: State collaboration to support quality, inclusive child care	This report presents findings from a study of state policies designed to provide special education and early intervention services to low-income children with disabilities in child care programs.	2003, Center for Law and Social Policy, Washington, DC
Miedel, W.T. & Reynolds, A.J.	Parent involvement in early intervention for disadvantaged children: Does it matter?	This study of parental involvement in early intervention curricula, such as participation in activities in their children's preschool and kindergarten classes and the frequency of their participation, and their children's later school competence examined the association between parent involvement in early intervention and children's later school competence. Results indicated that even after controlling for family background, the number of activities in which parents participated in preschool and kindergarten was significantly associated with higher reading achievement, with lower rates of grade retention at age 14, and with fewer years in special education.	1999, Journal of School Psychology, Volume 37, Issue 4, pages 379-402

Mohler, G., Yun, K., Carter, A., & Kasak, D.	The effect of curriculum, coaching, and professional development on prekindergarten children's literacy achievement	Disadvantaged children—those in poverty, minorities, or whose first language is not English—often come to kindergarten several years behind their more advantaged peers, especially in the areas of literacy and oral language development. A logical place to begin making a difference in children's literate lives is in the years before kindergarten. This study empirically assessed one community's efforts to close this gap for its youngest children. Over a 3-year period, a grassroots venture consisting of business, university and public school personnel provided teachers in 22 California state preschool classrooms with a literacy-rich curriculum, weekly support from a literacy coach and professional development on early literacy acquisition and instruction. Baseline scores collected the year prior to the implementation of this project were compared to end-of-year scores for two experimental condition cohort groups (Year 1 and Year 2 of the project). These data reveal that children exposed to the literacy curriculum and coaching model significantly outperformed the children in the baseline condition for most of the literacy outcome subtest measures. Teacher ratings on child development literacy measures also showed a majority of the experimental condition students had improved significantly by the end of the year. Furthermore, significant differences were also found when 103 children from Year 1 of the project were followed through kindergarten and compared to 665 control children on end-of-year literacy assessments. Implications for early childhood teacher preparation based on these results are discussed.	2009, Journal of Early Childhood Teacher Education, v. 30 n1, pages 49-68
Moller, A., Deci, E., & Ryan, R.	Choice and ego-depletion- the moderating role of autonomy	The self-regulatory strength model maintains that all acts of self-regulation, self-control, and choice result in a state of fatigue called ego-depletion. Self-determination theory differentiates between autonomous regulation and controlled regulation. Because making decisions represents one instance of self-regulation, the authors also differentiate between autonomous choice and controlled choice. Three experiments support the hypothesis that whereas conditions representing controlled choice would be ego-depleting, conditions that represented autonomous choice would not. In Experiment 3, the authors found significant mediation by perceived self-determination of the relation between the choice condition (autonomous vs. controlled) and ego-depletion as measured by performance	2006, Personality & Social Psychology Bulletin; Aug2006, Vol. 32 Issue 8, pages 1024-1036
Moon, K. & Reifel, S.	Play and literacy learning in a diverse language pre-kindergarten classroom	This study explores a teacher's understandings of the role of play and her use of play in literacy learning serving children from diverse language backgrounds. The participants in this study were a public pre-kindergarten teacher and her class. Data were collected from interviews, informal conversations, observations, and self-reflexive notes. The teacher believed that play, as she defined it, has an important role in children's literacy learning and development, and she used playful activities (concrete, manipulative, fun, hands-on, and creative activities, including games) as potential teaching and learning mediums for literacy learning, within her own unique understanding and use of play. Implications for understanding multicultural and developmentally appropriate literacy practices are discussed in terms of teacher beliefs and understandings.	2008, Contemporary Issues in Early Childhood Vol 9(1) pages.532-566
National Association for the Education of Young Children	Developmentally appropriate practices in early childhood programs	The purpose of this position statement is to promote excellence in early childhood education by providing a framework for best practice. Grounded both in the research on child development and learning and in the knowledge base regarding educational effectiveness, the framework outlines practice that promotes young children's optimal learning and development. Since its first adoption in 1986, this framework has been known as developmentally appropriate practice.	2009, NAEYC, Washington, DC
National Council for Accreditation of Teacher Education	Professional standards for the accreditation of teacher preparation instruction	This edition of "Professional Standards" contains the revised unit standards and accreditation decisions approved by National Council for Accreditation of Teacher Education's (NCATE's) Executive Board in 2007. All teacher preparation institutions with visits scheduled in fall 2008 and beyond will be reviewed under these standards, and accreditation will be based on these decisions. This easy to read 92-page publication contains the six unit standards, including the rubrics that delineate elements of the standards, as well as supporting explanations of the	2008, National Council for Accreditation of Teacher Education

		standards and a complete glossary. The book also contains information on NCATE's mission, scope, and board structure. In addition, summaries of professional program standards are included. Individual chapters are footnoted.	
Neuman, S.B., & Cunningham, L.	The impact of professional development and coaching on early language and literacy instructional practices	This study examined the impact of professional development on teacher knowledge and quality early language and literacy practices in center- and home-based care settings. Participants from 177 child care centers and 114 home-based providers in four cities were randomly selected to one of three different groups. The first received a 3-credit course in early language and literacy, the second received the course plus ongoing coaching and the third was the control group. Analysis of covariance indicated no significant differences between groups on teacher knowledge. However, there were statistically significant improvements in language and literacy practices for teachers who received coursework plus coaching with substantial effect sizes for both center- and home-based providers. Professional development alone had negligible effects on improvements in quality practices. Authors suggest that coursework and coaching may represent a promising quality investment in early childhood.	2009 American Educational Research Journal, Vol 46(2), pages 532-566
Noaks, J., & Noaks, L.	School-based peer mediation as a strategy for social inclusion	This paper focuses on the impact of peer mediation as a strategy for promoting social inclusion in primary school settings. Peer mediation constituted one of the interventions in the government-sponsored "On Track" program and evaluative data from this project were reported. The paper reports on trends in bullying and anti-social behavior in nine schools where peer mediation was deployed. The benefits of mainstreaming and further dissemination of the approach are discussed.	2009, Pastoral Care in Education, Vol. 27 Issue 1, pages 53-61
O'Sullivan, R.G. & D'Agostino, A.	Promoting evaluation through collaboration	Collaborative evaluation engages key program stakeholders actively in the evaluation process. Distance between external evaluators and program staff is often minimal, based on the assumption that a collaborative stance will strengthen evaluation results and increase utilization of evaluation findings. Convincing empirical evidence to support these assumptions is scarce. This study uses evaluation findings from a county-wide, comprehensive, early childhood education initiative to support the contention that a collaborative approach can substantively improve evaluation findings.	2002, Evaluation, Vol. 8 Issue 3
Odom, S. L. & Strain, P.S.	Evidence-based practice in early intervention/early childhood special education: single-subject design research	This study examined the strength of evidence from single-subject research underlying the Council for Exceptional Children's Division of early Childhood Recommended Practices. A review of 184 articles (1990- 1998) found the literature provided positive, and in some cases very strong, evidence for the effectiveness of practices from the Child-Focused Strand of the DEC Recommended Practices.	2002, Journal of Early Intervention, v 25 n2, pages 151-60
Organization for Economic Co-operation and Development	Research brief: Minimum standards matter	As ECEC expands outside the home, the regulation of services inevitably becomes a public responsibility. All OECD countries impose a preliminary health and safety check on centers or homes licensed to look after young children. However, the extent and manner of regulation differs widely from country to country and often varies within countries according to region or the type of service concerned. Authors assert that appropriate regulation not only helps define and enforce health, environmental and program standards but can also ensure some degree of equity for parents and children in poorer neighborhoods (OECD).	2012, Organization for Economic Co-operation and Development
Office of Childcare	A foundation for quality improvement systems state licensing, preschool, and QRIS program quality standards	State interest in program quality improvement systems is being driven by a desire to improve outcomes for children, especially children with high needs. States are also trying to make informed decisions about quality investments based on their effectiveness in achieving desired outcomes. Finally, efforts like the Race to the Top Early Learning Challenge have focused attention on standards, tracking progress, and supporting State systems of program quality improvement. Using a quality rating and improvement system (QRIS) framework, the Office of Child Care drafted benchmarks for State systems and they included new quality questions in the biennial Child	2011, QRIS Network

		Care and Development Fund (CCDF) grantee plans. This document was developed to help inform States about current program quality standards found in licensing regulations, state-funded preschool program standards, and quality rating and improvement systems (QRIS). This examination of current standards that apply to varied types of early care and education programs are designed to guide development and improvement of those standards.	
Organization for Economic Co-operation and Development	Starting strong III: A quality toolbox for early childhood education and care	Early childhood education and care (ECEC) can bring a wide range of benefits – for children, parents and society at large. However, these benefits are conditional on "quality". Expanding access to services without attention to quality will not deliver good outcomes for children or long-term productivity benefits for society. This new publication focuses on quality issues: it aims to define quality and outlines five policy levers that can enhance it in ECEC. In addition, it provides busy policy makers with practical tools such as research briefs, international comparisons, country examples, self-reflection sheets, etc. in order to successfully implement these policy levers.	2012, Organization for Economic Cooperation and Development
Patal, E. A., Cooper, H. & Robinson, A.	The effects of choice on intrinsic motivation and related outcomes - A meta-analysis of research findings	The authors engaged in a meta-analysis of 41 studies that examined the effect of choice on intrinsic motivation and related outcomes in a variety of settings with both child and adult samples. Authors report that providing choice enhanced intrinsic motivation, effort, task performance, and perceived competence, among other outcomes. Moderator tests revealed the effect of choice on intrinsic motivation was stronger (a) for instructionally irrelevant choices compared to choices made between activities, versions of a task, rewards, and instructionally relevant options, (b) when 2 to 4 successive choices were given, (c) when rewards were not given after the choice manipulation, (d) when participants given choice were compared to the most controlling forms of control groups, (e) for children compared to adults, and (f) when the experiment was conducted in a laboratory embedded in a natural setting. Implications for future research and applications to real-world settings are discussed.	2008, Psychological Bulletin, Vol 134(2), Mar, 2008. pp. 270-300
Pate, R. R., Pfeiffer, K. A., Trost, S. G., Ziegler, P., & Dowda, M.	Physical activity among children attending preschools.	The purpose of this study was to describe the physical activity levels of children while they attend preschools, to identify the demographic factors that might be associated with physical activity among those children, and to determine the extent to which children's physical activity varies among preschools. A total of 281 children from 9 preschools wore an accelerometer for an average of 4.4 hours per day for an average of 6.6 days. Each child's height and weight were measured, and parents of participating children provided demographic and education data. Authors found that the preschool that a child attended was a significant predictor of vigorous physical activity and moderate-to-vigorous physical activity. Boys participated in significantly more moderate and vigorous physical activity than girls, and black children participated in more vigorous physical activity than white children. Age was not a significant predictor of activity. Authors conclude that children's physical activity levels were highly variable among preschools, which suggests that preschool policies and practices have an important influence on the overall activity levels of the children the preschools serve.	2004, Pediatrics, 114(5), 1258-1263
Paulsell, Porter, & Kirby	Supporting quality in home-based child care	This brief presents an overview of key project findings from a study of quality in home-based child care settings. It begins with a summary of findings about the prevalence and quality of home-based child care, the characteristics of caregivers, quality initiatives for home-based care, and evidence of effectiveness for home-based care initiatives. It then presents an agenda for program development and research designed to foster effective quality initiatives for home-based care. Although it is a highly prevalent form of child care, research suggests the quality of most home-based care is of poor-to-mediocre quality. Most quality initiatives are not targeted to the specific needs and interests of home-based caregivers.	2010, Mathematica Policy Research, Inc.
Peisner-Feinberg, E. Burchinal, M. Clifford, R.	The relation of preschool child-care quality to children's cognitive and social	The cognitive and socio-emotional development of 733 children was examined longitudinally from ages 4 to 8 years as a function of the quality of their preschool experiences in community child-care centers, after adjusting for family selection factors related to child-care quality and development. These results provide evidence that child-care quality has a modest long-term effect on children's patterns of cognitive and socio-emotional	2001, Child Development. 72. 5, pages 1534-1553

Culkin, M. Howes, C.	developmental trajectories through second grade	development at least through kindergarten, and in some cases, through second grade. Differential effects on children's development were found for two aspects of child-care quality. Observed classroom practices were related to children's language and academic skills, whereas the closeness of the teacher – child relationship was related to both cognitive and social skills, with the strongest effects for the latter. Moderating influences of family characteristics were observed for some outcomes, indicating stronger positive effects of child-care quality for children from more at-risk backgrounds. These findings contribute further evidence of the long-term influences of the quality of child-care environments on children's cognitive and social skills through the elementary school years and are consistent with a bioecological model of development that considers the multiple environmental contexts that the child experiences.	
Pfannenstiel, J.C., & Seltzer, D.A.	New parents as teachers: Evaluation of an early parent education program	The authors reported that a high quality parent education and support program during a child's first 3 years increase the child's intellectual development at age three. Analysis of staff assessment data reveals that high quality parental involvement with the parent educator during home visits was the key to the program's success. The consistent relationships between observed at-risk characteristics and outcomes provide support for the theory that stress-producing situations can have direct impact on children's language development and achievement, even by age three.	1989, Early Childhood Research Quarterly, Vol 4(1), Mar, 1989, pages 1-18
Phaneuf, R. & Silbergliitt, B.	Tracking preschoolers' language and preliteracy development using a general outcome measurement system.	A general outcome measurement system designed for use in early childhood represents an alternative to current assessment practices. This article describes an application of a general outcome measurement system, Individual Growth and Development Indicators (IGDIs), with 68 preschool children attending early childhood programs in east-central Minnesota. IGDIs were administered on three occasions from January to May at four early childhood sites, with one site implementing an intervention after the second administration. Results indicated that the measures were easy to use; were efficient in administration, scoring, and data interpretation; and provided valuable information for making decisions about early childhood education and special education. Obtained rates of growth over time were similar to those for other applications of IGDIs and demonstrated some sensitivity to intervention	2003, Topics in Early Childhood Special Education; Fall 2003, Vol. 23 Issue 3, pages 114-123
Pianta, R.C.	Adult-child processes and early schooling	This paper highlights the importance of social processes in early school outcomes. Child-adult relationships are a social context with particular salience for the development of a number of social and academic outcomes in early childhood. Research on both child-parent and child-teacher relationships is reviewed. Measurement technologies are described and conceptual perspectives based on dyadic systems models are advanced as heuristics for future research. Practice implications are drawn with respect to assessment of relationships and implications for conceptualization of early childhood outcomes	1997, Early Education and Development, 8(1), 11-26
Pianta, R.C. Howes, C., Burchinal, M., Bryant, D. M., Clifford, R. Early, D. & Barbarin, O.	Features of pre-kindergarten programs, classrooms, and teachers: Do they predict observed classroom quality and child-teacher interaction?	This article presents results from an observational study of the extent to which features of programs, classrooms, and teachers contribute to quality and teacher–child interactions in a sample of 238 classrooms in 6 state-funded pre-kindergarten programs. This study draws from the National Center for Early Development and Learning's Multi-State Pre-Kindergarten Study to examine the extent to which program, classroom, and teacher attributes of the program ecology predict observed quality and teacher-child interactions in a sample of 238 classrooms representing 6 states' pre-kindergarten programs. Quality was assessed observationally at the global level and for specific teaching practices. Quality was lower in classrooms with more than 60% of the children from homes below the poverty line, when teachers lacked formal training (or a degree) in early childhood education, and held less child-centered beliefs. Program and teacher attributes were statistically significant, but modest predictors of observed quality.	2005, Applied Developmental Science, Volume 9, Issue 3 July 2005

Piasta, S. B., Justice, L. M., Cabell, S. Q., Wiggins, A. K., Turnbull, K. P., Curenton, S. M.	Impact of professional development on preschool teachers' conversational responsivity and children's linguistic productivity and complexity	The present study investigated the effect of professional development (PD) on preschool teachers' conversational responsivity in the classroom, defined as teachers' use of strategies to promote children's participation in extended conversational exchanges (communication-facilitating strategies) and exposure to advanced linguistic models (language-developing strategies), and the resultant impact on proximal child language outcomes. We randomly-assigned 49 preschool teachers to receive 15–20 h of such PD (PD; n = 25) or to a comparison condition (n = 24). Growth curve analysis indicated that trained teachers used significantly more communication-facilitating strategies across the year but no such difference for language-developing strategies. Moreover, children in these classrooms showed greater linguistic productivity and complexity in their talk. These findings suggest that PD may alter some aspects of teachers' conversational responsivity responsible for increasing the amount and complexity of child language. Alteration of some strategies, however, may require more intensive PD efforts.	2012 Early Childhood Research Quarterly 27 (2012) 387–400
Pregibon, A., Heinkel, L. & Grosso, L.	The Early Head Start for family child care project: profiles of the partnership teams	This report provides profiles for the 22 partnership teams. Each profile identifies the Early Head Start and child care partner agencies; highlights local and state initiatives designed to support quality in family child care; describes the team's targeted outcomes and key strategies implemented as part of the Early Head Start for Family Child Care project; and identifies the team's key partners. Each profile also lists contact information for lead staff on the partnership team.	2011, Mathematica Policy Research, Inc.
Quintero, N. & McIntyre, L.	Kindergarten transition preparation: A comparison of teacher and parent practices for children with autism and other developmental disabilities	The transition to kindergarten represents an important developmental milestone for children and may pose unique challenges to children with disabilities, their families, and teachers. The primary goal of the current study was to investigate teacher concerns regarding the transition to kindergarten as well as teacher and parent-reported transition preparation practices and involvement for a sample of children with autism spectrum disorders and children with other developmental disabilities. Although teacher and parent involvement in transition preparation was generally high, generic less individualized practice softens were utilized.	2011 Journal of Early Childhood Education
Raustorp, A., Boldemann, C., Johansson, M., Mårtensson, F.	Objectively measured physical activity level during a physical education class: A pilot study with Swedish youth.	The aim of this study was to advance our knowledge of the contribution of a typical physical education (PE) class to children's daily physical activity. The pilot project was a part of a survey study comprising 11 fourth grader classes (250 pupils). One class of 19 pupils (9 girls) participated in the pilot study. Daily step counts were measured by Yamax pedometers during four consecutive weekdays. During PE class, the participants wore a second pedometer and an Actigraph GT1M accelerometer. The total average step count during physical education (PE) class was 2512, average 74 steps/ min. The counts for the whole day were 16668, and 19 steps/ min respectively. The total share of moderate-vigorous physical activity (MVPA) of the PE class was 50,4% (52,5% and 48,3 % for boys and girls respectively). There was an inverse correlation between daily mean step count and contribution of PE class step to daily mean step ($r = -0.64$, $p = .003$). Conclusion: The contribution of PE class to MVPA was in high in both boys and girls. Considering the suggested independent role of physical fitness for cardiovascular health in children, the PE class must be seen as an important health factor, especially for otherwise inactive children.	2010 International Journal of Adolescent Medicine and Health
Ray, A., Bowman, B. & Robbins, J.	Preparing early childhood teachers to successfully educate all children: the contributions of state	The present study makes a contribution to filling this void by examining the role of national professional accreditation organizations and state boards of higher education ¹ . Specifically, this study reports how the developmental and educational needs of children of color, poor children, second language/dialect speakers, and others are addressed in early childhood teacher standards (Pre-K – early elementary grades) developed by state boards of education and professional accreditation organizations. The goals of the study are to answer the	2006b, Erickson Institute

	boards of higher education and national professional accreditation programs	following questions: 1) identify and describe diversity content (e.g., references to 8 student characteristics e.g., race, social class) in early childhood teacher standards of state boards of education; and 2) identify and describe references to 8 student characteristics e.g., social class, language) in early childhood teacher standards developed by national professional accreditation organizations.	
Ray, A., Bowman, B., & Robbins, J.	Preparing early childhood teachers to successfully educate all children: The contributions of state boards of higher education and national professional accreditation organizations	This study found ample evidence that accrediting bodies recognize diversity as relevant to knowledge and practice of early childhood teachers. Despite the obvious interest of state boards of higher education and professional accreditation organizations in the developmental and educational needs of children of color, second language/dialect speakers, and others the findings suggest that state early childhood teacher standards convey a inconsistent and ambiguous message regarding domains of teacher competence and the developmental and educational needs of a very complex population of children (e.g., children of color, second language/dialect speakers) their families, and communities.	2006c, Erickson Institute
Ray, J. A., Pewitt-Kinder, J., & George, S.	Partnering with families of children with special needs	The article offers insights for early childhood educators to work with families of children with disabilities. It explores the stages of adjustments for parents with disabled children, and stresses the importance for educators to learn and participate in the development of the child's Individualized Family Service Plan (IFSP) or Individualized Education Program (IEP). It notes the importance of ensuring a two-way communication between teachers and parents to work successfully with families of children with disabilities and to continue having a regular contact with them as well. It suggests the need for educators to familiarize particular diagnoses and to understand its nature to create a better environment for the child's learning.	2009, Young Children, Vol. 64 Issue 5, pages 16-22
Reedy, C.K., & McGrath, W. H.	Can you hear me now? Staff-parent communication in child care centres	Supporting the growth and development of young children through effective communication with parents is one of the greatest challenges of the twenty-first century facing early childhood and special educators. This article examines adult communication in child care centers through data gathered via a mixed-method study of child care directors' perspectives on parent education and their actual practices and a one-year-long ethnographic study of relationships between mothers and teachers in an ethnically and economically diverse child care centre. Findings show that practicing ongoing dialogue between child care centre personnel and parents presents multiple opportunities for clarification which support the current NAEYC and CEC standards requiring collaboration with families. Yet, the analysis suggests that the fields of early childhood education and special education need to focus more on the process of how information is provided and conveyed to, received by, and accepted by/from families.	2010, Early Child Development & Care; April 2010, Vol. 180 Issue 3, pages 347-357
Reis-Jorge, J.	Teachers' conceptions of teacher-research and self-perceptions as enquiring practitioners- A longitudinal case study	Recognizing the importance teachers' own voices play in their own professional development, the case study reported in this paper aims to illuminate the role that formal instruction and immersion in research can play in shaping teachers' views of teacher-research and of themselves as future enquiring practitioners. The study was conducted with a group of nine overseas teachers attending a bachelors in education program run by a higher education institution in Britain. Data were collected via questionnaires, semi-structured interviews and field notes from direct observation. The results of the study confirm previous assumptions that the highly-structured nature of the academic format of doing and reporting research may fall short of providing teachers with skills and tools for reflection that are easily transferable to practice.	2007, Teaching and Teacher Education, v. 23 number 4 (May 2007) pages 402-17
Ridley, S., & McWilliam, R.	Putting the child back into child care quality	The article presents information about various assessment tools for evaluating the effectiveness of early childhood education programs. Several assessment tools such as classroom observation are used by early childhood	2001, Young Children, July

	assessment	educators to evaluate the quality of classroom environment. Child care professionals keep all the records of improvements through the measure of group engagement. Group engagement can be measured by using a procedure known as Engagement Check II. It helps in determining number of children engaged at each observation and finally average engagement score for the classroom. Other useful assessment tools are: Infant/Toddler Environment Rating Scale, the Early Childhood Environment Rating Scale, and the Classroom Environment Scale.	2001, Vol. 56 Issue 4, p92-94
Rosemberg, C. R. & Silva, M. L.	Teacher-children interaction and concept development in kindergarten	This article analyzes the interaction between teachers and children in kindergarten classrooms in order to identify and describe the discursive strategies of teachers that retrieve children's previous expressions to clarify and specify concepts represented in them. Data analyzed include 90 situations of teacher-children exchanges in 7 kindergarten classrooms located in marginal urban neighborhoods in the outskirts of the city of Buenos Aires, Argentina. The authors identified and described the various ways in which teachers re-conceptualize information offered by the children in ways that allow them to gradually specify, define, and characterize concepts underlying the words they use, albeit with a limited meaning.	2009 Discourse Processes; Nov/Dec2009, Vol. 46 Issue 6, pages 572-591
Rosen, L., Manor, O., Engelhard, D., Brody, D., Rosen, B., Peleg, H., Meir, M. & Zucker, D.	Can a handwashing intervention make a difference? Results from a randomized controlled trial in Jerusalem preschools	The objective of this preschool intervention trial was to determine whether a hygiene program can promote handwashing and thereby reduce illness absenteeism. This cluster randomized trial included 40 Jerusalem preschools with 1029 children for 6 baseline days and 66 study days, yielding 73,779 child days. The main outcomes were rates of handwashing and illness absenteeism. The intervention included an educational program and environmental changes. Authors report that an approximately threefold increase in handwashing with soap was observed among preschool children exposed to the intervention. Neither the preschool nor the home intervention program reduced illness absenteeism or overall absenteeism. Authors conclude that the trial illuminates the potential of the preschool as a promising venue for health promotion activities leading to sustained behavioral change, yet suggests the need for enhanced approaches for reducing illness absenteeism.	2006 Preventive Medicine: An International Journal Devoted to Practice and Theory, Vol 42(1), Jan, 2006. pp. 27-32
Rous, B., Lobianco, T., Moffett, C., & Lund, I.	Building preschool accountability systems: guidelines resulting from a national study	The authors of this article examine preschool accountability systems. Results are reported from a national validation survey of early childhood and early childhood special education professionals and family members related to guidelines for implementing accountability systems at the preschool level. Of the 47 statements included on the survey, 43 were validated by 75% or more of the 299 respondents. Specific implications for state and local programs involved in developing or refining accountability processes are presented in the areas of standards, assessment, and general accountability system design.	2005, Journal of Early Interventions, vol. 28 no. 1, pages 50-6
Rowan, B., Correnti, R. & Miller, R.J.	Insights from the prospects study of elementary schools	This paper discusses conceptual and methodological issues that arise when educational researchers use data from large-scale, survey research to examine the effects of teachers and teaching on student achievement. Using data from Prospects: The Congressionally Mandated Study of Educational Growth and Opportunity 1991–1994, the authors show that researchers' use of different statistical models has led to widely varying interpretations about the overall magnitude of teacher effects on student achievement. Authors conclude that in well-specified models of academic growth, teacher effects on elementary school students' growth in reading and mathematics achievement are substantial. Authors suggest that characteristics of teachers and their teaching account for these effects, including variation among teachers in professional preparation and content knowledge, use of teaching routines, and patterns of content coverage.	2002 Teachers College Record; Dec 2002, Vol. 104 Issue 8, pages 1525-1567
Saracho, O. N. & Spodek, B.	Early childhood teachers' preparation and the quality of program outcomes	The issue of the preparation of effective teachers becomes more critical for teachers of early childhood programs. It has been hypothesized that better program quality depends on better-educated teachers. The purpose of this investigation was to explore the importance of a high level of education for all early childhood education teachers. This issue has intrigued early childhood researchers and has prompted a large amount of research	2007, Early Childhood Development and Care, v177m n1

		studies over the past decades. In order to assess the status of this line of inquiry and to provide guidance for future research, a critical analysis of 40 studies on the preparation of early childhood education teachers and the quality of their educational programs that were published within a 15-year (1989–2004) period is presented here. The analysis consisted of literal and allegorical critical analysis and interpretative critical analyses, which generated results in three main areas that focused on the professional development of the teachers, including teachers' professional development, the importance of a Bachelor's Degree and educational standards for early childhood education teachers.	pages 71-91
Scheer, S. D. & Safrit, R. D.	Nurturing future leadership skills in five to eight year-old children through self-awareness activities	There is an increasing emphasis in formal and community-based education on youth leadership through self-awareness development via community service: Community service programs often focus upon a "remedial" context, attempting to encourage community leadership among high school students who are about to assume adult roles and responsibilities. This paper introduces a new approach to community service using a proven developmentally age-appropriate curriculum that nurtures self-awareness, the building block for leadership skills, in five to eight year--old children. This experiential-based, discovery-learning curriculum is easily utilized in the community, school, and or collaborative leadership programs, especially those focused upon education, public safety, or the environment.	2001, Journal of Leadership Studies, Volume 6, Number 2
Scott-Little, C., La Paro, K.M., Thomason, A. C., Pianta, R. C., Hamre, B., Downer, J.	Implementation of a course focused on language and literacy within teacher-child interactions: Instructor and student perspectives across three institutions of higher education	Research suggests that teachers' interactions with preschool-age children have a significant influence on what children learn and the skills they develop. Additional research is needed to systematically determine the types of professional development that can help teachers learn effective teaching practices. This study is part of a larger effort to document the impact of a professional development model in which teachers learn how to implement effective teaching practices operationalized using the CLASS observation measure. A course developed by the National Center for Research on Early Childhood Education (NCRECE) was implemented in three higher education teacher preparation programs. This article describes the process of implementing the course and documents instructor and student perspectives on course delivery, content, and their learning. Results suggest that professional development in the form of a standardized course may be an effective means for presenting content related to language and literacy instruction within the context of information about effective teaching practices. Data from the study also indicate challenges associated with delivering a standardized course within multiple institutions of higher education.	2011, Journal of Early Childhood Teacher Education, 32(3), pages 200-224
Selden, S.C., Sowa, J. E. & Sandfort, J.	The impact of nonprofit collaboration in early child care and education on management and program outcomes	The use of interorganizational relationships such as collaboration, partnerships, and alliances between public, private, and nonprofit organizations for the delivery of human services has increased. This article contributes to the growing body of knowledge on collaboration by exploring one kind of interorganizational relationship—interagency collaboration—in the field of early care and education. It examines variations within interagency collaborations and their impact on management and program outcomes. The findings show that interagency collaboration has a clear impact on management, program, and client outcomes. Specifically, the intensity of the collaborative relationship has a positive and statistically significant impact on staff compensation, staff turnover, and school readiness.	2006, Public Administration Review; May2006, Vol. 66 Issue 3, pages 412-425
Siderits, A.	Building effective teams through delegation and recognition	The article offers a guide to building effective child care teams through delegation and recognition. They include assigning key child care center responsibilities, leading teacher versus assistant director, curriculum coordination and programming, facilities maintenance and staff orientation and training.	2006, Child Care Information Exchange; Nov/Dec2006, Issue 172, pages 6-11

Sitton, L.A.	The relationship among organizational practices, director level of education, experience, and child care center program quality in Tennessee.	This research focused on Tennessee's child care directors' level of education and experience; specific organizational practices, and program quality as measured by (a) the Program Assessment scores (ECERS) or (b) NAEYC Accreditation status. The stratified random sample was 294 child care center directors from 80 urban and rural counties comprising the West, Middle, and a portion of East Tennessee. The survey instrument included a format of multiple-choice, yes/no, and fill-in the blank questions and yielded a 57.8% return rate. The 170 responses describe more than half of directors as working in not-for-profit centers located in urban areas; operating full-time year-round; and serving 51-100 children. Ten percent of the centers were accredited by the NAEYC and the average Program Assessment score (ECERS) was 4.55, which represents quality as between minimal and good. The highest level of education for 49.1% of directors was the completion of the 30 hour Tennessee Early Childhood Training Alliance (TECTA) Orientation. Twenty-eight percent reported having earned the bachelor's degree in a major other than early childhood. Experience as director, on average, was 10 years and averaged 18 years in the early childhood field. A statistically significant relationship was found between the directors' level of education and the specific organization practices of lead teacher education requirement, lead teacher salary, the number of family involvement opportunities, and the number of staff benefits. A statistically significant relationship was found between director education and Program Assessment scores (ECERS). However, there was no significance between director experience and scores. A total of 21% of the variance in the Program Assessment scores (ECERS) may be attributed to lead teacher qualifications, director level of professional involvement, and years of experience as a director. A total of 23% of the variance in NAEYC Accreditation status may be attributed to lead teacher pay and the number of family supports. It is recommended that the Tennessee Department of Human Services' minimal licensing standards be increased specifically in the area of the pre-service education requirements for directors. Research supports the significant impact director education has on organizational practices and Program Assessment scores (ECERS).	2008, ProQuest® Dissertations & Theses
Snow, C.E.	Developing kindergarten readiness and other large scale assessment systems	The Center for Applied Research at the National Association for the Education of Young Children (NAEYC) has developed this guidance to support states' development and implementation of kindergarten readiness assessment systems. Such systems, properly developed and implemented, can contribute greatly to the success of early childhood programs and early elementary programming to identify and meet the needs of children entering kindergarten. The considerations presented in this paper are built around NAEYC positions related to assessment and research on child assessment. While focused on large-scale assessment of young children, the guidelines included here are intended to inform considerations about early childhood assessment beyond the implementation of kindergarten entry assessments.	2011, National Association for Education of Young Children, Washington, DC
Snyder, P., Wixson, C., Talapatra, D., & Roach, A.	Assessment in early childhood	The current emphasis on alignment of early learning guidelines, assessment, curricular practices, and accountability in early education and care systems has provided an opportunity to revisit and refine early childhood assessment practices. Practitioners, researchers, and policy makers are increasingly interested in developing instruction-focused assessment strategies that have instructional and intervention validity. In particular, progress is being made in the development and validation of universal screening assessments and progress-monitoring methods that can support the application of response-to- intervention models in early childhood settings. This article provides a brief review of select assessment tools in early childhood that demonstrate instructional validity. The authors suggest future directions for strengthening the instructional and intervention validity of early childhood assessments in the context of response-to-intervention frameworks.	2008 Assessment for Effective Intervention; Dec2008, Vol. 34 Issue 1, pages 25-34
Snyder, P., Thompson, B.,	Examination of quantitative methods	Findings are reported related to the research methods and statistical techniques used in the 450 group quantitative studies examined as part of the literature review portion of the Division for Early Childhood Recommended	2002, Journal of Early

Mclean, M. E., & Smith, B. J.	used in early intervention research: linkages with recommended practices	Practices project. Twelve trained coders used an investigator-developed coding form to analyze studies across seven major dimensions: (a) sampling procedures, (b) variable selection, (c) variable definition, (d) measurement integrity, (e) treatment fidelity, (f) statistical analyses, and (g) magnitude-of effect reporting. Results suggested that the methodological integrity of the quantitative research used to inform recommended practices was not uniformly convincing and compelling. Implications are offered related to the strength of empirical support for recommended practices and the conduct and reporting of future research.	Intervention, Vol. 25 Issue 2
Stefan, C. A., Miclea, M.	Classroom effects of a hybrid universal and indicated prevention program for preschool children: a comparative analysis based on social and emotional competence screening	Research Findings: The current study's main aim was to implement a multi-focused, community-based intervention for preventing conduct problems in preschool children. Our assumption was that the same intervention program could be delivered concomitantly as a universal prevention program for all children as well as an indicated prevention program for high-risk children selected after screening for social and emotional competencies development. We used a quasi-experimental design with a between-subjects variable (intervention vs. comparison) and a within-subjects variable (pre-intervention, postintervention, and 3-month follow-up). The efficacy of the intervention was assessed for high-risk children targeted by the indicated intervention as well as for moderate- and low-risk children, who received the universal intervention. Practice or Policy: First, our results demonstrate the capacity of classroom-based interventions, without added pull-out sessions, to generate significant changes in high-risk children's competencies as well as externalizing and internalizing problems. Second, similar results were found for the moderate-risk, but not the low-risk, group, and these data suggest that marginally at-risk children are the most likely to benefit from participating in universal interventions. And third, comparing data from social and emotional competence risk groups indicates that underdeveloped emotional competencies might have a prolonged negative effect on children's social skills, which increases as a function of higher risk status.	2012 Early Education and Development, v23 n3 pages 393-426 2012
Stoney & Blank	Delivering quality: strengthening the business side of early care and education	Relatively little has been written about what kind of strategies and techniques do the most to help ECE programs operate as financially viable businesses. To help answer that question—and to stimulate further discussion about techniques and strategies that work— this issue brief draws lessons from the experiences of organizations that are using two broad approaches to promoting ECE financial stability:	2011 Opportunities Exchange
Stoney, L.	Unlocking the potential of QRIS: Trends and opportunities in the Race to the Top-Early Learning Challenge applications	The stated purpose of the Race to the Top — Early Learning Challenge (RTT-ELC) was to improve the quality of early learning and help close the achievement gap for children with high needs. The grant application included one absolute priority: states must integrate and align resources and policies across participating state agencies and design and implement a common, statewide tiered quality rating and improvement system (TQRIS). Applicants could earn points for addressing two competitive priorities — including all early learning and development programs in the TQRIS, and understanding the status of children's learning and development at kindergarten entry. Applications were also invited to include, although were not awarded points for, strategies that sustain program effects in the elementary grades and encourage private sector support.	2012 QRIS Network
Sugiyama, T., Okely, A. D., Masters, J. M. & Moore, G. T.	Attributes of child care centers and outdoor play areas associated with preschoolers' physical activity and sedentary behavior	This study examined characteristics of child care centers associated with preschoolers' moderate-to-vigorous physical activity and sedentary behavior while in child care, and attributes of outdoor play areas associated with the same behaviors during outdoor time. Authors found that children were mostly sedentary while in child care settings Authors reported that fixed play equipment in outdoor areas was conducive to more physical activity. This study suggests the possibility of enhancing preschoolers' activity levels through changing these attributes.	2010 Environment & Behavior
Taylor, K. & Bryant, D.	Demonstrating effective child care quality	Research shows that child care quality is related to children's readiness to succeed in kindergarten. Accordingly, local Smart Start partnerships have designed and implemented a variety of quality improvement initiatives for	2002, Frank Porter Graham

	improvement	child care centers and family child care homes. Several partnerships have made remarkable progress, in spite of the fact that the literature provides little guidance as to which types of technical assistance (TA) activities might work best for which types of programs. This report describes the strategies and activities that 12 highly successful partnerships have used to significantly improve the number of high quality child care programs in their county or region. Through 37 interviews with key participants in these partnerships we discovered that key factors repeatedly mentioned were: strong leadership; strategic planning for a system of quality improvement programs; support for the education and professional development of the work force; financial rewards for higher education and improved quality; on-site, customized technical assistance; and effective collaborations with multiple community agencies.	Child Development Institute
Thornton, J.S., Crim, C.L.& Hawkins, J.	The impact of an ongoing professional development program on prekindergarten teachers' mathematics practices	Mathematics is a natural part of daily life for young children as they explore and investigate the world around them. To build on these experiences, and to begin establishing a mathematical foundation, the authors assert that early childhood educators must not only be knowledgeable about mathematical concepts, they must also be aware of the most developmentally appropriate ways in which to teach these concepts to young children. After participation in an ongoing professional development program, specifically targeting teachers of prekindergarten children in public school, Preschool Programs for Children with Disabilities, Head Start, and child care settings, teachers reported positive changes in math practices. Specifically, teachers reported a stronger alignment to national mathematics standards and increased awareness pertaining to developmentally appropriate mathematics practices as they apply to early childhood classrooms. Teachers reported a shift towards more hands-on activities and a shift away from the use of worksheets in their prekindergarten classrooms. Implications from this study suggest that ongoing professional development that is designed to meet the specific needs of early childhood educators can have a positive impact on reported mathematics content knowledge and instructional practices.	2009 Journal of Early Childhood Teacher Education Vol 30(2) April 2009; pages 150-161
United States. Administration for Children and Families. Office of Planning, Research and Evaluation	Identifying profiles of quality in home-based child care	The purpose of the research brief was to provide information that can be used to target and guide content for professional development efforts designed for home-based child care providers. To do this, home-based providers who participated in a large multi-state study were grouped into three quality categories according to their scores on observational measures of teaching and interaction, tone/discipline, provisions for health, instructional supports for literacy, and caregiver sensitivity. The authors also examined how providers in the three groups differed in their professional characteristics, their attitudes and supports, and the composition and characteristics of their home-based care settings.	2012 Administration for Children and Families
Unusan, N.	Effects of a food and nutrition course on the self-reported knowledge and behavior of preschool teacher candidates.	This study examined effects of food and nutrition knowledge on the self-reported behaviors of preschool teacher candidates who completed a 10-week course. Self-reported information was gathered at entry, after completion of the course, and follow up 4 months after completion of the course. A paired t-test compared responses at pre, post and follow up. Preschool teacher candidates improved significantly between entry and at the end of the course for 9 of the 18 practices. Statistically significant improvements were also recorded for 13 of the 18 practices between entry and follow up. Overall, the nutrition course increased the nutrition knowledge of preschool teacher candidates. Further analyses are needed to evaluate immediate and longer effects of nutrition course, with larger samples, using more powerful research designs.	2007 Early Childhood Education Journal, April, 2007, Vol. 34 Issue 5
Vitiello, V. E., Moas, O., Henderson, H. A., Greenfield, D. B., & Munis,	Goodness of fit between children and classrooms: Effects of child temperament and preschool classroom	The transition to kindergarten represents an important developmental milestone for children and may pose unique challenges to children with disabilities, their families, and teachers. The primary goal of the study was to investigate teacher concerns regarding the transition to kindergarten as well as teacher and parent-reported transition preparation practices and involvement for a sample of children with autism spectrum disorders and children with other developmental disabilities. Although teacher and parent involvement in transition preparation	2012, Early Education and Development

P. M.	quality on achievement trajectories	was generally high, generic less individualized practices often were utilized. Study findings are discussed in the context of future research directions to help facilitate kindergarten transitions for young children with disabilities.	
Vu, J.A., Jeon, H., & Howes, C.	Formal education, credential, or both: Early childhood program classroom practices	This study was intended to widen the debate around the bachelor's degree (BA) as preparation for early childhood teaching when head teachers possess various levels of credentials and education. Authors examined classroom quality and teacher involvement in 231 classrooms sponsored by 122 different agencies, staffed and supervised by teachers and program directors who had varying levels of credentials within the California Child Development Permit. Authors found that teachers' education and credential level, credential level of the program director, and auspice predicted classroom quality.	May 2008, Early Education and Development; Volume Number: 19; Issue, Number: 3; Pages 479-504
Wagner, B., & French, L.	Motivation, work satisfaction, and teacher change among early childhood teachers	This study tests the explanatory power of Deci and Ryan's (1985) self-determination theory as a framework for describing how interactions between early childhood teachers and the systems within which their work is embedded influence motivation for professional growth and change in teaching practice. Fifty-four early childhood teachers and teacher assistants participated in a yearlong professional development program comprising monthly workshops and on-site support visits. Quantitative analysis of motivation and work attitude surveys, coupled with qualitative analysis of teacher interviews, addressed two major research questions: (1) What factors within the social context of early childhood teachers' workplaces are related to their motivation for professional growth? and (2) What is the relationship between early childhood teachers' motivation for professional growth and change in teaching practice? Results indicate that three facets of work satisfaction were significant predictors of intrinsic interest in professional development: supervisor support, the nature of the work itself, and co-worker relations. The qualitative analysis reveals ways in which interactions between motivation, professional development activities, and work environment support or undermine change.	2010, Journal of Research in Childhood Education; Apr-Jun2010, Vol. 24 Issue 2, pages 152-171
Walker, D., Carta, J., Greenwood, C., & Buzhardt, J.	The use of individual growth and developmental indicators for progress monitoring and intervention decision making in early education	The purpose of this article is to describe Individual Growth and Developmental Indicators, contrast them with existing approaches to assessment in early childhood, and illustrate how they can be used within a larger problem-solving model to guide intervention decisions for infants and toddlers.	2008, Exceptionality; 2008, Vol. 16 Issue 1, pages 33-47
Warren, L. L. & Muth, K. D.	The impact of common planning time on middle grades students and teachers	This article examined the impact of common planning time (CPT) on middle grade students' self-concepts and both teachers and students' perceptions of their school climate. Results indicated that students receiving instruction from teachers on interdisciplinary teams with CPT had higher self-concepts and both teachers and students had more positive perceptions of their schools	1995, Research in Middle Level Education Quarterly, v. 18 n number 3 pages 41-58
Warren, L. L. & Payne, B. D.	Impact of middle grades' organization on teacher efficacy and environmental	Middle grades' organizational patters and their impact on teachers' efficacy and perceptions of their work environment were examined. The participants were 82 8th-grade teachers who were surveyed about their efficacy and perceptions of their working environment. Instruments used were the Teacher Efficacy Scale and the Teacher Opinion Questionnaire. Results of the study showed that teachers on interdisciplinary teams with common	1997, Journal of Educational Research, May/June97, Vol.

	perceptions.	planning time had significantly higher perceptions of personal teacher efficacy and more positive perceptions of their working environment than did teacher on interdisciplinary teams without common planning time or teachers who were organized departmentally. The findings failed to support a difference in general teacher efficacy among the organizational patterns.	90 Issue 5
Waterman, C., McDermott, P. A., Fantuzzo, J. W., Gadsden. V. L.	The matter of assessor variance in early childhood education— Or whose score is it anyway?	Useful assessment outcomes (as manifest through assigned scores) must show reasonable variation across children because it is that variation that presumably defines children’s individual differences. Alternatively it is conceivable that some portion of the variability in assessment outcomes does not reflect child differences but rather differences in the performance of the assessors who carry out assessments. Hierarchical linear modeling is applied in this article to identify the amount of score variation attributable to assessors rather than children. Working with multiple cohorts of Head Start and kindergarten children, score variation is analyzed for measures administered outside of classrooms by extramural assessors and for teacher-administered measures within classrooms. The amount of assessor variance (vs. actual child variance) was negligible as associated with extramural assessors but substantial for teacher assessors, indicating that large portions of the variability in teacher-administered assessments have nothing to do with children’s unique performances. Recommendations are provided to assist the interpretation of assessment outcomes in future research and practice.	2012, Early Childhood Research Quarterly, Volume 27, Issue 1, 1st Quarter 2012, Pages 46–54
Weinstock, P., Bos, J., Tseng, F., Rosenthal, E., Ortiz, L., Dowsett, C., Huston, A., & Bentley, A.	Evaluation of Program for Infant/Toddler Care (PITC): An on site training of caregivers	This study used an experimental intent-to-treat design to measure the impact of an established intervention, the on-site caregiver training component of the Program for Infant/Toddler Care (PITC), on child development and child care program quality. The study sample of 251 child care programs included 92 child care centers and 159 licensed family child care homes, and the sample of 936 children included an average of eight children per center and between one and two children per family child care home. Authors addressed the following primary questions focus on child outcomes: (1) What is the impact of the PITC on a composite measure of children's cognitive and language skills, at least 6 months after its full delivery to the children's child care programs (within an average of 23 months after random assignment)?; and (2) What is the impact of the PITC on a composite measure of children's social and behavioral skills, at least 6 months after its full delivery to the children's child care programs (within an average of 23 months after random assignment)?	2012, National Center for Education Evaluation and Regional Assistance, Washington, DC
Whitebook, M.	Bachelor's degree are best: higher qualifications for pre-kindergarten teachers lead to better learning environments for children	This study found that over half of child care center teaching staff and a third of directors who were interviewed in 1996 had left their centers by 2000. The demographic and professional profiles of those who left and stayed at their centers were similar. Among those who left, only half continued to work in child care. Highly trained teaching staff were more likely to leave their jobs if they earned lower wages, worked in a climate with less stability of highly trained co-workers, and worked with a greater percentage of teaching staff who did not have a bachelor’s degree. Directors were more likely to leave if they earned lower wages.	2003, The Trust for Early Education, Washington, DC
Whitebook, M., Sakai, L., Kipnis, F., Almaraz, M., Suarez, E., & Bellm, D.	Learning together: A study of six B.A. completion programs in early care and education—Year 1 report	The first two phases of this multi-year investigation of bachelors degree completion cohort programs have indicated the significant potential of such programs to contribute well-trained teachers and leaders to the early care and education profession. The six programs under study could well become models not only for the ECE field in California and other states, but also for other fields, helping diverse groups of working adults to gain access to and succeed in higher education.	2008, University of California, Berkley, Center for the Study of Child Care Employment
Wright, C.Y., Reeder, A.I.,	Solar UVR Exposure, Concurrent Activities	Comprehensive measures of ultraviolet radiation (UVR) exposure, concurrent activities and sun-protective practices are needed to develop and evaluate skin cancer prevention and sun protection interventions. The UVR	2007, Photochemistry

Bodeker, G. E., & Gray, A.	and Sun-Protective Practices Among Primary Schoolchildren.	exposures of 345 primary schoolchildren at 23 schools around New Zealand were measured using electronic UVR monitors for 1-week periods over 12 weeks in 2004 and 2005. In addition, ambient UVR levels on a horizontal surface were measured on-site at each school. Children completed activity diaries during the period UVR measurements were made and provided information on their indoor and outdoor status and clothing and sun protection worn. Differences in children's UVR exposure could be explained in part by activity, where outdoor passive pursuits were associated with higher UVR exposure rates than outdoor active and outdoor travel pursuits. Compared with older children, the activities of younger children, although labeled the same, resulted in different UVR exposures, either as a result of reporting differences or a real difference in UVR exposure patterns. UVR exposure rates were generally higher on weekdays compared with the weekend, confirming the important role of school sun protection and skin cancer prevention programs. High UVR exposure activities included physical education, athletics and lunch break.	& Photobiology; Jun2007, Vol. 83 Issue 3, p749-758
Xu, M. Kushner Benson, S., Mudrey-Camino, R., & Steiner, R.	The relationship between parental involvement, self-regulated learning, and reading achievement of fifth graders: a path analysis using the ECLS-K database	This study examined the relationship between parental involvement, self-regulated learning (SRL), and reading achievement through analyzing the fifth grade data from the Early Childhood Longitudinal Study, Kindergarten Class of 1998–1999 (ECLS-K). The results identified six dimensions of parental involvement that are likely to foster SRL of fifth graders	2010 Social Psychology of Education, Vol. 13 Issue 2, pages 237-269
Zaslow, M., Whittaker, J., Vick., J., Tout, K., Lavelle, B., & Halle, T.	Toward the identification of features of effective professional development for early childhood educators	This literature review analyzed the research on professional development of early childhood educators to work toward identification of a set of core features that characterize effective professional development.	2010, U.S. Department of Education, Washington, DC
Zellman, G. L., & Karoly, L. A.	Moving to outcomes: Approaches to incorporating child assessments into state early childhood quality rating and improvement systems.	Many studies have shown that higher-quality early care and education (ECE) predicts positive developmental gains for the children who experience it. However, much ECE in the United States is not of sufficiently high quality to produce these benefits. Quality rating and improvement systems (QRISs) attempt to improve practice and care quality in ECE settings; both are expected to improve child functioning. However, these systems rarely assess children to determine their effects because of the high costs and assessment burdens involved. Yet including child assessments in the design, implementation, and evaluation of QRISs or other quality improvement (QI) efforts could improve practice and raise care quality. The authors identify five strategies for states to consider for incorporating child assessments into QRISs or other QI approaches. Two of the strategies use assessments to inform classroom practice and to support program improvements. The remaining three use assessments to measure the effects of participating in a given classroom, program, or ECE system on child functioning. The authors' analysis of these strategies relies on research about measuring child functioning and methods for determining the contribution of ECE to developmental trajectories. It relies as well on new research concerning how states have included child assessments in their QRISs. Guidance is offered about when and how to incorporate the five approaches into a QRIS; the value of these approaches depends on the questions to be answered, the stage of the QRIS, and the availability of the resources needed to implement assessments and mount a rigorous research design.	2012 RAND Corporation, Santa Monica, CA

Zhai, F., Jones, S. M. & Raver, C.	Academic performance of subsequent schools and impacts of early interventions: Evidence from a randomized controlled trial in Head Start settings	The role of subsequent school contexts in the long-term effects of early childhood interventions has received increasing attention, but has been understudied in the literature. Using data from the Chicago School Readiness Project (CSRP), a cluster-randomized controlled trial conducted in Head Start programs, we investigate whether the intervention had differential effects on academic and behavioral outcomes in kindergarten if children attended high- or low-performing schools subsequent to the preschool intervention year. To address the issue of selection bias, we adopt an innovative method, principal score matching, and control for a set of child, mother, and classroom covariates. We find that exposure to the CSRP intervention in the Head Start year had significant effects on academic and behavioral outcomes in kindergarten for children who subsequently attended high-performing schools, but no significant effects on children attending low-performing schools. Policy implications of the findings are discussed.	2012, Child Services Review
Zhou, M., Ma, W. & Deci, E. L.	The importance of autonomy for rural Chinese children's motivation for learning	Two studies applied self-determination theory (SDT) to investigate the motivation for learning of rural Chinese children. The aim was to test whether findings from studies in western individualist cultures would hold up within a very different, eastern collectivist setting. In the first study, when students' autonomous and controlled motivation for a course were entered simultaneously in a regression analysis, autonomous motivation uniquely positively predicted students' perceptions of interest, competence, and choice in the course, whereas controlled motivation uniquely negatively predicted perceptions of interest and choice. In the second study students' perceptions of instructors' autonomy support during the course predicted changes in autonomous motivation, controlled motivation, and perceived competence.	2009, Learning & Individual Differences; Dec2009, Vol. 19 Issue 4