

EARLY EDUCATION COMMISSION

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EARLY EDUCATION COMMISSION LITERATURE REVIEW

Program Elements/Models

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INTRODUCTION

There is an extensive body of research, articles and opinion about program models and elements in early care and education. The amount of emphasis on parent involvement, language and literacy programming and community partnerships varies considerably from model to model. Another key element of discussion in the field has been direct instruction by a teacher versus what is now called a “developmentally appropriate approach.” Provision of additional supporting services (to children and their families) has also been an issue of discussion and is included in some models.

At least one meta-analysis (of 120 studies over 5 decades) has been published on the effects of early education interventions. While advocates of some programs are fairly adamant about their particular approach, many experts in the field seem to agree that there is no “magic bullet” or “one size fits all” approach that will improve outcomes for all children in every community. This document provides a review of some articles and research on this complex topic.

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Camilli, G., Vargas, S., Ryan, S., & Barnett, W.S. (2010). *Meta-Analysis of the Effects of Early Education Interventions on Cognitive and Social Development*

Teachers College Record

<http://www.tcrecord.org/Content.asp?ContentID=15440>

EXCERPTS: This study was designed to synthesize preschool outcomes from the broadest set of comparative studies collected to date. In this meta-analysis, conclusions are based on the results of 120 studies carried out over 5 decades.

In agreement with previous work, it was found that the direct instruction (DI) component in preschool programs had an immediate effect on children's cognitive development in the T/A contrasts. (*Direct instruction can be defined as instruction involving mostly teacher-directed activities designed to teach information and develop skills.*) Many early childhood educators might be concerned by this finding in light of the field's consensus that a developmentally appropriate approach (Bredekamp, 1987; Bredekamp & Copple 1997) is not one where children are drilled in basic concepts and have little opportunity to apply their knowledge in meaningful learning situations. However, the majority of studies characterized by direct instruction were conducted prior to 1983 when policy attention was directed toward determining the most effective curriculum model to ameliorate the effects of disadvantage on basic skills (Goffin & Wilson, 2001). In contrast to curriculum comparison studies conducted prior to 1983, more recent studies of naturally occurring variations in teaching practices (e.g. Marcon, 1992; Stipek et al., 1998) have found that children in developmentally appropriate settings outperform their counterparts in classrooms where DI is more the norm ... Given that more recent studies have found positive academic gains for children in programs where teachers utilize more developmentally appropriate strategies, it is probably safer to conclude that the sum of this evidence provides some support for teacher-directed instruction, rather than DI per se as the primary method of teaching.

Early childhood education has always had a commitment to development of the whole child, thus supporting families and providing a range of services to facilitate children's development. Despite the logic underpinning the provision of additional services, the results of this meta-analysis indicate that the children in the programs that provided these types of services did not perform as well as those who did not receive such services. The influence on cognitive outcomes may not be directly due to the extra services provided, because children who received extra services tended to receive less direct instruction, but also received instruction in larger groups in longer interventions. Here the concern is that provision of additional services could compete with instructional time or resources. The findings from this meta-analysis regarding additional services would suggest that policymakers should consider carefully not only what additional services, if any, they will provide but also how these services might be delivered in a way that does not dilute intensity of children's preschool experience.

Given the current state of research on the efficacy of early childhood interventions, there is both good and bad news. The good news is that a host of original and synthetic studies have found positive effects for a range of outcomes, and this pattern is clearest for outcomes relating to cognitive development. ... The bad news is that there is much less empirical information available for designing interventions at multiple levels with multiple components. ... Thus, for example, it is not yet possible to combine an array of program elements in a way that would allow an estimate of program effect, and just as the magnitude of benefit remains somewhat murky, so does the cost.

References: 284 citations

Lilian G. Katz, PhD (November 2008). *Lessons from Far and Near: Implications of International Developments in Early Childhood Education*

Clearinghouse On Early Education and Parenting

<http://ceep.crc.uiuc.edu/pubs/pdac2008.html>

EXCERPTS: At this point I want to recommend a shift in paradigm from that of alignment. I am suggesting that instead of doing earlier what we probably should not do so much of later, we should focus on building a good foundation upon which the rest of a child's education can be safely built. I do want to take this opportunity to share my concern with the excessive emphasis on "outcomes" in current discussions of preschool and primary education. The concept of "outcomes" is based on an industrial analogy in which raw materials are placed on an assembly line and subjected to identical series of processes, and "out" "come" identical bottles or shoes or tires, etc. I suggest that it is more appropriate to address standards not in terms of "outcomes," but in terms of the ultimate *effects* early experiences have on the children. In other words, I am recommending that we think in terms of "standards of experiences" that all of our young children should have much of the time.

To build a good foundation upon which to develop the intellectual disposition, for example, to be life-long learners, young children need frequent opportunities to be engaged in investigations that strengthen (and not damage) their in-born (intellectual) dispositions to make the best sense they can of their own experience and environment. An appropriate curriculum in the early years is one that encourages and motivates children to seek mastery of basic academic skills, e.g. beginning writing skills, *in the service of their intellectual pursuits*.

In other words, in the course of their work, i.e. investigations, the children should be able to sense that the skills involved in writing and reading and measurement have a function and a purpose. A sense of purpose, when sensed by the learner, makes an important contribution to their motivation – an central consideration at all ages. The important motivation here is *interest* (versus boredom), which means the capacity to absorb and to lose oneself in something outside of oneself. Young children do not need to be amused or excited – but to have frequent opportunities to become deeply engaged in finding out things of interest – and worthy of their interest.

There are two more points to emphasize in connection with the importance of intellectual goals. The first is that it is easy to mistakenly assume that young children who have not been exposed to the knowledge and skills associated with 'school readiness' (due to poverty, or other extenuating circumstances) lack the basic intellectual dispositions such as to make sense of experience, to analyze, hypothesize, predict, as do their peers of more affluent and privileged backgrounds. Children of very low-income families may not have been read to or held a pencil at home or encouraged to write their names. But I suggest that it is a good idea to assume that they too usually have lively minds. Indeed, the intellectual challenges many children face in coping with precarious - if not dangerous - environments are likely to be substantial and often complex.

Secondly, while intellectual dispositions may be weakened or even damaged by excessive and premature formal instruction, they are also not likely to be strengthened by many of the trivial, mindless, if not banal activities frequently offered in child care, preschool and kindergarten programs.

But, we can only build a good educational foundation if we provide capable well trained, and well qualified teachers who have decent working conditions and good compensation, and who receive strong and full support in other ways. As Barnett has put it, on the basis of many studies,

...far too few young children have access to the quality of education it takes to produce the positive lifetime outcomes that classic long-term studies like the Perry Preschool Project show are possible.

References: 9 citations

National Forum on Early Childhood Program Evaluation and the National Scientific Council on the Developing Child (August, 2007). ***SUMMARY OF ESSENTIAL FINDINGS: Science-Based Framework for Early Childhood Policy Using Evidence to Improve Outcomes in Learning, Behavior, and Health for Vulnerable Children***

A Publication from the Center on the Developing Child at Harvard University

www.developingchild.harvard.edu.

http://www.developingchild.harvard.edu/content/downloads/Summary_of_Essential_Findings.pdf

EXCERPTS: As scientists, we believe that advances in neuroscience, molecular biology, genetics, and child development research, combined with four decades of rigorous program evaluation data, can now provide the common ground on which policymakers, business executives, civic leaders, and practitioners can design effective policies for children in the first five years of life. After vigorous debate among experts representing numerous fields, we present the following summary of what we know from credible, peer-reviewed research.

Young children need positive relationships, rich learning opportunities, and safe environments, not quick fixes or magic bullets. There are many ways to increase the availability of growth-promoting experiences for young children, in their homes and in a variety of child care or preschool settings, as long as programs are well implemented and match the needs of the children and families they serve. Core concepts of neuroscience and child development apply equally to all early childhood policies and practices, and do not vary depending on program category, administrative structure, or funding source.

Not all services are effective. Center-based programs that have positive impacts on young children's development provide some combination of the following features:

- o highly skilled staff;
- o small class sizes and high adult-to-child ratios;
- o a language-rich environment;
- o age-appropriate curricula and stimulating materials in a safe physical setting;
- o warm, responsive interactions between staff and children; and
- o high and consistent levels of child participation.

Program evaluation research also identifies intervention strategies that have been shown to be effective for children and families who are at risk for poor outcomes:

- For vulnerable families who are expecting a first child, early and intensive support by skilled home visitors can produce significant benefits for both the child and parents.
- For young children from low-income families, high-quality, center-based, early education programs can enhance child cognitive and social development.
- For young children from families experiencing significant adversity, two-generation programs that simultaneously provide direct support for parents and high-quality, center-based care and education for the children can have positive impacts on both.

- For young children experiencing toxic stress from abuse or neglect, severe maternal depression, parental substance abuse, or family violence, interventions that provide specialized services matched to the problems they are asked to address can prevent the disruption of brain architecture and promote better developmental outcomes.
- For families living in poverty, work-based income supplements for working parents have been demonstrated to boost the achievement of some young children.

References: 118 citations

Robin, Kenneth B. and Ellen C. Friede & W. Steven Barnett (May 2006). *Is More Better? The Effects of Full-Day vs. Half-Day Preschool on Early School Achievement*

A NIEER Working Paper

National Institute for Early Education Research

www.nieer.org

EXCERPTS: Preschool programs vary greatly—from less-than-half-day to full-day-plus programs. Little rigorous research is available to inform policy decisions about the relative benefits of programs with shorter and longer hours per day or days per year. To address this need, NIEER conducted a randomized trial in which 4-year-olds in a low-income urban district were randomly assigned to programs of different durations. The programs were otherwise quite similar: all had teachers with college degrees, a low ratio of children to teachers, and used the same curriculum.

Results of this study indicate that even students who are far behind at entry to preschool can develop vocabulary, math, and literacy skills that approach national norms if provided with extended-duration preschool that maintains reasonable quality standards. By the Spring kindergarten assessment, children in the extended-duration program had improved 11 to 12 standard points on vocabulary and math skills. Children in half-day programs also improved, but to a lesser degree, 6 to 7 standard score points on vocabulary and math). Thus, the added hours of preschool education were substantially effective at closing the achievement gap between these urban children and their more advantaged peers.

Students in the extended program continued to outperform children in the control group in follow-up testing through the spring of first grade. While further research is needed to augment this study of half-day vs. extended-day preschool education, the results clearly indicate that duration matters.

References: 45 citations

Center on the Developing Child, Harvard University (August 2007). *InBrief: Early Childhood Program Effectiveness*

www.developingchild.harvard.edu/content/publications.html

Four decades of evaluation research have identified innovative programs that can improve a wide range of outcomes with continued impact into the adult years. Effective interventions are grounded in neuroscience and child development research and guided by evidence regarding what works for what purpose.

Effective services build supportive relationships and stimulating environments. To develop strong brain architecture, babies and toddlers require dependable interaction with nurturing adults and safe environments to explore.

Quality of implementation is key. Model programs can lose their impact if not brought to scale correctly. Rigorous program standards, ongoing training and technical assistance, and continual quality assessment and improvement are critical to ensuring the ongoing effectiveness of large-scale programs. A multi-strategy approach will best enable states to ensure healthy futures for children. No single program can meet the diverse developmental needs of all children. A more promising approach targets a range of needs with a continuum of services that have documented effectiveness.

Effective interventions address specific developmental challenges. Decades of brain science and developmental research suggest a three-tiered approach to ensure the health and well-being of young children:

- Tier 1 covers the basics — the health services, stable, responsible care giving, and safe environments that all children need to help them build and sustain strong brains and bodies.
- Tier 2 includes broadly targeted interventions for children and families in poverty.
- Tier 3 provides specialized services for children and families who are most likely to experience toxic stress.

In early care and education, for example, the effectiveness factors that have been shown by multiple studies to improve outcomes for children include:

- Qualified and appropriately compensated personnel
- Small group sizes and high adult-child ratios
- Language-rich environment
- Developmentally appropriate “curriculum”
- Safe physical setting
- Warm and responsive adult-child interactions

References: Per the Center on the Developing Child, this is a brief summary taken from the scientific presentations at the National Symposium on Early Childhood Science and Policy

Rous, Beth, Ed.D. with R. Hallam, Ph.D., J. Grove, M.S., S. Robinson, M.S., M. Machara, M.S. (July 2003). ***Parent Involvement in Early Care and Education Programs: A Review of the Literature***

University of Kentucky: Parent Leadership Initiative

http://www.ihdi.uky.edu/pli/Documents/ECPLI_Literature_Review_Report.pdf

Increasing attention has been paid to the early childhood years as the foundation of children's academic success. The importance of high quality learning environments, qualified teachers, and family engagement with early care and education programs have all been identified as critical factors in enhancing young children's early learning experiences and their subsequent educational outcomes (Cost, Quality, and Outcome Study Team, 1995; NICHD, 2000; Peisner-Feinberg et al., 1999). This report focuses on one critical aspect in supporting high quality learning experiences for young children – that of family involvement in early care and education programs.

Parent education is most traditionally defined as parents engaging in learning activities to change their methods of interacting with their children to yield more positive outcomes (Crooke

& Glover, 2001; Kaiser et al, 1999; Mahoney et al., 1999; Powell et al, 1990). Historically these partnerships emphasize providing information to parents rather than engaging parents in their child's education. The vast majority of early childhood education programs are based in public school systems. Typically, both parents and schools have a common goal of achievement for the children served. Some of these parent involvement programs, however, assume that programs teach parents acceptable ways of parenting and interacting with their children in the home or community (Bemak & Cornely, 2002; Reglin, 2002, Sacks, 2001).

With the understanding that parent involvement is highly individualized, a broad approach to defining parent involvement is more likely to encompass the full extent of beliefs and expectations presently held by families and providers. To that end, Epstein (2001) suggests that the relationships and interactions among family members, educators, community, and students are similar to partnerships. Dunst (1990) presents a family-centered approach, one where a child's growth and development is nurtured by the overlapping supports of parents, family, community, and child learning opportunities, as most effective for successful outcomes. Both Epstein and Dunst present the partnerships between families and providers as an opportunity for shared responsibility for facilitating the growth and development of children.

Everyone, including families, children and professionals, should have a say in how a program is developed and implemented. Giving parents an equitable opportunity to make decisions and govern rules leads to empowerment, and when parents feel competent and influential in their child's education, they view parental involvement as important (Bruckman & Blanton, 2003). Exploring further into the roles of parents and professionals, another component that is valuable to a wide range of parents is empowerment. Research indicates that decision making opportunities (Carlson, 1991; Maloy & Scribner, 1985) and roles in school governance (Eccles & Harold, 1993) are ways to promote empowerment and parents' abilities to make choices. These opportunities, along with other leadership roles can have positive effects on parents' overall competence and attitude (Bruckman & Blanton, 2003).

The first step for both parents and professionals is to recognize the importance of working together. Because parents are vital players in their children's education, their lack of involvement can greatly hinder optimal progress (Berger, 1991). When families are not involved, children are left to negotiate between the two systems on their own. Collaborative partnerships not only make this transition easier for children, but families and programs can also benefit. Through this mutual relationship, families can get the support and encouragement that they need, while program staff experience more acceptance of changes implemented to solve potential problem situations (Bagdi, 1997). When the collaboration places the child's needs at the central focus (Epstein, 1995), parent involvement has a positive impact on the child's academic achievement and behavior (Hoover-Dempsey, Walker, Jones, & Reed, 2002; Marcon, 1999).

References: 115 citations

Dickinson, David K. and S. B. Neuman, Eds. New York: Guilford, 2001. 483 pp. *Handbook of Early Literacy Research*

Reviewed by Anita Page, Director, Early Childhood/Elementary Teacher Training Programs, Mt. Holyoke College, South Hadley, MA

This publication helps to establish the importance of the study of early literacy, so essential to later reading achievement. Neuman and Dickinson have assembled a very useful collection of 30 research studies, with contributions by some of the most prestigious people in the field.

Both editors have impressive research backgrounds in early literacy development. Neuman is Professor of Educational Studies at the University of Michigan and the Director of the Center for the Improvement of Early Reading Ability. Dickinson, a Senior Researcher at the Education Development Center in Newton, Massachusetts, is the co-author of several books on beginning literacy.

Of particular importance are more than a half dozen articles that address the critical problem of underachievement among children of poverty, who are children from language minorities and children of color in disproportionate numbers. In "Early Language Literacy Skills of Low-Income African American and Hispanic Children," the authors examine the reasons why poor children lag behind their peers in early literacy development. Although the lack of a stimulating literacy environment has received the greatest attention, what is often overlooked in addressing this critical issue is the biological/health environment in which such children live and how such associated problems as poor nutrition, chronic ear infections, and low immunization rates can affect low-income children's achievement. Finally, but not least of all, these children face discrimination in school and from society at large. The authors cite examples of African American students with superior narrative skills gained from a tradition of storytelling; these talents, however, often do not translate into school literacy achievement.

In "Young Bilingual Children and Early Literacy Development," the authors examine family and community language environments for bilingual children from birth through age 5, including the first-language classroom, the bilingual classroom, and the English language classroom. Their findings indicate multiple pathways to literacy. Literacy acquisition in the home language between parent and child can transfer to literacy acquisition in English. "It is the quality of the literacy interaction, not the language that it is carried on in, that is the critical factor," they write.

Ochshorn, Susan. (2000). *Partnering for Success: Community Approaches to Early Learning. A Report on Partnerships in Low-Income Communities*

Child Care Action Campaign, New York, NY

<http://www.childcareaction.org>.

This report details the Partnering for Success project, which identified and documented efforts to enhance school readiness through partnerships among Head Start, child care, and public schools in low-income communities.

Sixty-eight partnerships in 37 states were identified with the assistance of national, state, and local experts, and practitioners. Among the findings noted in the report: the initial challenge in launching effective partnerships involves changing beliefs and motivation as well as acquiring or spending more money; school superintendents have been prime initiators for change; partnerships between schools and early childhood education programs are effective in providing greater access to care and education; 84 percent of programs reported higher levels of elementary school performance; and program continuity for 3- to 8-year-olds is currently evolving.

The report also makes the resulting recommendations: that superintendents need to see collaborative early childhood efforts as a vehicle for education reform and a foundation for universal prekindergarten; that schools must help to ensure a smooth transition; and that partnerships must take into account the needs of working parents. This report then profiles six of the programs studied, located in Michigan, New Mexico, Tennessee, Kentucky, Alabama and Pennsylvania. The remaining programs are also described, including types of services provided, demographic characteristics of families served, partners involved in partnership, location, time of operation, role of school, parent involvement components, funding sources, and evidence of outcomes.

References: 17 citations

Includes 10-page, state-by-state partnership listing

Olds, D., Hill, P., & Rumsey, E. (1998). *Prenatal and early childhood nurse home visitation. Juvenile Justice Bulletin No. NCJ-172875*. Washington, DC. Office of Juvenile Justice and Delinquency Prevention.
<http://www.ncjrs.org/pdffiles/172875.pdf>

Abstract: The Prenatal and Early Childhood Nurse Home Visitation program was designed to help low-income, first-time parents start their lives with their children on a sound course and prevent the health and parenting problems that can contribute to the early development of antisocial behavior. Nurses begin home visits during pregnancy and continue until a child is 2 years old. These visits help pregnant women improve their health, and teach new mothers how to care for their children and provide a positive home environment. This bulletin presents evidence detailing the program's effectiveness in reducing three major risk factors: (1) adverse maternal health related behaviors during pregnancy; (2) child abuse and neglect; and (3) a troubled maternal life course. Specifically noted is a 15-year follow-up of the program, which found that adolescents whose mothers received nurse home visits over a decade earlier were 60 percent less likely than comparable peers to have run away, 55 percent less likely to have been arrested, and 80 percent less likely to have been convicted of a crime. The bulletin also shows that cost savings were four times the initial expenditure by the time high-risk children reached age 15.

Website article: ***National Care Public-Private Partnerships Supporting Early Care and Education and After-School Care***

The National Child Care Information and Technical Assistance Center (NCCIC)

<http://nccic.acf.hhs.gov/index.cfm>

States have provided support and funding for public-private partnerships and collaborations to provide comprehensive systems of early care and education for young children. Anticipated advantages include leveraging potential funding, coordinating and aligning resources, increasing availability of technical assistance, and building public will to support policies and funding.

Some examples of state public-private partnership structures and collaborative strategies that receive state funding to improve the quality of and expand access to early care and education programs are shown on

this website. These examples do not include all states that have implemented public-private partnerships, but are meant to represent a range of approaches states have taken to establish such partnerships to increase investment in early care and education programs.

The National Child Care Information and Technical Assistance Center (NCCIC), a service of the Child Care Bureau, is a national clearinghouse and technical assistance (TA) center that provides comprehensive child care information resources and TA services to Child Care and Development Fund (CCDF) Administrators and other key stakeholders.
