Universal Preschool Programs: A Review of the Literature

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HIGHLIGHTS FROM THE LITERATURE REVIEW

The purpose of this report is to provide an overview of the literature on universal preschool in order to benefit from the experiences of other states and regions which have already implemented services targeting part or all of the preschool population. Programs targeted to low-income children have been in place since at least the mid 1960's when Head Start was created as an early intervention program. The now extensive literature on publicly funded preschool initiatives includes forty-two states, each with its own version and unique history of implementation.

In this section we will offer highlights from that review, covering each part of our organizing outline. While we can only offer a summary of the many efforts which have been described, we have made suggestions in the final part of the "Endnotes" about a small number of recent publications which provide greater detail on state activities.

Defining the Terms and Their Rationale

- Only one state, Georgia, is currently operating a truly universal preschool program open to all four year olds without cost.
- The intent of the New York state preschool program is universal, but it is currently targeted to low-income children and working families, and is in the process of being phased in.
- All other states are defining "universal" as children who are low income, at-risk of school failure, or special needs.
- Five purposes characterize the formation of these programs, either singly or multiple in number:
    1. To prepare children for successful entry into the schools.
    2. To improve the learning outcomes of children towards desired, specified results.
    3. To expand access for targeted groups of children to quality early care and learning experiences.
    4. To improve the quality of early care and learning programs across the board.
    5. To support the needs of parents, and their children, who are working or attending school.
- Preschool programs operate under several designations: the most descriptive and comprehensive is "Early Childhood Care and Education," recognizing that care and education are inseparable for the young child.
- The premier example of best practices and comprehensiveness is the French system, Ecole Maternelle.
- Many European and Commonwealth countries have achieved universality, based on beliefs in the "common good."
- A particular preschool initiative will be defined by decisions made about the following elements:

    What is the intent (goal) of the program?
    1. What is the target population and how will eligibility be determined?
    2. Under what auspices will the program be administered?
    3. Where will the services be delivered?
    4. Who can teach in the funded prekindergarten program?

5. What will the basic unit of service consist of?
6. What standards will be used for all contracted programs?
7. Will parents pay fees?
8. How will funds be allocated at the local level?
9. What extensions must be put in place for the children of working families?
10. How will the program be funded?

A preliminary definition is offered for San Mateo County for a public awareness campaign.

Overlap with Other Educational Initiatives

Four of the five purposes listed in Part I overlap the "School Readiness" initiative currently being implemented by a partnership between the California Children and Families Commission (Prop 10) and the California Department of Education which has made a commitment to promote Universal Preschool. In January 2001 the Governor's Office appointed a School Readiness Task Force chaired jointly by the Governor's Office of the Secretary for Education and the California Children and Families Commission. This task force developed the concept for the School Readiness Initiative which is now being implemented. Demonstration programs are currently in the process of selection for funding by the Commission. As they have not been funded yet, this report includes information on models which already exist.

- Universal prekindergarten could be integrated with the new program thrust developing under "School Readiness."
- Both share the stimulus of the recent new findings by the Neuroscience field on the crucial importance of the early years on brain development.
- Both share a goal of comprehensive services to the child and family.
- Several states have used the opportunities of educational reforms and new initiatives to expand their prekindergarten programs.
- Two states in particular offer successful models: Massachusetts and Wisconsin.
- Programs funded under these initiatives must meet clearly defined and rigorous standards to elicit public support.

Mobilizing Support: Key Messages

- The pros and cons of universal preschool, as expressed by supporters and dissenters, must be understood by planners.
- Advantages include: Community perspective (common good). equity, no labeling (at-risk), accessibility, affordability, safe environments, qualified teachers, better salaries and working conditions, availability of support services of the school system, availability of peer models/tutors at school sites.
- Disadvantages include: traditional school not equipped to deal with many needs of young children, curriculum could be watered-down kindergarten, no requirements in schools to provide services such as naps, snacks, toileting, low child-to-teacher ratio, negative impact on child care industry, fails to meet working parents' needs for full day care.
- Opposition is predictably from the conservative right element in communities, focusing on questionable benefits to middle class children (no research supporting), new public funding

commitments, expanding bureaucratization of public education at earlier and earlier ages, undermining of the maternal-child relationship, suspect outside influences, fear for mandatory enrollment.

- Advocates have used three key public messages: school readiness to reduce early school failure; developmental support for acquiring social, emotional and cognitive skills; and support for working parents.
- Resistance to change found to be an important element in opposition: advocates must target tax-payer beliefs through clear and sustained public education, highlighting benefits documented through research.

Creating Partnerships

- Collaborating with community partners is the primary way states have been able to expand prekinderarten programs: Only eight states consign funding to school districts alone.
- The "Early Care" part of "Early Care and Education" can only be achieved with the cooperation of the child care field; they are major stakeholders.
- A wide variety of partners are documented in the literature: Business, government, politicians, child care professionals and organizations, civic associations, educators, housing experts among others.
- Some states have made partnerships a condition of funding.
- Massachusetts, Wisconsin and North Carolina are premier examples of community partnerships.
- Unusual partnerships have been created with the business sector.
- Head Start has always incorporated a collaborative ideology. A current example is its partnership with family child care home providers in the implementation of Early Head Start.
- Collaboration is hard work: Productive collaboration demands good leadership, an atmosphere of commitment to the common good versus competition, enough time to flesh out how things will work and a realistic time-table for implementation.

An active partnership strategy greatly expands the resources for publicly funded prekindergarten programs, allows for blending of funding sources for maximum leverage, includes potential opponents, and creates a larger set of stakeholders.

A Review of Needed Resources

- Essential elements of a support system include governance systems, program administration, technical assistance/professional development activities, parent resource and referral services, accreditation/oversight systems, rewards and incentives, data reporting and collection, program evaluation, program planning and improvement efforts, and linkages with existing school-based systems, other child- and family-serving entities, and businesses.
- Support systems are usually assumed at the top level. Specific functions may be referred to the local level.
- Master planning is needed to develop remedies for space shortages.
- A number of innovative approaches have been used to create needed spaces.
- Collaboration between school districts, early childhood programs, and other agencies providing service to young children and their families is essential for successful programs.

- Data collection will be required to demonstrate to funders, legislators and planners how many children are being served, what facilities the children are in, where the programs are located, how many certified teachers are in place, how many others are working towards certification, and where they are receiving their certification.
- A uniform data collection system will need to be built with input from all partners, hopefully integrated with existing systems.
- Transportation issues are critical in planning for prekindergarten locations and access.
- Wrap-around services or collaboration with other agencies or programs can lead to full-day programs to ease working parents' issues, such as transportation and difficult hours.
- Families can pay for extended hours of child care beyond the half-day preschool program, using a sliding fee schedule.
- Full-day versus part-day programs must be addressed as policy choice questions, and strongly suggest blending of funding streams. Half-day programs create more obstacles for working parents.
- Careful plans for staffing of programs is critical, requiring decisions about minimum credentials and training.
- Most early childhood education providers serving four-year-old preschoolers could meet the universal preschool standards given some time and could offer their services in the existing facilities and licensed homes, reducing the need for new facilities.
- The Child Development Permit Matrix, adopted in California in February 1997, should serve as the staffing standards for a County of San Mateo Universal Preschool Program.
- A new wage and benefit study is needed in San Mateo County to document current wages and benefits as a baseline for improvement in competitive salaries for early childhood education staff.
- Standards concerning certification of key staff members and developing technical assistance personnel to improve the overall quality of the program have generated greater support and acceptance for the programs.

Setting Standards for Quality Services

- Extensive literature exists on what constitutes quality early care and education services.
- Studies have confirmed the relationship between quality of services and child outcomes.
- A number of activities have been employed to improve quality: Training, monetary incentives, curriculum development, accountability and accreditation, and mentoring, among others.
- Successful programs must ensure funders that programs supported are of high quality.
- Universities can be enlisted to assist in the process of evaluating quality.
- One critical issue is the depressed level of workforce wages as a result of severe market barriers.

Options for Funding

- It is estimated that 65% to 70% of those in the work force require some form of child care. This figure is expected to increase as more people seek employment and job training in compliance with their state Temporary Assistance to Needy Families (TANF) plans.

- Traditionally, child care has been financed through the private sector; families are responsible for paying the majority of the costs. Roughly 60% of the revenue for child care and early education comes from out-of-pocket fees paid by parents. The remainder is paid for by federal, state, and local governments through subsidies and tax credits.
- Successful financing strategies are often developed over time. Long-term commitment, planning, and buy-in from key stakeholders are essential. Further, successful strategies are defined by their ability to recognize the particular needs of the community for which they are being designed.

There are many existing federal and state funding streams that are available to help communities finance child care. These funding sources allow a high degree of flexibility for states to utilize them in ways that will provide the most benefit to its populace. Federal funding sources include:

- The Child Care and Development Block Grant (CCDBG).
- Temporary Assistance for Needy Families (TANF).
- Social Services Block Grant (SSBG), which is authorized under Title XX of the Social Security Act,
- Title I Grants to Local Educational Agencies
- Head Start
- Tax credits

Federal funding is not the only source of public financial support for child care services. States are increasingly spending their own money. State funding sources include:

- Some states offer a tax credit modeled after the federal tax credit
- Property taxes
- Sales taxes
- Excise taxes
- State income tax
- Tobacco settlements
- An indirect form of child care funding comes from employers who utilize the tax credits provided by the states.
- Impact fees
- Enterprise fees
- State lotteries

To effectively develop a comprehensive funding strategy for early childhood education programs, states cannot rely on only one of these funding sources. They need to develop a **financing approach** which is defined as a "package of financing mechanisms that are combined to provide near-universal coverage of a social benefit for a specified purpose."

Implementation Strategies

- Political Leadership is key (bipartisan if possible).
- Housing the program in a separate office (i.e., Office of School Readiness), rather than State Department of Education, results in less competition with other educational needs.

- Need to involve professional child care providers (Head Start and child care personnel) in initial planning to minimize anxiety felt by these providers about potential loss of control in relation to their own client population.
- Gradual implementation strategy increases public support and cuts costs.
- Begin with focus on children "at-risk" for academic failure, with gradual expansion to all prekindergarten-aged children.
- Establish program standards regarding certification of key staff members, curriculum, staff/child ratios, and maximum class size.
- Funds have to be designated for transportation costs for half-day programs as working parents may not have a means to transport children mid-day.
- Encourage efforts to bring about collaboration between program administrators, legislators, and child care service providers.
- Embed prekindergarten program in larger educational reform package, making programs easier to fund and less noticeable to the general public.
- Widely publicize intervention research and media attention to brain development; importance of early stimulation.

Outcomes and Measures

- Research on the effects of prekindergarten programs on children and families includes both small, experimental studies and large-scale institutionalized services.
- Research outside of the United States has been largely overlooked.
- Most effective research results when policy choices have already been made and research on effects is used to improve programs.
- A review of well-constructed research on child outcomes in this country definitively supports the sizable gains to be achieved in school success to include lower grade retention, special education rates, cognitive increases, increased graduation rates, and positive social effects such as reduced welfare dependency and teen pregnancy.
- Children of low income families gain most.
- Continuing research is needed on questions such as effects on different children.

The argument for and against universal preschool appears to be settled; Child effects overall are positive when good quality preschool is employed as the standard. All children stand to gain developmentally and in school readiness, with the recognition that children of low-income families have most to gain. The greatest challenges remaining are to make quality programs accessible to all children in families who wish to enroll their child, and to create systems of uniform high quality throughout.

INTRODUCTION

Child care is a necessity for millions of parents in the 21st century; children of all income levels are cared for by someone other than their parents. Nationwide, an estimated 13 million children under the age of six and not in kindergarten spend some or all of their day in a non-parent's care.[1] Many of these children enter care as early as 11 weeks of age, and often stay in some form of child care until they enter school. In 1995, nearly three out of four preschool children age three to five, including those with working mothers, and those with mothers who were not working outside of the home, were in some form of non-parental care.

In California, the Superintendent's Universal Preschool Task Force estimates that preschool services will be required for about 575,000 four year-olds and 555,000 three year-olds.[2] California currently provides preschool services for only 48,000 children through its State Preschool Program, while another 80,000 low-income children are enrolled in the federal Head Start program. Given the number of children to be served, and the fiscal reality of providing those services, the Task Force determined that the focus should be on publicly funded early education and development services that emphasize school readiness. Like kindergarten, these services should be provided for half day throughout the school year.

I. DEFINING THE TERMS AND THEIR RATIONALE

The issue of clearly defining the term "Universal Preschool (UP)" as it is intended in San Mateo County is of critical importance to the mobilization of public support and to the subsequent implementation processes to be undertaken. This section documents how various terms have been used to describe essentially the same concepts, and the confusion which has resulted. A suggested definition is offered to the San Mateo stakeholders, one which can be expanded through public dialogue to fit the outcomes intended.

The dictionary definition of "universal" is the following: "For everybody; of widest scope; of every member in a class." "Preschool" is defined as: "Of or relating to the period of infancy prior to the age of compulsory school attendance." If San Mateo County would interpret these definitions correctly according to their meaning, then their choices would apply either to all four year olds in the county (more "universal"), or to all four year olds who qualify under certain designated conditions such as family income (less "universal"). It is to be noted that the definition of universal is based on the concept of "widest possible choice." The term "universal" is used theoretically in some states; what is really meant is that all school districts may apply for funds under the stated conditions and requirements.

"Preschool" is a vague term; it has been applied to a wide range of ages below mandatory school age, and is therefore viewed as "voluntary." Almost all ages under five have been included in the various programs reviewed (eight states serve children 0 to 5), in spite of the fact that the term is generally used to describe programs for the three to five year old group who are not yet in school. The term has also been used to imply a more educationally oriented program in comparison with "child care," but the differences appear to be more semantic than actual.

Most programs documented in the literature serve, or target, at-risk children defined as low-income, in low achieving school districts, or non-English language speakers.[1] They can be said to be universal only in the narrow sense. These include South Carolina, North Carolina, Washington, Texas, New York as it is currently operationalized, New Jersey, Massachusetts and, in fact, most of the 42 states which now have prekindergarten programs.[1,3,4,5,6] Only Georgia has created a program in this country which can truly be called "universal," intended for all four year old children in the state without exception. Several states, such as New York, are developing plans for phased-in eligibility over future years, depending on availability of funding.

Program Goals

The rationale articulated in the literature for these programs is based on one or more of five goals: Examples of each are offered from the literature.

1. To prepare children for successful entry into the schools. The State of Texas is an example of the many states which recognized the need to counteract the growing condition of costly remediation, failure and drop-out in later grades. The intent of their prekindergarten program was to build a solid foundation of school success among high-risk four year olds.[4] In California, the articulated purpose of "Ready to Learn" is the centerpiece of Superintendent Delain Easton's initiative towards universal preschool.[2]

2. To improve the learning outcomes of children towards desired, specified results. President Bush, former governor of Texas, began a campaign to adopt the outcome "every child reading on grade level by 3rd grade." This push towards a concrete and measurable outcome was said to have had a tremendous impact on education policy in that state. Child development/early education research over the past decade has confirmed the short and long-term gains which can accrue from high-quality prekindergarten programs, particularly for disadvantaged children. These include reduction in special education needs, drop-out rates, juvenile arrests, and productive job attainment.[8,9]

3. To expand access for targeted groups of children to quality early care and learning experiences. One of the many examples is the Seattle model of the State of Washington's "Family and Education Levy" program. The city of Seattle has chosen to use its funds to target a child care subsidy program to families who are above the eligibility limits for state-funded child care subsidies, up to 80% of state median income. As noted earlier, most states are focusing their funding on at-risk populations.[3]

4. To improve the quality of early care and learning programs across the board. In FY 1999-2000 the State of Wisconsin created a "Childhood Excellence Initiative" to support the establishment of high-quality early childhood learning centers in low-income neighborhoods. This new initiative was in addition to an already existing Quality Improvement and Staff Retention grant program targeted to increase compliance with the state's quality standards. North Carolina's Child Care "WAGES" Project offers salary supplements to workers who earn less than a specified amount, who have achieved early childhood educational credentials and who have remained working at the same facility for at least six months. This is the model for the current CARES Incentive program in California.[3]

5. To support the needs of parents, and their children, who are working or attending school. The State of New York began its U-PreK program in FY 1998-99 with the ultimate intent to create a universal prekindergarten for four year olds, but with the caveat that parents who are working or in school have first priority. The requirements of the funding to local districts include parent participation, provision of social services and integration of children with special needs. It is intended that more local districts will be brought into the program over time, until the program is "universal" (if funding is available).

The names given to the programs which would be of interest to San Mateo County include preschool for four year olds, junior kindergarten, 4K (Wisconsin), pre-kindergarten, early childhood education, early childhood care and education, universal prekindergarten, Head start, and universal preschool. The titles do not significantly differentiate the programs from one another with the exception of Head Start which was created, not as a preschool program, but as an early intervention program. Many common elements are shared across the spectrum. The differences are most often represented by the history of political routes to program implementation, to the means by which they have been funded, and by specifics in implementation. However, the term "Early Childhood Care and Education" describes most accurately the various and best practice arrangements across American and international programs.[9] This term bears the recognition and understanding that early childhood education cannot be separated from early care, that both must be addressed together. The best example of this awareness in practice is the French system, Ecole Maternelle, which serves the needs of the whole child and the family, and is considered to be the premier model world-wide.

It is interesting to note that, among the European models (many of which have achieved universality), there has been less emphasis on research findings and more emphasis on "public good" as a reason for pursuing development and coverage for these programs. This can be explained to some degree by the more critical stage European countries have arrived at in terms of their "dependency ratio," i.e. the proportion of adult workers to retirees who have left the labor force and are receiving some form of benefits. Supporting working families is a critical factor, as it has become in this country as well. European countries are currently focusing their attention on increasing the availability of supplementary services to meet the needs of employed parents, and view this as a public issue.[10]

Program Elements

The definition of a particular preschool program initiative includes the following elements, drawn from the literature:

- What is the intent (goal) of the program? The five major goals articulated in already existing programs are listed in "Defining the Terms and Their Rationale."
- What is the target population and how will eligibility be determined? San Mateo County has already made the decision that this will be a program eligible to all four year olds in the county who do not meet the kindergarten enrollment cut-off date by the year in question.

- Under what auspices will the program be administered? The greatest consensus in the literature is that these programs belong most appropriately under education, and in fact, that is where most reside. However, there is general agreement, not always carried out well in practice, that the child care provider field is an essential collaborator.

- Where will the services be delivered? The literature documents several options which are being used: on school sites or immediately adjacent; in community settings such as community centers; at accredited child care centers; in child care family homes; in Head Start programs. Most existing state-funded programs are using a combination of education and child care facilities. For example, New York State requires that at least 10% of funded programs be contracted to eligible community agencies, up to 100%. Only eight state programs limit the funding to public schools.

- Who can teach in the funded pre-kindergarten programs? This is a difficult area that all states appear to struggle with, in the face of teacher shortages in education and staff-turnover in child care. The goal of most states is to apply the credential requirements for kindergarten and the early primary grades to the prekindergarten programs. In order to eventually achieve this goal, interim stages have been established. For example, the State of New York required that all teachers be certified, but it gave community providers four years to achieve certification. The T.E.A.C.H. program in North Carolina rewards centers for supporting the education and compensation of their staff by sharing the cost of health insurance coverage for teachers.

- What will the basic unit of service consist of? The two and a half hour day, five days a week during the same school year as applies to the public schools appears, across states, to constitute the basic minimum. However, special note should be made of the movement to increase half-day programs to full day in order to better meet the needs of working parents.

- What standards will be used for all contracted programs? These include not only determining the qualifications of staff, but also child/staff ratios and curriculum. Child/staff ratios in child care are determined in most states by the licensing agency and are generally lower than education standards. For example, in California the ratio in programs for 4 year olds would be 1 adult to 12 children. A typical classroom would be covered by 1 teacher and one aide to 15 children. Child development programs funded by the state require a minimum ratio of 1 adult to 8 children, and 1 teacher to 24 children (includes 1 aide). The optimal ratio for kindergartens in the public school, after class-size reduction initiatives, would be one teacher to 15 children. The State of Illinois is a good example of high quality standard-setting from the outset of their preschool program for "at-risk" children, one that includes teacher certification.

- Will parents pay fees? The State of Massachusetts is one of only a few states charging fees for their preschool program. The sliding scale used for their subsidy program provides the policy guideline for fees. Most countries outside of the United States such as

Canada, France, Sweden and other European regions provide preschool as an entitlement of the education system. In this country the premier example is the State of Georgia which has now opened preschool enrollment to all families of 4 year olds who want the services.

- How will funds be allocated at the local level? If the policy-makers in a particular county such as San Mateo have made all of the above decisions which will define their version of a universal preschool program for all four year olds, how will this be implemented at the local school district level? The section on "implementation" in a later part of this literature review will summarize the options currently in use.

- What extensions must be put in place for the children of working families? Stated earlier, it is not possible to separate care from early education in contemporary societies in which both parents (or the single parent) work. Most states have addressed this issue through the creation of "wrap-around" services, extended child care interfaced with the preschool. States have used a variety of innovative partnerships with community agencies to make these services available. In regions with long-standing publicly funded preschool programs, such as the city of Toronto, Canada, extended care services are offered on school sites where children attend Jr. Kindergarten (JK) to avoid additional transitions, and are paid for by sliding scale fees. These services are administered by the Social Services division of the Toronto Board of Education.[11]

- And finally, how will the program be funded? In the section on "Options for Funding" we will review the major routes through which funds have been mobilized to cover the costs of programs, and the cautions attendant to particular choices.

A Preliminary Definition for San Mateo County

The Early Care and Education Program of San Mateo County will offer high-quality, half-day preschool services to all 4 year olds whose families wish to enroll them, located in the local community wherever possible and at a cost based on family income, to include subsidies for low-income families. The intents of the program are to give every child a good start for success in school, and to support working families.

II. OVERLAP WITH OTHER EDUCATIONAL INITIATIVES

In the first section of the literature review the major reasons for state initiatives in expanding preschool services were summarized. In California, the intents of four out of the five goals overlap the "School Readiness" movement, which is currently being promoted across the state in a partnership between the California Department of Education and the Prop 10 Children and Families Commission. While California's first phases are not intended to be "universal" in the short run (targeting "at-risk" school districts), its long-term goal is to provide enhanced learning services for all children in the state.[12] AB 1302 was signed by the Governor in September of 2001, to permit school districts to implement the program in selected schools or on a district-wide basis. The National Education Goals Panel definition of school readiness was adopted by the School Readiness Task Force, outlining three major realms:

- Children's readiness for school.
- Schools' readiness for children.
- Family and community supports and services that contribute to children's readiness for school success.

The intents of universal preschool are included in each of these realms, therefore it would be fair to say that the two sets of initiatives are inextricably bound together, and could be placed under one rubric. With the relatively new data from the field of Neuroscience informing the public about the critical importance of the earliest years for sensory, motor and language capabilities, we have come to see how early care and education has been overlooked. The public has generally tended to see these services as baby-sitting or at best, care for children while parents work. The enormous potential for helping young children prepare for success in school has not been the dominant public message with the exception of Head Start and disadvantaged children. Again, as in the case of universal preschool, the definitions of school readiness vary across the country.

In California, the intent is to offer a comprehensive program with several service elements including health and social services, early care and education, parent education and support, and improved family-friendly school environments. These are all elements which are seen to be related to school success and are, for the most part, confirmed in the research literature.[13,14] The School Readiness initiative will be targeted to those schools in the lowest three deciles of the Academic Performance Index which have already been identified. The intent is to implement the new initiative in three phases, through June 2003. Some models already exist in the form of Urban Learning Centers in low performing schools. The Elizabeth Learning Center in Los Angeles County; the Bret Harte Healthy Start in the Sacramento Unified School District; and the Lamont/Weedpatch Family Service Center in Kern county are all outstanding examples of integrated School Readiness programs. It should also be noted that California is currently the largest funder of subsidized early education and child care in the country, covering a total of 489,000 children at a cost of $3,311,800,000. Of that total number of children, 413,000 are ages 0 to 5 years. New programs are in the process of being selected for funding by the California Children and Families Commission.

A review of how these overlapped goals have played out in other states reveals the following:

In 1997 the State of Connecticut launched a targeted School Readiness Initiative to ensure full-day early care and education services year-round for 3 and 4 year olds from low-income families. Funds were made available at the local level to expand and improve the quality of care currently in existence, to build or renovate space to house preschool programs, and to provide supports for an educated childcare workforce.

The Georgia universal prekindergarten program impetus derived from concern over large numbers of students dropping out of school or repeating grades. It began in 1992 as a pilot program, was expanded in 1993, and became universal in 1995. Throughout, the focus has been on educational outcomes and includes long-term evaluation.

Provisions for universal preschool were included in a larger educational reform bill in New York, the LADDER proposal, in

1997. This proposal was directed at improving the educational outcomes and addressing the similar problems of school drop-out and grade retention. The educational reform package contained provisions to lower the K to 3 class size, to offer full-day kindergartens and a variety of other incentives towards educational improvement.

The Texas example already discussed was created as part of an educational reform package recommended to the legislature by the Select Committee on Public Education appointed by the governor in 1983. This is the only state that requires school districts to provide a prekindergarten program if at least 15 eligible children live in the district.

The original Community Partnerships for Children program in Massachusetts began in 1985 as part of the Public School Improvement Act. It has evolved since that time to a state-wide network of preschool and support services designed to meet the needs of each local community.

The existing Illinois prekindergarten began in 1985 as part of a comprehensive program of school reform. Again, the target population was "at-risk" children. Quality control of services and programs, and partnering with community agencies to provide wrap-around services has been the earmark of the Illinois prekindergarten initiative.[3,4]

The State of Wisconsin has probably created one of the most innovative approaches to the integration of preschool into the education system through its Bright Beginnings and Family-Community-School Partnership program funded under the state's new Early Childhood Excellence Initiative. The program is built around the concept of Early Learning Centers designed at the local school district level to bring together, in one place, all of the educational and other resources in a community which are known to support positive learning outcomes.[15]

These are selected examples of school readiness programs and initiatives across the states, with a focus on the at-risk child but with a growing awareness that high-quality preschool services would benefit all children. The emphasis in this case must be on quality and access, particularly for the children of low-income families who constitute the major targets of publicly funded programs. Unfortunately, these children currently represent the least access to quality preschool services. Availability of good-quality centers is scarce in low-income neighborhoods, especially full-time care needed by working mothers.[16] This means that many at-risk children enter school with inadequate linguistic, cognitive, and early literacy skills which could greatly reduce the magnitude of the literacy problem facing schools today. The strongest recommendation from the National Research Council, Committee on Preventing Reading Difficulties in Young Children report was to demand early education and kindergarten environments that help develop the skills children need to read.[17] This can only be done if programs which are funded by public money are required to meet clear and rigorous standards to ensure quality which includes staff training and competence, high teacher to child ratios, and curricula which support and articulate with the early primary grades.

This review has illustrated the fact that there is considerable overlap of interest and intent between universal preschool and school readiness initiatives. It is envisioned by many that the future will bring a full integration of programs under the educational system. However, a present implication for California is that the funds available for both initiatives could be blended to make the overall shape of all funded programs more comprehensive and family-friendly.

III. MOBILIZING SUPPORT: KEY MESSAGES

In this section the pros and cons regarding universal preschool and publicly funded prekindergarten programs will be analyzed as they have arisen in public debate. The most effective messages used by advocates to influence public policy will be highlighted.

We begin with words of wisdom from the experience of the State of Wisconsin:

> "Any school district considering operating 4-year old programs should be fully aware of these (strongly held pro and con opinions) issues before moving ahead with the program."[18]

They go on to list the advantages and disadvantages as they have emerged in their efforts to mobilize public support. Some items have been amended to make them more relevant to San Mateo.

<u>Advantages:</u>

- Community perspective – common school for the common good.
- Equity – available to all children in a community.
- Child does not have to be labeled (e.g. "at-risk") or have a special condition to be enrolled.
- Accessibility – centralized sites with transportation.
- Affordability – costs distributed across the user population and community.
- School (licensing) standards provide protection and safe environments.
- Teacher qualifications set at higher level for all programs, to include training in early childhood education.
- Better salaries and working conditions create more stable workforce.
- Availability of support services, library, school nurse, psychologists, specialty teachers, quality materials (for programs in schools).
- For those programs at school sites, availability of older children as peer models/tutors/coaches.

<u>Disadvantages</u>:

- The traditional school is not equipped to deal with many needs of young children e.g.. environment of large numbers, travel time on bus, lack of parent involvement.
- Curriculum could be a watered down 5 year old kindergarten program; not developmentally appropriate, with too much structure, and overemphasis on intellectual development.
- No rules in schools like those in licensed care so may not appropriately address naps, toileting, or snacks, or may have high pupil ratios.
- Negative community impact on the child care industry by duplicating or eliminating community programs.
- Does not respond to the needs of working parents and children needing child care (half-day programs).

Opposition to public expansion of preschool programs has predictably come from the conservative right wing of political thought. For example, the CATO Institute, a well-known conservative think-tank, has expressed the views of this somewhat small outspoken constituency. Their editorials were particularly virulent during the most recent presidential election, targeting then Vice-President Al Gore. The crux of their opposition can be summed up as expansion of public funding commitments, and movement towards ever-greater centralization and bureaucratization of education at earlier and earlier ages.[19] They cite, as do other opponents, the overall absence of research which definitively confirms the benefits accruing to society from large-scale public investments such as Head Start. They quote, out of context, Edward Zigler, a co-founder of Head Start: "We simply cannot inoculate children in one year against the ravages of a life of deprivation," extrapolating this presumed lesson to all other preschool efforts. What they fail to say is that Zigler himself favors universal preschool as a means to achieve school readiness, but states that it is certainly not guaranteed to place all children on an equal footing.

Other opposition from the conservative sector includes the undermining of the maternal-child relationship; fear of exposing the young child to suspect outside influences; the implications and trends in some countries that, what begins as a voluntary 4 year old program will become mandatory; suspicion that Head Start, a program for the poor and disadvantaged, is being touted as the model for all children and is therefore not palatable.[4,20,21,22] The opposition claims that middle and upper class children already are exposed to many of the learning stimulations being touted for preschools, and that they invariably perform better in school regardless of whether they have had preschool experiences or not. These fears have been supported by the recent endorsement of the American Federation of Teachers for universal preschool. President Sandra Feldman backed up the endorsement by saying that all children, working class and poor, should be eligible to attend quality preschool programs like Head Start. In Georgia, the only truly universal preschool program in the country, Governor Zell Miller advocates mandatory enrollment.

A favorite and much-listened-to opponent is "Dr. Laura" Schlesinger, a psychologist who broadcasts several hours a day from Los Angeles and whose motto is "I am my kids' mom." What she means by this is that "I am a mom who chooses to stay home and raise my own children and not give them to strangers to raise," i.e. child care and early education.

Advocates for preschool expansion have relied on three key messages to support their cause: school readiness as discussed in the earlier section, which is perceived as a strategy to ameliorate or reduce early school failures; developmental support for the acquisition of social, emotional and cognitive skills; and support for working parents, both single and two-parent families.[3,7,23] Early care and education services has also been more recently studied and promoted as an important economic development factor for a region. A good example is the recent release in California of the report on "The Economic Impact of Child Care in California," sponsored by the National Economic Development and Law Center (NEDLC).[24] This report shows that the industry is a critical component of the state's economic infrastructure, not only supporting working families but also generating billions of dollars in direct and indirect earnings. Apparently this message is intended to counter the criticisms of spending public money, but it is not clear how it would help the case for universal preschool.

The claim for the child development gains to be accrued through preschool services has been largely based upon programs such as Head Start and state-funded preschools for the low-income and at-risk child population, lending strength to the opposition's charge that these do not apply to the non-poor child.[8,25] Such accusations include the much quoted Perry Preschool study which has been criticized for its narrowly defined study population and significant research flaws.[26,20] Much less research is available about the developmental experiences of middle-class children in longitudinal outcome studies. Perhaps the best known is the Cost, Quality, and Child Outcomes in Child Care Centers study which based its research on a random selection of non-profit and for-profit facilities across four states, and continued to follow the cohorts longitudinally.[7] Unfortunately, the results of that study paint a gloomy picture of child outcomes in poor to mediocre quality environments. Market forces were blamed for constraining the cost of child care and at the same time depressing the quality of care provided to children. On the other hand, factors which support positive outcomes and developmentally sound experiences for young children were found to be the already known elements of "quality" child care: higher staff-to-child ratios, staff education, administrators' prior experience, teachers' wages, and specialized training. Public funding to address these elements was recommended, and in fact have been funded by many states.

Underlying the pro and con debate are the dynamics of resistance to change and holding to the status quo which are characteristic of all social movements. Change which generally reallocates power is seen, in the instance at hand, in the tension about where the leadership will come from, the education establishment or the field of child care as it is presently constituted. Gallagher and Clifford note, in their recent article on The Missing Support Infrastructure in Child Care,

> "Resistance to new methods and procedures is routine, and there has to be a very powerful reason for changes to be instituted in order for people to overcome that resistance. Psychological inertia can be as powerful as physical inertia."[27]

One important strategy for overcoming this inertia requires a change in beliefs by the tax-payers, suggesting a clear and sustained public education campaign which highlights the benefits to be reaped from a universal preschool program. This harks back to the beginning of the literature review, the section on definitions, and the caution that the goals of the program must be clear to the public and framed in a way which carries its appeal to every working parent. The rapid increase in the number of mothers with young children in the workforce is, in itself, a sufficient incentive to prepare the larger environment for change. A recent publication from the non-profit Families and Work Institute provides instructive lessons and examples in engaging the public as supporters of early childhood issues.[28] In the next section we will review how other states have approached the problem of movement from a condition of holding to the status quo.

IV. CREATING PARTNERSHIPS

Collaboration with community partners represents the primary pathway that states and localities have needed to traverse in order to achieve their ends in expanding access to prekindergarten programs. It is not only the preferred mode, but in fact it is an absolute necessity in the face of overcrowded school facilities, competition for teachers and trained staff, the setting of standards for the delivery of quality early care and education services, and the need for reconfiguration of funding streams. The "Early Care" part of "Early Care and Education" cannot be achieved without the cooperation of the child care field. The child care field itself has been both a major stakeholder in the expansions of pre-kindergarten and a potential opponent. Just as we see in California today, child care providers are concerned about the disappearance of their clients, at least a part of that group, and the loss of their livelihood. The rapid growth of publicly funded before and after school programs is a case in point. Many children who are now attending school-based programs were once the after-school clients of family child care home and center providers. On the other hand, child care providers would welcome partnerships which would expand fiscal and other resources to improve quality and take the burden off ever-increasing costs to parents.

A wide variety of partners involved as advocates, planners and implementers of preschool initiatives are documented in the literature. This list includes business groups, government representatives, politicians, child care professionals and organizations, civic associations, educators including higher education, housing experts, nursing associations, and the National Organization for Women, among others.[3]

In some instances, the states have made community-level partnerships a condition for receiving funds. Such a requirement has been built into North Carolina's "Smart Start" program which mandates the inclusion of families, educators, non-profits, service providers, community groups, religious and business leaders, and county and municipal officials. This partnership must develop a collaborative plan for child and family services for their area. Currently, 83 local partnerships covering all 100 counties in the state have been created. A structure was created to oversee the initiatives at the local level, the North Carolina Partnership for Children, which also serves to deliver technical assistance to local units. In this way continuity was assured by the development of both programs and a supportive infrastructure.

Another exemplary example of collaboration at all levels is the Wisconsin "Bright Beginnings and Family-Community-School Partnership" mentioned earlier, with the creation of Early Learning Centers.[15] This concept envisions the changing (new and renovated) schools of the future as community hubs with satellite connections to other providers such as family child care, private preschools, health services and planned by a wide coalition of community and school members. One example described in the literature is a partnership in the city of La Crosse, which has created a plan called the "Community Collaboration for Four Year Olds."[29] The goal of the project is to give every four year old in the community access to quality early learning experiences. The plan includes three different operational models. The first model provides a traditional preschool located at one of the district's elementary schools and linked with non-district staff who run before and after school programs. In the second model the preschool would be located at a "Partnering Agency," with the school district providing teachers and the agency providing other services. Model three, the most radical option, would give the management of the preschool program to a non-district Partnering Agency, such as a for-profit or non-profit preschool.

In yet another exemplary collaborative partnership, the State of Massachusetts has created the "Community Partnerships for Children (CPC)" program designed to provide high-quality programs for preschool-aged children and their families. Each city or town establishes a CPC Council consisting of agencies and families in a community or group of communities. The Council is responsible for planning the mix of children's services, in addition to preschool, which are needed by that geographic region; the services are funded through contracts with the State Department of Education. At least two million dollars of the state funding must be contracted to Head Start programs. The goal of the local CPC is to expand access to, and improve the quality of, preschool education, and at the same time to maximize the use of existing resources.

Appendix A displays 1998 data on agencies eligible to offer prekindergarten services with public funding, drawn from a Families and Work Institute report on Essential Elements for Policy Makers.[31] More programs have been added since that time. Thirteen of the states listed in this report are required to conduct community-level planning.

The State of New York's prekindergarten program requires that funded school districts must contract out at least 10%, and as much as 100% to eligible community agencies which include child care centers, nursery schools, Head Start grantees, private schools and preschool special education providers. As it has turned out, more than half of the New York prekindergarten funding has been contracted out to local providers. In New York City, more than 60% of the funding is contracted out to providers outside of the public schools. The requirement for a local advisory board has been credited in part with the relatively smooth implementation.[32]

In Florida, the "Early Childhood Collaborative Grants Program" created an unusual partnership at the local level between businesses and the child care community, benefiting the low income family needing child care subsidies.[3] Businesses agreeing to provide child care subsidies to eligible workers must contribute half the costs as a match to the state grants. A number of target businesses were identified by an earlier state-wide study. The subsidies are administered by the non-profit childcare resource and referral agencies. All districts in the state now receive these funds.

On both the national and community levels, Head Start has always incorporated a collaborative ideology. In a recent example though the creation of Early Head Start, local grantee agencies have collaborated with family child care home providers to offer Head Start services to infants and toddlers. This collaboration has provided new resources to Head Start and has brought training and technical assistance resources to the linked family home providers which were previously unavailable to them. At the national level, Head Start has been a partner in long-standing relationships with agencies in the Public Health Service such as the Maternal and Child Health Bureau and the American Academy of Pediatrics.

Collaboration is hard work, requiring partners to give up something (usually control) in order to achieve a larger end. Productive collaboration demands good leadership, an atmosphere of commitment to the common good versus competition, enough time to flesh out how things will work and a realistic time-table for implementation. One of the serendipitous outcomes reported in the literature is greatly improved relationships between the schools and other organizations.

In summary, an active partnership strategy greatly expands the resources for funded prekindergarten programs, allows for blending of funding sources for maximum leverage, includes potential opposition from the outset, and creates a larger set of stakeholders for community investment. Only eight states or regions consign funding to school districts; all other states encourage and even mandate collaboration.

V. A REVIEW OF NEEDED RESOURCES

In the early years of an implementation for universal preschool, a large part of the effort will be dedicated to increasing the resources required for a successful program. These resources can be summarized as financing, facilities, staffing, program standards, evaluation, support systems and governance, linkage and collaboration. Successful implementation will require well-designed support systems to administer the program, collect data, conduct evaluations, and plan for improvement. Transportation issues must be addressed, as well as wrap-around services that provide both preschool and linked child care services. Finally, the supply of teaching staff must be increased, as well as the training those professionals receive.

Facilities

Communities need to establish master plans to identify remedies for the space shortage which, in the case of San Mateo, would require an estimated 10,500 spaces to accommodate all 4 year olds.[33] However, universal preschool is a voluntary program, therefore not all children would be enrolled. Both Wisconsin and Massachusetts are good examples in the literature of community-level master planning. Most states have employed a targeted approach to implementation, while only a few have achieved, or are moving towards full universality (Georgia and New York) at this time.

Facility needs will include the expansion of those that already exist, where possible, and the building or renovating of new facilities where they don't exist. Most states, as represented in the literature, have partnered with community child care and preschool programs to create the space needed; only a small number of states have used school sites exclusively. With California's constantly increasing population, such partnerships are a "must" if communities are to serve families who wish to use universal prekindergarten services. In most urban areas, public schools are using every bit of space possible, which frequently includes portable units. Child care facilities, on the other hand, are generally licensed by the state and must meet specific codes as in California, which may differ substantially from the school.[33]

Connecticut is a good example of a state that has addressed the problem of facility expansion. Under its Child Care Facilities Loan fund, Connecticut makes long-term, low-interest loans for construction or renovation of child care centers which are available as tax-exempt bond funding from the state Health and Educational Facilities Authority. The Department of Social Services pays up to 85% on the debt service for the bonds on behalf of eligible non-profit providers.[3] Connecticut also has created two other facility loan programs which are available to for-profit centers and family home providers as well as to non-profit centers. In this way the state has been able to finance multiple expansions and a large number of new facilities. What they learned from the experience is that many small child care providers in low-income areas need technical assistance on the whole matter of real estate development and loan management.

In another state example, Florida's Child Care Financial Assistance Program makes funds available as grants and loans to help child care providers start their businesses, to assist in accreditation and in improving over-all quality. Child care programs that comply with specified quality standards may apply for a 100% rebate of the loan principal.[3]

The San Mateo Child Care Partnership Council suggests that a facilities development "intermediary" could serve to broker training, technical assistance, and facilities financing to meet the specific needs and purposes of child care and early learning programs. An intermediary could provide a mechanism for coordinating, collaborating and building new partnerships between public and private sources of funding for development of facilities.[34] This proposal can be viewed as part of the support system that under-girds the universal preschool implementation.

Among other opportunities for funding or securing new or renovated facilities, the California Superintendent's Universal Preschool Task Force in California suggests the following:

- Issuing bonds.
- Augmenting the existing revolving fund for facilities.
- Changing the state School Building Program law to ensure that schools are not penalized for allocation of space to preschool programs by changing the code to include preschool spaces in any space utilization calculation, and excluding classrooms used for child development programs from available space estimations.
- Issuing certificates of participation.
- Encouraging collaborative efforts among city planners, developers, employers, and businesses.
- Retrofitting of nontraditional facilities, such as military buildings.
- Creating joint-use agreements with local governments for the use of new or existing facilities.[2]

Support Systems

- Well-designed support systems will be required to maintain a quality universal preschool program. Essential elements of such a support system, from the experience of other states, include:

- Governance systems
- Program administration
- Technical assistance and professional development activities
- Parent resource and referral services
- Accreditation and oversight systems
- Rewards and incentive programs
- Data reporting and regional/state data collection
- Program evaluation
- Program planning and improvement efforts
- Linkages with K-12 systems, other child- and family-serving entities, and businesses

These activities are all part of the support infrastructure that must be built in order to ensure good quality services. In California, some of these activities, such as resource and referral services and professional development activities are already in place. Others are in the process of implementation such as accreditation (application of the Child Development Permit Matrix), and still others will need to be built (governance and program administration at the local level, technical assistance). San Mateo is currently participating in the state-wide CARES program to incentivize child care providers to upgrade their education, thereby improving staff quality and reducing turnover. It is also clear from the Child Care Partnership Council 2000-2005 Strategic Plan that the child care community is already deeply involved with the county office of education in thinking through these issues of governance and management.

In the literature these support system activities are usually assumed at the state level, although some states have chosen to allocate specific support functions to the local level through targeted funds. For example, eight states provide "enhancement" grants to local districts for infrastructure purposes, to be used as the area feels is most needed.[1] One model, employed by the state of Delaware, makes grants to new programs for purchase of materials, renovation of facilities and other improvements to meet quality requirements.

Linkages

Prekindergarten initiatives can coordinate and build on existing early childhood programs in the state and in each community. All but seven states have taken this approach, funding a variety of prekindergarten programs and setting more or less stringent standards for their performance.[31] Communities have the opportunities and incentives to coordinate their prekindergarten resources with other early childhood programs. Coordination and collaboration among various agencies must be stressed in order to minimize the conflict that inevitably occurs when scarce resources are to be divided among multiple early childhood efforts. One of the goals of the San Mateo Child Care Partnership Council (CCPC) is for increased collaboration between school districts, early childhood programs and other agencies providing service to young children and their families. They offer the following recommendations for meeting that goal:

- Form collaborative relationships to develop standards and shared protocols, curricula and testing formats.
- Expand "preschool to kindergarten" connections and interactions between preschool teachers and kindergarten teachers and between teachers and families to assure a smooth transition for children.

Potential partners in their efforts include the CCPC, Children & Families First Commission, the San Mateo County Office of Education, Peninsula Partnership for Children, Youth and Families, local private and public child care and early learning programs, and local school districts.[34]
The variety of collaborative relationships which exist in state and local programs was summarized in the section on "Creating Partnerships."

Data Collection

A uniform data collection system is required to determine how many children are being served, what facilities the children are in, where the programs are located, how many certified teachers are in place, how many others are working towards certification, and where they are receiving their certification. Without such data, planners are in the dark when it comes to funding for needed resources and legislators are in the dark about the viability of the requests being made.[4]

The initial design and implementation of a comprehensive early care and education data system will require an interdisciplinary committee, with help from data systems consultants with demonstrated expertise. Some data collection systems already exist, and hopefully can be integrated into new data approaches which will support management and planning. Staff persons who will have to provide the data for the system (early care and early education personnel) should have input into the design of the system.[27] At the state level, the data collection practices vary greatly, from those that collect only annual reports from grantees to other states such as Illinois, Georgia and Michigan that track participating children over long periods of time. The collective experiences in child care within California highlight the frustrations inherent in attempting to obtain data on usage and other important issues for planning purposes, when such data do not exist. Recent exercises in carrying out mandated child care needs assessments for the State Department of Education, Child Development Division, attest to the difficulties encountered. A variety of data sources on children co-exist at the local and state levels, but frequently fail to interface with one another to produce a more comprehensive picture of services and needs at the community level. A single system for data collection in the universal preschool program will need to be designed.

Transportation

One factor often overlooked in the planning process has been transportation, and there is no doubt that this constitutes an important barrier to access. Public schools have historically accepted responsibility for transportation for school children who are within their care. However, this service has more often than not been left out of the prekindergarten planning process, no doubt because it is an expensive and controversial issue. The fact is that at least half of urban dwellers, a third of suburban dwellers and a quarter of rural residents do not own a vehicle, according to a federal transportation survey carried out in 1995 and reported in 1998.[35] In addition, we know that low-income families are least likely to own personal transportation and will be using public resources. This issue has direct implications for planning the location of prekindergarten services and for providing a plan for transportation means in the case of communities where no viable public transportation exists.

Most states do not require transportation as a condition of program funding, or provide additional funding to offer this service. School districts, strapped for money, frequently reduce or eliminate school transportation services as was the case recently in Alameda county. On the other hand, some programs have had long-standing policies to offer this service, notably Head Start grantees. Six states require transportation; sixteen states do not require it, but report that some programs provide it voluntarily. In fourteen states the school district transportation funds are used to cover the cost for prekindergarten programs. Local districts in these states are frequently reimbursed for a portion of their costs. New York allows prekindergarten children to be included only if there are unfilled spaces on buses. Of course, concerns regarding safety of young children riding school buses will require urgent attention. This includes conflict with state laws that require all children up to age six to ride with designated passenger seat restraints as in California.

Half-day programs create even more obstacles for working parents, as the problem of providing transportation in mid-day is often problematic. In response, some schools have instituted wrap-around services or services offered through collaboration with other agencies or programs, such as Title I, so that a full-day program could be carried out and the transportation and working parents' issues could be eased.[4]

The Bay Area Metropolitan Transportation Commission, during a Welfare- to- Work Transportation Summit, "Linking People to Success," issued a report that noting that many school programs do not have after-school care on-site, requiring children to be transported during the day to another site.[36] The report also noted the concern that many child care services and early learning programs do not operate early enough in the morning or late enough at night to allow parents time to travel from work. Among the recommendations the report offered:

- Create a Child Care Facilities Development Fund to provide matching funds for the development of child care facilities at or near transit hubs and stations.
- Seek state legislation to increase funding for child care facilities to offer transportation and assist in the development of an insurance liability pool.
- Advocate for on-site child care at all public schools.
- Develop a brokered transportation system to transport both working parents and their children.

Wrap-Around: Half Day versus Whole Day

The needs of working families can best be met by creating wrap-around programs. This involves providing full-day/full-year program options, preferably with the child staying at the same site for the entire day in order to minimize transitions. A different option is the one referred to earlier in this review, where one region in Wisconsin brings the credentialed teacher from the school to the site for a designated number of "early education" hours in a program which is located in a traditional child care site. Wrap-around services also include the provision of parent-focused education and related activities outside of working hours, much like the School Readiness plan envisioned by California at this time. Fees charged for extended care hours should be set on a sliding fee scale, and should be minimal for low-income working families.

Eight states have programs that provide a full-day for at least some of the families they serve. Maine promotes partnerships between Head Start and child care that allows programs to offer a full-day schedule. Maryland provides preschool programs with funding from a general school reform in an effort to extend the length of the program day. Eight other states have prekindergarten programs which operate on a school-day schedule of about 5 to 7 hours a day. Thirty-one states support only part-day classes of about 2 ½ to 4 hours a day as their core service. Several states allow the length of the prekindergarten day to be determined by local option, while others use the Head Start Performance Standards to determine the hours. Wisconsin allows for extended days which must be funded by the locality.[29] The greatest problem for working families is the fact that most of these programs function on a short day and school year basis, leaving the summer months uncovered so that families must search out interim arrangements. Family child care home providers are potentially an important interfacing resource and should be considered as an option in planning wrap-around services.

Examples of full day/full year services are Connecticut's School Readiness initiative, which fully reimburses the cost ($7,000) for participating children and requires that 60% of spaces be for this full-day participation. Communities are required to assess their needs as part of the local planning requirement. The Massachusetts Community Partnerships initiative targets the working family and requires that at least one third of participating children receive full day/full year services. The state also encourages local councils to consider offering flexible programs for non-traditional hours needed by parent schedules. Hawaii's Preschool Open Doors program offers full-day/not full year option to parents and provides funds directly to parents who can select programs that best meet their needs.

A number of states provide extended hours through other sources of funding such as child care subsidies, Title I, and local funding. Another group of states operate a small number of their programs on a year-round basis. Several states reported in the literature have taken initiatives to encourage coordination with other existing funded programs, such as before and after school care, and have offered incentive awards for coordinating with community-based programs.[1] These initiatives should be studied for their applicability to the San Mateo County prekindergarten design.

The optimal prekindergarten program offers a full day/full year option to meet the needs of working families. These programs are the least disruptive to children and provide working parents with the assurance they need that their children are safe and secure.[1]
In California, the Superintendent's Universal Preschool Task Force noted that the majority of California families work full-time, and many need full-day, year-round services for their children. The Task Force recommends that families should pay for extended hours of child care beyond the half-day preschool program which should constitute the core service.[2]

Staffing

The California Code of Regulations requires the following staff ratios for the preschool setting:

- Preschool (36 months to enrollment in kindergarten)- 1:8 adult-child ratio, 1:24 teacher-child ratio.[30]

If universal preschool classes in San Mateo County all had 24 children, an additional 441 classrooms and 1,323 teaching staff would be needed each year to serve the more than 10,500 four year olds. However, as noted before, not all four year olds will be enrolled; some families will choose not to send their children to preschool and others will choose to remain with their current arrangements. Based on the Georgia experience, it might be safe to use the estimate of a 65 to 70% enrollment. The 1999-2000 San Mateo County child Care Needs Assessment estimates that the current availability can only serve 25% of the need for child care. Within that population, spaces are available for only 57% of preschoolers.

In an effort to recruit and retain early childhood education staff, San Mateo has initiated a program to upgrade the educational background of child care providers. One of these efforts, as of the year 2000, is the San Mateo County Community College/Cañada program which provides textbooks, bilingual tutorial support, and includes the development of a home-based child-care certificate program.

Another such effort is the CARES (Compensation and Retention Enhances Stability) 2001 Program referred to earlier. It is anticipated that this initiative will improve the retention of qualified staff by promoting, supporting and rewarding continuing education.

The preparation of preschool teachers must include specialized knowledge and skill in child development, including the recent findings on early brain development. Preschoolers should not be viewed as smaller versions of elementary school students. The literature speaks to a variety of approaches being used to train staff. For example, the Missouri Department of Elementary Education established Project Construct in 1986 to help preschool, primary and elementary teachers incorporate a curriculum based on Piaget and constructivist theory into national and state curriculum frameworks.[37]

Oklahoma requires that all prekindergarten teachers have early childhood education certification and that teachers use curricula and learning environments that are designed for four year olds and appropriate for their developmental levels. Connecticut is increasing the focus on literacy and the overall quality of preschool special education, Head Start, and their school readiness programs. Their "Facilitation Project" supports public schools, special education, child care, and Head Start programs in seeking Competencies Training accreditation by the National Association for the Education of Young Children.

Teacher credentialing and compensation add to tensions and prevent collaboration between schools, Head Start, and child care programs. One important example is the differential in salary. Many providers leave for-profit and non-profit centers to work for child care programs in school districts and Head Start because they pay better. Staff turnover is a significant factor in lowering the quality in child care. There is currently no public infrastructure to pay for professionally certified preschool teachers; no professional credentials are required for child care as exist for public school teachers.

These differences can lead to an informal professional hierarchy that gets in the way of cooperation and collaboration between public schools, Head Start and child care teachers, and need to be thought through.

VI. SETTING STANDARDS FOR QUALITY SERVICES

"The quality of child care is primarily related to higher staff-to-child ratios, staff education, teacher turnover, administrators' experience, and their effectiveness in curriculum planning," were the major findings of the widely read 1995 study entitled "Cost, Quality, and Child Outcomes in Child Care Centers."[7] In addition, the researchers concluded that teachers' wages, education levels, and specialized training opportunities were the most important determinants in identifying poor, mediocre, and good-quality centers. Much has been written about quality standards in child care; the findings of the above study are generally accepted in the field, therefore spawning the efforts being undertaken in several states to increase education and retention by offering monetary incentives. This is a necessary but temporary phase in upgrading quality while longer-term and more institutionalized solutions are sought, and a national infrastructure is created. Educational upgrading must be coupled with increases in wages to which there are currently severe market barriers. One solution sought in

California is professional career advancement through the application of the Child Development Permit Matrix (see Appendix B). The matrix was adopted in California in February 1997 and was the result of the recommendations proposed by the Advancing Careers Project, the Commission on Teacher Credentialing, and the Superintendent of Public Instruction.[2] This matrix can serve as the staffing standards for a County of San Mateo Universal Preschool Program. Equitable salary scales tied to the matrix need to be tailored to the real cost of living in San Mateo County.

One study of quality contains an excellent review of research conducted in recent years on the relationships between child care quality, child outcomes and process elements which are believed to affect quality. Some questions have been raised about the accuracy of research findings as a result of uncontrollable confounders.[38] For example, while the Cost, Quality, and Child Outcomes study painted a rather dismal picture of existing child care quality in four states, the author points out that 52% of the centers approached for their participation declined. This strongly suggests that the findings on quality were skewed towards a more optimistic view than what really exists. In a similar way, the larger study carried out by the National Institute of Child Health and Development (NICHD), the study of Early Child Care Observations, is not representative of national household composition. Some obvious distortions appear as a result of the ability of high-income parents to purchase better care than those of low incomes. In spite of these limitations, the NICHD study again confirmed the fact that educational background and training are strong predictors of positive outcomes for preschoolers. A number of validated scales have been used to measure quality including The Early Care Environmental Ratings Scale (ECERS), the Infant/Toddler Environmental Rating Scale (ITERS), and the Family Day Care Environmental Rating Scale among others.

Appendix C contains a table on "Concurrent Associations Between Child Care Quality and Child Developmental Outcomes" from the referenced study by Vandell and Wolfe.

Successful prekindergarten initiatives have taken visible steps to ensure funders and participants that the programs to be supported were of high quality. Strong and well enforced standards concerning certification of key staff members and the provision of technical assistance personnel to improve the overall quality of the program were two successful strategies employed in other states. Most states have developed curriculum materials that can be used by individual centers and programs. These efforts have generated greater public support and acceptance for the programs.[4]

According to the Children's Defense Fund, high quality prekindergarten programs ensure that:

- All children are cared for in environments that protect their health and safety, and have experiences that help them develop to their full potential.
- Children receive the attention they need in classes with small group sizes and a limited number of children per staff.
- Children learn from highly qualified teachers who are knowledgeable about the development of young children and who are adequately compensated.
- Children and families with unmet nutritional, health care, and social services needs are provided with supports that are at least as

comprehensive as those provided by Head Start. Programs may meet these needs either by working with families directly or linking them to other resources and programs in the community.

- Parents have extensive opportunities to be involved in their children's prekindergarten experience and to participate in parent education and support activities.
- Technical assistance, targeted financial assistance for quality, and regular programmatic monitoring are provided.
- Periodic evaluations are conducted to improve programs and demonstrate results.[1]

A formal system of accountability and accreditation should be required to ensure and maintain prekindergarten program quality. A number of recognized national accreditation sources already exist to ensure quality and are being promoted at the local levels. These include the National Association for the Education of Young Children; the performance standards for Head Start; High/Scope; the National Family Child Care Association; the Ecumenical Child Care Network; and the National Program Improvement and Accreditation System.[39] Licensed providers, whether public or private, who have the professional qualifications and whose programs meet the standards for content and performance, program design, and health and safety should be eligible for accreditation. Quality review processes similar to those offered by the Program Quality Review (PQR) and Western Association of Schools and Colleges (WASC) could be adopted.[2]

All child care and early learning programs should meet standards of high quality. In an effort to meet that goal, the San Mateo Child Care Partnership Council recommends the following strategies:

- Adopt and promote county-wide child care competencies, standards and developmental measures in order to achieve quality child care and early learning experiences.
- Identify and connect child care and early learning programs to sources of funding to achieve accreditation and quality standards.

Potential partners in this effort include the Child Care Partnership Council, Central San Mateo Labor Council, Division of Apprenticeship, Children & Families First Commission, Child Care Coordinating Council of San Mateo County, Family Child Care Association, Peninsula Partnership for Children, Youth and Families, Professional Association of Childhood Education, San Mateo Consortium of Quality Programs, and the San Mateo County Office of Education.[34]

Program Evaluation

Evaluation of State Preschool Programs varies from state to state, but all share a common theme of ensuring funders, staff members, and parents that the programs are of high quality. In California, the Department of Education (CDE) monitors fiscal and program compliance every three years. Programs are expected to file quarterly attendance and fiscal reports and conduct annual fiscal audit and program quality self-review using instruments developed by Child Development Division of the California Department of Education.

In Georgia, early childhood consultants from the Office of School Readiness (OSR) conduct 3 to 4 site visits annually to assess program performance and offer technical assistance as needed.[31] These same consultants conduct a formal on-site evaluation of each program annually. A longitudinal study of the program began with parent satisfaction surveys in 1996-97 and started to collect other data in 1997-1998. Early findings on program quality and parent satisfaction are positive.

New York State Districts are required to submit annual final program reports to the state. State staff provide fiscal monitoring annually and program monitoring on a less regular basis due to small number of staff available. Technical assistance is available from state staff. An evaluation of the program showed positive gains for children, reduced special education placement and grade retention, and increased parental expectations for their children's educational success.

In summary, researchers and professionals agree that high quality early childhood education requires well-trained personnel who are appropriately compensated, working in an attractive setting and under worker-friendly conditions, with curricula and materials designed to enhance children's development. The children should work and play in small groups with a reasonable child-to-teacher ratio, and staff should have opportunities for continued training. But how do early childhood educators create these conditions when faced with limited government support, restricted family resources, and a fragmented support system? If universal preschool is to be successful in meeting the quality demands of its stakeholders, it will require an infrastructure that will provide (1) personnel preparation, (2) technical assistance, (3) applied research and program evaluation, (4) communication, (5) data systems, (6) comprehensive planning, and (7) coordination of support elements.[27]

VII. OPTIONS FOR FUNDING

While the American public has been willing to invest in programs for low-income children and for children with special needs, no commitment has been made to assuming financial responsibility for all preschool children. Therefore, most policy makers have resisted support for universal programs for early childhood.[27]

It is estimated that 65% to 70% of those in the work force require some form of child care. This figure is expected to increase as more people seek employment and job training in compliance with their state Temporary Assistance to Needy Families (TANF) plans.[40] The most recent national data indicates that a median-income family with preschool aged children spent approximately $4,100 per year on child care. This does not represent the full fee of child care due to the fact that many families receive some sort of subsidy to offset the cost. In 1998, the average cost for full time child care for a year old child ranged from a low of $4,000 to a high of $6,000. In fact, in 49 of 50 states, the cost of child care was higher than the annual fees at a public college.

Traditionally, child care has been financed through the private sector; families are responsible for paying the majority of the costs. Roughly 60% of the revenue for child care and early education comes from out-of-pocket fees paid by parents. The remainder is paid for by federal, state, and local governments through subsidies and tax credits.[3] In states where median-income families are eligible for child care subsidies, their expected contribution is an astounding 15-18% of their income. In contrast, the U.S. Department of Education would expect the same family to contribute 5-7% of its income to pay for college related fees. With fees so high, many individuals find it impossible to afford child care. Income is the best predictor of participation for early education services with many low income children not enrolled. Those who are enrolled, participate mostly in publicly funded programs such as Head Start and preschool programs in pubic schools.[41]

The 1995 study of Costs, Quality, and Child Outcomes noted earlier found that sites that were publicly operated and received direct public funding provided services of higher quality than programs that relied solely on parent fees.[7] The conclusion of the report was that market forces constrain the cost of child care while simultaneously depressing the quality of care. This research demonstrated the need for public funding sources to supplement child care services of all forms.

Characteristics of Successful Financing Strategies

Financing strategies are not developed in a vacuum; they are influenced by social and political forces. Most successful strategies are developed in similar contexts. For instance, child care initiatives are frequently embedded in larger political issues such as educational reform or economic development. The increased emphasis of the welfare reform on employment has been a significant force in increasing child care funding. Many states have recognized that, by increasing the size and the quality of the child care industry, they can in turn increase economic development through increased productivity in the child care dependent work force.

Successful strategies are developed through a clear understanding of the political climate as well as what the limitations are under the law. "Knowing what powers are available to which levels of government, what tax strategies can be used and how government works is essential to crafting a public-revenue strategy." Although the approaches to developing funding strategies are diverse, the ability to interpret and conform to the current political climate is a necessary aspect of developing a successful financing strategy. When child care initiatives are linked to political issues that are deemed important by society, the greatest opportunities to instigate reform are realized.

Successful financing strategies are often developed over time. Long-term commitment, planning, and buy-in from key stakeholders are essential. Strategies are also defined by their ability to recognize the particular needs of the community for which they are being designed. Community assessment that takes into account unique local needs and resources allows funding to be targeted to meet those needs. Successful strategies do not try to shift additional costs to families regardless of income. They target children within a wider socio-economic status to ensure more universal access to child care.[3]

Federal Funding Sources

There are many existing federal and state funding streams that are available to help communities finance child care. These funding sources allow a high degree of flexibility for states to utilize them in ways that will provide the most benefit to its populace. For instance, the Child Care and Development Block Grant (CCDBG)[42] is the primary source of direct federal funding for child care. This block grant allows states to support child care services for children under the age of 13 in families that earn below 85% of the state median income. Under CCDBG rules, states have the ability to set income eligibility standards and parent copayment levels.

The federal government also provides money for early childhood services through welfare reform, such as Temporary Assistance for Needy Families (TANF). States can spend TANF dollars on child care in a variety of ways. They can transfer TANF dollars directly to the Child Care and Development Block Grant or the Social Services Block Grant (SSBG), which is authorized under Title XX of the Social Security Act to provide a variety of social services, including child care. They can also allocate TANF funds specifically for child care services as long as the funds are spent for low income families.

States may transfer up to 30% of their TANF funds into the CCDBG or 4.25% into the SSBG. Funds that are transferred into one of the block grants are subject to the rules of the block grant they are transferred to. States have 2 years to spend TANF funds that have been transferred to the CCDBG. Funds transferred to the SSBG can only be used for services provided to families whose incomes are less than 200% of the federal poverty level.[43]

Title I Grants to Local Educational Agencies is another federal funding stream designed to serve low achieving children in high poverty areas. Originating from the Elementary and Secondary Education Act, these funds provide extra academic support to help disadvantaged students keep pace with their classmates. Title I funds are available to support extended day kindergarten programs. Allocations are based on the number of eligible children in each area school. It is estimated that during the 1999-2000 school year, 17% of all school districts that received Title I funds "spent approximately $407 million on preschool services making Title I second only to Head Start in its level of federal preschool education funding."[44]

The Individuals with Disabilities Education Act provides grants to states to fund preschool programs under Section 619 of Part B. These funds are directed to serve children ages 3-5 with disabilities. To qualify for federal funds, states must provide a "free, appropriate, public education to children with disabilities." Funds are authorized to be used for support services, for direct services, adminstration costs, and to supplement other funds to develop a statewide coordinated services system.[45]

Head Start is another federal source of funding for child care. Head Start is an early intervention program for low-income children (family income below the federal poverty level) between the ages of 3 and 5, and for children with disabilities. Funds are provided to local public agencies, private non-profit organizations, and school systems to provide Head Start services at the community level. The federal government grants additional funding to states that develop unified plans for early education and child care that include participation from Head Start agencies.

Many states synchronize child care and early education programs with Head Start programs in order to maximize funding possibilities. "According to a dozen state reports, coordination among early childhood education programs, including Head Start, has resulted in positive outcomes, including better child development, more affordable child care, increased access to better quality services, more funding, more comprehensive services, and consistency in caregivers and settings for children over time."[43] Collaboration between Head Start, child care and preschool programs has resulted in more children receiving services. However, Head Start serves only about half of the eligible children and federal subsidies reach less than one fifth of all eligible children.[46]

Federal funding can also come from indirect sources such as tax credits. Families are allowed to deduct up to $2,400 from their federal income tax for child care related expenses on a child below the age of 13 and up to $4,800 for two or more children. However, this credit decreases as income rises. Families that have an annual income over $28,000 only receive 20% of the credit. Further, the tax credit is not refundable, so families that earn a high enough income to owe income tax are not able to claim the credit.[43]

State Funding Sources

Federal funding is not the only source of public financial support for child care services; many states spend their own money. As part of the CCDBG requirements, states are mandated to allocate matching funds to serve the targeted population. Matching funds are also known as "maintenance of effort", which refers to the requirement that a state must continue the level of funding that had existed during a specified base period. Expenditures for prekindergarten programs may be counted toward the required maintenance of efforts matching funds in certain circumstances.[47] However, states are increasingly spending above and beyond the required matching amount. Many times these funds are used as subsidies to increase eligibility limits, reduce parent fees, and to increase child care provider reimbursement rates.

States are also increasingly using funds to finance state preschool programs as research links early childhood education with improved performance in school, less crime, and better jobs. In 1998-1999 states invested 1.7 billion to serve 725,000 children in preschool programs. As with the federal government, states are also financing the collaboration between Head Start, child care and prekindergarten programs.

Some states offer a tax credit modeled after the federal tax credit for child care related expenses. Eight of the states have a refundable tax credit, so families who owe no state income taxes may still claim the credit. Private/public partnerships are encouraged by many states; the Florida state legislature appropriates some money for child care that can be matched by employers in the state. These state or community partnerships are encouraged through business tax credits or other incentives. Less than 1% of child care funding in Florida come from this source.[43]

Revenue can be generated at the state level to subsidize early childhood education programs. Such potential sources of revenue include: state and local property taxes, sales taxes, excise taxes, state income taxes, tax credits or tax deductions, tobacco settlement funds, employment tax benefits, and state lotteries.[3] States can generate additional revenue by charging fees for various services. There are three main types of fees: impact, service, and enterprise.[3] Each of these financing strategies will be discussed briefly followed by a few illustrative examples of how various states have combined these strategies to successfully implement an early childhood education program.

- Property taxes are levied against residential and commercial property. They can be applied by units of local government, such as cities and counties. Property taxes are usually the main source of funding for municipalities, accounting for up to 90% of annual revenue for most communities. Public education is primarily funded through this source.[46] A percentage of property taxes can be allocated to child care.

- Sales taxes are one of the main revenue sources at the state level. Sales taxes are usually accrued to the sale of goods. Local government agencies have the ability to impose additional sales taxes. Items commonly subject to additional tax are hotel rooms and restaurant meals.

- Excise taxes are taxes paid on certain goods such as tobacco and liquor. These taxes are levied in an attempt to offset the cost of smoking such as increased medical costs. In 1998, California voters passed the Children and Families Initiative (Proposition 10) which is an additional tobacco surtax. This initiative establishes a 50 cent excise tax per pack of cigarettes sold. It will generate approximately $750 million a year to expand services for children up to age five.[1,3]

- State income tax is the taxation of individual earnings. States can generate funds for specific programs by offering a voluntary check-off box on the income tax reporting form. Individuals can contribute to the program by checking the box. The most common use for these check-off boxes is political contributions and elder care.

- As discussed earlier, states can provide tax credits (which are subtracted from taxes owed) or tax deductions (which are subtracted from taxable income before tax is computed) for child care related expenses. These tax benefits are usually linked to the federal government tax benefit.[3] They represent an indirect source of funding as they reduce state revenue, but they are intended to reward the desired behavior that the tax benefits target.

- Recent tobacco settlements have provided states with a substantial funding source.[46] A few states have begun earmarking portions of that money for child care related issues such as state preschool programs.

- An indirect form of child care funding comes from employers who utilize the tax credits provided by the states. Employers with a qualified dependent care assistance program are allowed up to $5,000 per employee from federal income tax, FICA and unemployment taxes. These benefits are not usually subject to state taxes. The most common form of this benefit allows employees to deduct a certain amount from their pre-tax salary that they are reimbursed to use for child care purposes. Neither the employee nor the employer is responsible for taxes on this money. Employers can also receive tax benefits for providing or paying for child care services.[3]

- Impact fees are charged in anticipation of future government expenditures that are caused by population growth in order to offset that cost (i.e. schools). Service fees shift part of the fee for a public service to user (i.e. garbage collection). Enterprise fees are generated through a "self-supporting enterprise created by government" such as a national park. Revenues generated from these fees can be used to fund other government expenses.

- State lotteries are often seen as a more acceptable way to generate state revenues than direct taxation. Other forms of gambling also exist in many states, such as gaming in Nevada and Indian gaming in California. Taxes are often assessed on gambling income as well for the right to operate gambling establishments. In 1996, states that allowed casino gaming earned nearly $2 billion in revenue. The state of Georgia offers universal preschool services to 4 year olds in the state and this program is funded primarily through the state lottery. In 1998-1999 the state provided $217 million in lottery funds to serve over 61,000 children.[1,4]

To effectively develop a comprehensive funding strategy for early childhood education programs, states cannot rely on only one of these funding sources. As discussed above, a community assessment needs to be performed in order to discover the local needs, and then integrate multiple sources of funds to address those needs. This is known as a **financing approach** which is defined as a "package of financing mechanisms that are combined to provide near-universal coverage of a social benefit for a specified purpose."[46] A financing approach can consist of all public monies, all private monies, or a combination of the two. In the chart that follows, the implementation strategies of several states are presented, including financing.

VIII. SUMMARY OF IMPLEMENTATION STRATEGIES BY SELECTED STATES: RECOMMENDATIONS AND KEY LESSONS LEARNED[1,4,31,48]

State	Georgia	Illinois	Massachusetts	New Jersey	New York	South Carolina	Texas	Common Features
Name of Program	Prekindergarten Program for Four-Year-Olds	Illinois Prekindergarten Program	Community Partnerships for Children (CPC)	Early Childhood Program Aid (ECPA)	Universal Prekindergarten Program (UPK)	Early Childhood Program	Public School PreKindergarten	N/A
Political Leadership	Governor.	State Board of Education, influential advocacy groups and friends of state legislature. Strong public support.		N/A: Program established in response to school finance equity lawsuit *Abbott v. Burke*.	Lieutenant Governor; Speaker of the Assembly; and members of the State Department of Education. (bottom-up – without support of governor)	Governor; Superintendent of Education.	Governor; Head of Early Childhood Education Commission. Commission of Education.	Commitment of high-ranking government officials.
Funding	>$225 million per school year; Grant funded (vs. part of school budget). State lottery funds utilized to fund Pre-K program.	$200 million per school year. Grant funded (vs. part of school budget).	$104 million per school year; Federal Child Care and Development Fund, along with additional dollars from other federal sources and state general revenues, including funds transferred from TANF block grant and TANF funds spent directly on child care. Parents pay copayment fees based on a sliding fee scale.	$70 million per school year. Funds are distributed on a non-competitive basis to school districts with high populations of students with low family incomes; School aid formula is based on enrollment and poverty level.	$225 million per school year. Anticipated to be $500 million in fourth year of implementation. $2700 in general state funds per student per year. No parent fees.	Raised sales tax by one-cent (to pay for global educational reform efforts). Provided funds for school districts; funds distributed based on % of students scoring "not ready" on 1st grade readiness test. $23.6 m. for Pre-K program (with localities spending additional funds).	$180 million per school year; $200 million added for upcoming 2-years (to fund expansion from ½ to full-days), for a total of approx. $280 million per school year. Pre-K program is included as part of continuing education budget, so funding more stable. Districts are allocated funds.	$200 million + per school year
Program Administration	Office of School Readiness (OSR) (reports directly to Governor).	Illinois Board of Education.	Department of Education, Early Learning Services.	State Department of Education.	State Department of Education.	Office of Early Childhood Education in State Department of Education.	Texas Education Agency.	State Department of Education.

State	Georgia	Illinois	Massachusetts	New Jersey	New York	South Carolina	Texas	Common Features
Service Providers	Contracts with public school districts , Head Starts, private providers.	State contracts with school districts which subcontract with Head Start and child care centers.	The lead agency for a community may be a public school, Head Start, or licensed child care center. Lead agency subcontracts for services.	State contracts with school districts which subcontract with Head Start and child care centers.	State contracts with school districts who subcontract with Head Start and child care centers. A minimum of 10% of funds must be subcontracted out to community agencies.	State contracts with school districts; Districts may subcontract with Head Start centers or programs funded by the Child Care and Development Block Grant; Most services are conducted by the public schools;	State contracts with school districts which subcontract with community agencies (Head Start, child care centers).	State contracts with school districts who subcontract with community agencies.
Implementation Strategy	From pilot program (serving 750 "at-risk" students) to full-day universal program for all 4-year olds. Implementation of program is voluntary	Gradual implementation. Units in every county in the state. Implementation of program is voluntary.	Original program started in 1986 as part of the Public School Improvement Act of 1985. In 1992, it was revised and became CPC when additional funds were appropriated.	In 1997-98, the 28 "Abbott" districts were required to provide half-day preschool for all resident 3- and 4-year olds; as of 1998-99, 136 districts were eligible; full implementation required by 2001-2002 school year.	5-year phase-in. Gradually increasing numbers of districts eligible to apply (over 4-5 yr. period).	Initially not all school districts required to have programs. After program in place about 10 years, all districts required by state to implement the program.	Gradual implementation (over 15+ years). Any school district **may** offer Pre-K classes, but any district with at least 15 eligible 4-year olds **must** offer a Pre-K program.	Gradual implement-ation.
Target Population	Initially "at-risk"; Expanded to serve all 4-year olds.	Children "at-risk" for academic failure or for whom English is a second language (ESL). 22% of statewide 4-yr old population served.	Children in families with income up to 100% of State Median Income (SMI); may be extended to families with income up to 125% of SMI according to local need.	Three- and four-year olds who reside in one of the special needs districts (districts with high concentrations of low-income children, as defined by poverty level.)	Universal; priority given to economically disadvantaged children of working/schooling parents. 13% of statewide 4-yr. old population served.	All children "at-risk" for academic failure or for whom English is a second language (ESL). 30% of statewide 4-yr old population served.	Children who are educational disadvantaged, homeless, or for whom English is a second language (ESL). 22% of statewide 4-yr old population served.	Initial focus on "at-risk" children. Some states maintain this "at-risk" focus, while others expand to universal program for all 4-year olds.

State	Georgia	Illinois	Massachusetts	New Jersey	New York	South Carolina	Texas	Common Features
Program Guidelines	Staff/child ratio: 1:10 Max. class size: 20 180 days/year Hours per day: 6 ½ 5 days/week Certified teachers. Must use OSR approved curriculum.	Staff/child ratio: 1:10 Max. class size: 20 Hours per day: 2.5 – 3 5 days/week Both full and half-day programs (mostly half-day). Certified teachers. Providers required to use one of several approved curricula.	Center-based programs must be accredited by the National Association for the Education of Young Children. Staff/child ratio and maximum group size must be in accordance with basic standards required per classroom setting. Hours per day: 2.5 – 3; 3 days/week Many programs are full working day year-round. Certified teachers. Curriculum determined at local level.	Staff/child ratio: 2:15 (1 teacher/ 1 aide) Max. class size: 15 180 days/year; Hours per day: 2.5; 5 days/week Certified teachers.	Staff/child ratio: 1:10 Max. class size: 20 180 days/year; Hours per day: 2.5 Certified teachers. Curriculum must be culturally appropriate for ages and developmental stages of children.	Staff/child ratio: 1:10 Max. class size: 20 180 days/year; Hours per day: 2.5; 5 days/week Many districts expanded to full-day with supplemental funds. Certified teachers. Curriculum determined based on needs of students.	Hours per day: 3 (additional funds added to expand to full day program) 5 days/week Certified teachers (many ESL teachers). No requirements in place re: staff/child ratio, maximum class size, or required curriculum; Districts encouraged to follow guidelines developed at state level.	Staff/child ratio: 1:10 Max. class size: 20 180 days/year; Hours per day: 2.5 – 6; Certified teachers.
Barriers to Implementation	Necessary collaboration initially overlooked.	Lack of space, transportation, and qualified teachers.			Late budgets. Lack of qualified teachers. Transportation. Lack of support by Governor and State Senate. Concern about future funding.	Transportation; Constant political opposition. Opposition b y Conservative Right. Financial costs. Lack of trained personnel.	Lack of space and qualified teachers.	Lack of space, transportation, and qualified teachers.

State	Georgia	Illinois	Massachusetts	New Jersey	New York	South Carolina	Texas	Common Features
Local Involvement	Coordinating councils required the commitment of many agencies and promoted a smooth start.	Limited collaboration between the schools and other agencies.	A Community Partnership Council (including parents) in each district develops plan for expanding and improving preschool education maximizing the use of existing resources.	Programs are required to collaborate with local service providers.	Public-private partnership with mandated minimum collaboration. Pre-K Policy Advisory boards for planning/ oversight	If local child care advisory committee exists, district must consult w/it to plan program based on identified needs and resources of the community. If not, district may collaborate with local early childhood programs to identify local needs and resources.	No reference to local involvement documented in the literature.	Collaboration between schools and local service providers.
Legislative Context	Facilitated by commitment from Governor and availability of designated funding source (the lottery), which did not dilute existing funds from other state programs.	Embedded in education reform legislation containing provisions for state-funded prekindergarten program.	Community Partnerships for Children initiative was housed and passed in the context of education reform legislation	ECPA was established by the Comprehensive Educational Improvement Act of 1996, the state's school funding law enacted in response to the school finance equity lawsuit *Abbott v. Burke* (brought against the state by 28 low-income urban districts).	Introduced in context of larger educational reform bill (LADDER proposal).	Introduced in context of statewide commitment to educational reform (Educational Improvement Act).	Introduced in context of HB 72. Goal of HB 72 is to break the debilitating effects of school failure by providing a solid foundation of school success among high-risk 4-year olds.	Introduced as part of larger educational reform package.

Recommendations and Key Lessons Learned from the States[27]

Political Leadership

- Political leadership is key (bipartisan if possible).
- If effort is spearheaded by Governor, Speaker of the House, or another key political figure, it is easier to gather support for the program.

Funding

- Lottery funds
- Increased sales tax
- Part of state's continuing budget
- Federal funds

Program Administration

- Housing the program in a separate office (i.e., Office of School Readiness), rather than State Department of Education, results in less competition with other educational needs. Departments within State Departments of Education compete for education resources.

Service Providers

- Need to involve professional child care providers (Head Start and child care personnel) in initial planning to minimize anxiety felt by these providers.
- Allow child care service providers to participate if educational standards have been met by their facility.
- Some states require that a minimum of 10% of funds go to non-school providers.

Implementation Strategies

- Gradual implementation; initial focus on "at-risk" children.
- Gradual implementation strategy increases public support and cuts costs.
- Although sudden implementation may initially result in less resistance due to opponents being "unarmed," gradual implementation allows time for collaboration and buy-in to occur.

Target Population

- Begin with focus on children "at-risk" for academic failure, with gradual expansion to all prekindergarten-aged children.

Program Guidelines

Establish standards such as:

- Certification of key staff members.
- Technical assistance personnel.
- Develop curriculum materials.
- Requirements for staff/child ratios, maximum class size, etc.
- Develop data system to track number of children being served to inform states of needed resources (teachers, classrooms, etc.).
- Track outcomes on specific measures for public support.

Barriers to Implementation

- Transportation issues arise with the implementation of half-day programs as working parents may not have a means to transport children mid-day. Funds have to be designated for transportation costs. Many schools are going with wrap-around services, or collaborating with other agencies to go to full day programs (subsidized by Title I, for example), in order to minimize transportation as a barrier to implementation.

Local Involvement

- Encourage efforts to bring about collaboration between program administrators, legislators, and child care service providers.

Legislative Context

- Link with larger educational reform. By including prekindergarten program in larger educational reform package, program is easier to fund and is not as noticeable to the general public. Diverts criticism/opposition and mutes perception of program costs.

- Early school failure as impetus (prevention of later dependence on larger society).
- Widely publicize intervention research and media attention to brain development; importance of early stimulation.

Change Strategies[27]

- Identify and cultivate various powerful political support (preferably bipartisan) that could promote the universal preschool concept.
- Establish an interagency technical planning group representing various stakeholders in the early childhood field (including parents). This group could prepare a multiyear development plan that would serve as the basis for a policy initiative for creating a universal preschool program.
- Initiate a media campaign disseminating the research documenting the impact of universal preschool on outcomes in young children. In addition to informing the general public of the advantages of the universal preschool concept, this media effort should specifically target decision makers who would be responsible for creating and implementing the program.
- Continuity for the planning effort can be achieved by involving state professional organizations that are proponents for early childhood education, and that may be adjuncts to national organizations (i.e., National Association for the Education of Young Children (NAEYC), Council for Exceptional Children (CEC), National Education Association (NEA).
- Be realistic about the time required to complete the series of activities needed to gain political support, establish the planning groups, develop program infrastructure, and carry out implementation plans.

As depicted above, there exist a wide array of strategies that can be utilized in implementing a universal preschool program. The key variables to be considered when developing an implementation plan include: political leadership, funding, program administration, service providers, target population, program guidelines, barriers to implementation, local involvement, and the legislative context. The lessons learned by other states that have implemented such programs provide guidance regarding how best to proceed in these areas.

IX. OUTCOMES AND MEASURES

Significant efforts have been made to demonstrate the outcomes of early care and education programs. From a research standpoint, credible results arise from carefully thought-out methodology and from replication. The research which has characterized the early care and education field is often: Idiosyncratic in nature, directed at convincing particular program funders to continue their support; regionally oriented, therefore shaped by the service norms in each area; and employs a variety of evaluation mechanisms. Research includes both small, experimental studies and large-scale services which have been institutionalized within a state or region's ongoing service structure.

Research conducted outside of the United States, albeit smaller in quantity, has been largely overlooked. However, preschool services and programs are more highly accepted by European and Commonwealth nations. It has been noted that the wealth of research in this country has not significantly increased the political will to support universal, high-quality preschool services.[49] Reviewing the studies in other countries, authors Kamerman and Kahn note that research has played the largest role where it "started with a policy choice made and uses child effects as the vantage point for designing ever more satisfactory programs."[50]

Overall, the review of other countries' research in the area of early childhood preschool programs, however they are defined, supports the finding that participation promotes cognitive development and school success. Low-income children gain most, as the research in this country also confirms. This is not to say that these gains close the gap between advantaged and disadvantaged children. International evidence also affirms that mother's employment and reliance upon child care do not harm children; on the contrary, they may reap substantial benefits in good quality care. This is an issue which obsessed American researchers in an earlier period.

The long-term effects of 36 early childhood programs (most of which provided child care) on cognitive and school outcomes were studied in a 1995 report by Dr. W.S. Bennett of Rutgers University.[51] Overall, the results provided considerable evidence on sizable gains to be achieved in school success which includes lower grade retention and special education rates. Effects on I.Q. increases were reported in all of the model (small) programs and inconsistently across the larger programs. Two of the model programs tracked participants over a long period and reported gains that lasted well into adolescence (enrolled in infancy). Five programs followed subjects through high school graduation and found large effects on graduation rates. A small number of studies included socialization elements and were able to record significant gains such as reduced teen pregnancy, crime and delinquency.

Effects which varied for different children support the current knowledge, noted above, that children from low-income families gain most. It is to be noted that this question has not been studied well, and that no definitive comparative information is available.

The attached chart summarizes and compares the child outcomes of several well-known and credible preschool studies involving four year olds, conducted in the United States over recent years. As in the foreign studies discussed, they also support the results of cognitive and school readiness gains made by children in well-planned, high-quality preschool programs. For the future, researchers agree that better evaluation of new and continuing interventions would greatly benefit decision-making.[13]

Evaluation Outcomes of Selected State Prekindergarten Programs

State	**Georgia**	**South Carolina**	**Chicago, Illinois**	**Michigan**	**4 States: California, Colorado, Connecticut, North Carolina**	**Ypsilanti, Michigan**
Program	4 Year-old Prekindergarten Program	Early Childhood Program	Child-ParentCenter Program	School Readiness Program (MSRP)	Cost, Quality and Child Care Outcomes in Child Care Centers	Perry Preschool Project
Target Population	All 4 year-olds in state.	At-risk 4 year-olds.	Low income 3-5 year- old children.	Age 4 children at-risk of school failure.	Preschool children in 400 centers across 4 states.	African-American low- income 3 and 4 year-olds.
Time Period of Evaluation	Study during 1997-98 school year.	Annual testing from 1984 inception.	1985-2000	1996-1999	1993	Began late 1960's.
Program Goals	School readiness.	School readiness.	School readiness as measured by reduced grade retention, special education, and delinquency.	School readiness.		To track effects of intensive early intervention.
Purpose of Evaluation	To examine program quality, and level of school readiness of pre-K participants.	To test readiness of pre-K participants as new 1st graders.	To measure indicators of school readiness stated above, over time.	To measure school readiness and developmental outcomes including grade retention.	To provide a comprehensive econometric and psychometric analysis of child care and children's outcomes.	To track the long term effects of quality and education on developmental, social, and emotional outcomes.
Methodology	Use of the Early Childhood Environment Rating Scale and Georgia Quality Curriculum Scale.	Annual testing at 1st grade entry level, using State Readiness Standards.	Tracked for 15 years. Preschool sample and matched controls.	Tracked matched cohorts from 7 sites; Child Observation Record and 6 subscale scores in kindergarten.	Random selection of 400 child care centers in 4 states. On-site interviews, data collection and testing. Assessment of 826 children.	Matched sample of experimental (E) and control (C) group, tracked at intervals from age of entry to age 27.
Findings	Pre-K classes found to be generally of higher quality than other states. Turnover rates remain high (45%). 78.8% of Pre-K participants rated good to extraordinary in relation to readiness for first grade.	1979: 60% of new first graders met state readiness standard compared with 81% in 1998. 80% of kindergarteners attended Pre-K program by 1998-99.	29% higher high school completion. 40% reduction in grade retention. 35% reduction in special education placement. 35% reduction in juvenile arrests. 41% reduction in violent arrests. Males benefited more than females.	MSRP group rated significantly higher overall on the school readiness rating scale in kindergarten year. Significantly lower grade retention rate by grade 2.	Centers that have access to extra resources beyond parent fees provide overall better quality care. Includes public schools, colleges, work site centers, and publicly funded centers tied to higher standards.	71% of (E) graduated from high school compared with 54% of (C) group. 59% of (E) received welfare as adults compared with 80% of (C). 57% of (E) experienced out-of-wedlock births compared with 83% of (C).

CONCLUSIONS

The demand for preschool services has been growing since the early 1990's, and is now funded to some degree by 42 states. Policy makers predict that this demand will eventually lead to universal prekindergarten services as a standard part of the education of the young child. At this point in time only the state of Georgia has succeeded in making this goal a reality. Across the country, states are struggling with ways to fund these services, and to create models which will reap the greatest benefits for the least cost to the tax-payer.

The focus to date has almost exclusively been on low-income and at-risk children. The many studies which have attempted to measure the outcomes of these efforts have conclusively proven, across the whole spectrum of evaluation, that these programs do prepare young children for school. They have not attempted to ask the question, "are schools ready for these children?" which has led to the observation in some cases that the gains children make are not sustained as they move through school. Obviously this is a complex question which cannot be answered by school readiness tests.

Four major reasons have been motivating these programs: The changes in society which have brought ever increasing numbers of women into the workplace, predicted to reach 80% by the end of the decade; the increasing number of children who enter school unprepared and begin to fail, thus being retained in early grades; the financial burden carried by working parents for care which is more often than not of a mediocre or poor quality; and the lack of access to good quality care for the working poor. These reasons are not discreet; parents who work need care for their children and would always want that care to be of high quality and safe. They also want their children to be happy and to be learning in preparation for school. The issue to be stressed is that the care and learning motivations can't be separated, therefore any plan for universal prekindergarten must include both care and school readiness services.

Top-down and bottom-up implementation models exist throughout the states. The one that fits the California "community engagement" norm is the collaborative model so well represented by the Massachusetts and Wisconsin examples. It would seem reasonable to study these initiatives in the pursuit of a blueprint for San Mateo's "universal preschool for four year olds" goal. That collaborative process has already begun, and can be further enriched by consulting with successful programs in other parts of the country.

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APPENDIX A

AGENCIES ELIGIBLE TO OFFER PREKINDERGARTEN PROGRAMS

	Public school districts only	*School districts & other agencies via subcontract with local school districts*	*School districts & other agencies via direct contracts from state agency*	*Comments*
Arizona		✓		also directly to charter schools
Arkansas			✓	
California		✓	✓	
Colorado		✓		
Connecticut			✓	
Delaware			✓	
Florida		✓		
Georgia			✓	
Hawaii			✓	Funds go to parents to pay tuition
Illinois		✓		
Iowa		✓	✓	
Kentucky		✓		
Louisiana	✓			
Maine	✓			
Maryland	✓			
Massachusetts		✓	✓	
Michigan		✓	✓	
Minnesota	✓			
Missouri			✓	
Nebraska		✓		
New Jersey		✓		
New Mexico			✓	
New York		✓		
North Carolina			✓	Via county Partnership boards
Ohio		✓		
Oklahoma		✓		
Oregon		✓	✓	
Pennsylvania	✓			
Rhode Island		✓		
South Carolina		✓		
Tennessee			✓	
Texas		✓		
Vermont			✓	
Virginia		✓		Also directly to local gov't. entities
Washington		✓	✓	
West Virginia	✓			
Wisconsin	✓			
TOTALS	**7**	**20**	**16**	
		Unduplicated count = **30** states		

Source: Mitchell, A., Ripple, C., & Chanan, N. (1998). *Prekindergarten Programs Funded by the States: Essential Elements for Policy Makers*. New York: Families and Work Institute.

APPENDIX B

Child Development Permit Matrix					
Title	**Educational requirement**	**Experience requirement**	**Alternative qualifications**	**Authorization**	**Five-year renewal**
Assistant (optional)	6 units* Early Childhood Education (ECE) or Child Development (CD)	None	Accredited HERO program (including ROCP) or CCTC-approved training	Assist in the instruction of children under supervision of Associate Teacher or above	105 hours of professional growth
Associate Teacher	12 units ECE/CD, including core courses†	50 days of 3+ hours per day within 2 years	Child Development Associate (CDA) Credential; or CCTC-approved training	May provide instruction and supervise Assistant	Must meet teacher requirements within 10 years
Teacher	24 units ECE/CD, including core courses +16 general education (GE) units‡	175 days of 3+ hours per day within 4 years	AA or higher in ECE or related field with 3 semester units of supervised field experience in ECE setting; or CCTC-approved training	May provide instruction and supervise all of the above (including Aide)	105 hours of professional growth
Master Teacher	24 units ECE/CD, including core courses +16 GE units +6 specialization units +2 units adult supervision	350 days of 3+ hours per day within 4 years	BA or higher with 12 units of ECE +3 semester units supervised field experience in ECE setting; or CCTC-approved training	May provide instruction and supervise all of the above (including Aide). May also serve as coordinator of curriculum and staff development.	105 hours of professional growth
Site Supervisor	AA (or 60 units) with 24 ECE/CD units (including core); +6 units administration; +2 units adult 4 supervision	350 days of 3+ hours per day within 4 years, including at least 100 days of supervising adults	BA or higher with 12 units of ECE, +3 semester units of supervised field experience in ECE setting; or a Teaching or an Administration credential with 12 units of ECE, +3 units supervised filed experience in ECE setting, or CCTC-approved training	May supervise single-site program; provide instruction, and serve as coordinator or curriculum and staff development	105 hours of professional growth
Program Director	BA with 24 ECE/CD units (including core), +6 units administration, +2 units adult supervision	Site supervisor status and one program year of site supervisor experience	Teaching or Administrative credential with 12 units of ECE +3 units supervised field experience in ECE setting; or CCTC-approved training; master's degree in ECE or CD.	May supervise multiple-site program; provide instruction; and serve as coordinator of curriculum and staff development	105 hours of professional growth

*A *unit* is the California term used to refer to college credit. Thus, six units equals six college credits.
†Core courses are child growth and development; child/family/community; program/curriculum.
‡The general education requirement is one course in each of four general education categories: English, mathematics or science, social science, and the humanities.
HERO = Home Economics Related Occupations.
ROCP = Regional Occupational Center Program.
CCTC = California Commission on Teacher Credentialing.
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Source: Burton, A., and M. Whitebook. 1998. *Child Care Staff Compensation Guidelines for California, 1998.* Washington, D.C.: Center for Child Care Workforce, p. 19.

APPENDIX C

Concurrent Associations Between Child Care Quality and Child Developmental Outcomes							
CITATION	**N**	**Age**	**Process Quality Measure[a]**	**Structural Quality Measure[a]**	**Family Controls**	**Child Developmental Outcomes[b]**	**Quality Findings**
Burchinal, Roberts, Nabors, & Bryant (1996)	79	12 mos	ITERS	Group Size, C:A Ratio[3], training experience		MDI: (Cog) SICD-R & CSBS: (Language Skills)	ITERS related to better cognitive development, language & communication skills better C:A Ratio[3] related to higher Bayley scores, more advanced receptive language development & communication skills. Better Educated CG[1]→ children higher on expressive lang Better Process Quality→ advanced cognitive development Better Structural Quality→ advanced language development
Clarke-Stewart, Vandell, Burchinal, O'Brien, & McCartney (2000)	242 @ 15-m 248 @ 24-m 201 @ 36-m	15-36 mos	ORCE CC-HOME	Group size, "points", CG education, specialized training, recent training	Family income Observed maternal sensitivity	Bayley MDI, Bracken School Readiness, Reynell language, mother & CG report of social competence, mother & CG report of behavior problems	Controlling for income and sensitivity, better process quality (ORCE & CC-HOME) related to better cognitive scores, better language comprehension, and more cooperation. Caregiver education and training was associated with better cognitive and language scores, controlling for family income and education
Dunn (1993)	60	51.85 mos	ECERS Goals, strategies, & guide child's emotional development	Group size, C: A Ratio[3], CG[1] education, CG[1] center exper[4], CG[1] field exper[4], CG[1] age	Child Age, SES[7], parental age & education, day care history	CBI: (Soc& Intelligence) PBQ: (Soc comp) PSI:(Cog) PPS (soc play) CPS & POS (cog play)	Structural variables (CG[1] w/ less experience in center)→ children rated more sociable. Struc & Process vars corr w/ c's intelligence. HMR (controls: child age, DC[6] hist, SES, parent age & education): higher quality (ECERS), CG[1] child major, less exper[4] in the center→ higher CBI intelligence
Dunn, Beach, & Kontos (1994)	60	51.85 mos	ECERS Language & reasoning envir Physical envir & available learning activities	CG[1] education training, certification, experience, C:A Ratio[3], group size	SES[7]	CBI: (Language) PSI (Cognitive)	Achievement not related to DC[6] quality Higher quality DC[6] (developmentally appropriate activities)→ more advanced language HMR controlling for SES[7]: DC[6] quality (developmentally appropriate activities) predicted children language development Children's language development positively correlated quality, but not literacy related activities. HMR literacy environment predicted significant portion children's language development controlling for SES[7]

Concurrent Associations Between Child Care Quality and Child Developmental Outcomes

CITATION	N	Age	Process Quality Measure[a]	Structural Quality Measure[a]	Family Controls	Child Developmental Outcomes[b]	Quality Findings
Elicker, Fortner-Wood, & Noppe (1999)	41	14.8 mos	FDCRS	CG[1] exper[4] caring for infants & toddlers, group size, income		AQS: (Attachment) Adult-Child IRS: (CG-Child Involvement)	Smaller group size & smaller C:A Ratio[3] predicted more infant-CG[1] interactive involvement. Higher global CC[5] quality was related to better infant-CG[1] attachment security. , but not interactive involvement
Goelman (1988)	105	CDC = 50.5 LFDC = 38.3 UFDC = 39.8	ECERS DCHERS COF			PPVT-R EOWPVT (Language)	Higher global quality in family day care (DCHERS) significantly predicted higher children's PPVT and EOWPVT scores.
Hausfather, Toharia, LaRoche, & Engelsmann (1997)	155	55 mos	ECERS ECOS	ECOS		SCS: (Soc Comp) PBC: (Beh Probs)	Low quality DC[6] significantly contributes to children's anger & defiance. HMR: additive risk for aggressive behavior (early entry to DC[6], low quality stress in parenting, males, stressful life events). High quality→ no relation w/ behavior problems. HMR: high quality, early attendance, favorable family circumstances→ children's level of interest & participation <u>Quality of care</u> mediates positive or negative effects of age of entry
Hestenes, Kontos, & Bryan (1993)	60	52 mos	ECERS Teacher Engagement	C:A Ratio[3], Group size	Gender SES[7]	BSQ: (Emotional Expression, Temperament)	MR: <u>DC[6] quality</u> predicted measure of affect acting for temperament (controlling for SES[7] & gender). In DC[6] centers w/ more appropriate caregiving the children displayed more positive affect. Neither structural related to affect High level CG[1] engagement→ children had higher intensity positive affect. More low level CG[1] engagement→ children display more intense negative affect
Holloway, Reichhart-Erickson (1988)	55	53 mos	Early Childhood Observation, Process Composite	Class size, C:A Ratio[3], # hrs substitute care	SES[7]	SSPS (Soc Prob Solv)	Children in high quality interaction w/ CG[1]→ more prosocial responses &mentioned more prosocial categories. In larger classes, children gave more antisocial responses & used more antisocial categories. Children in classes w/ larger C:A ratios[3] spent less time in solitary play. Controlling for SES[7], most still remained significant.
Howes (1997) Study 1	760	4.25 yrs	CIS, AIS	C:A Ratio[3], group size, ECE[2] training, CG[1] education		Language, Pre-Academic, Social Development	CG[1] w/ at least AA in ECE[2]→ higher PPVT-R scores, children in classes complying w/ C:A Ratio[3]→ higher prereading

Concurrent Associations Between Child Care Quality and Child Developmental Outcomes							
CITATION	**N**	**Age**	**Process Quality Measure[a]**	**Structural Quality Measure[a]**	**Family Controls**	**Child Developmental Outcomes[b]**	**Quality Findings**
Howes (1997) Study 2	410		CIS, A IS, T. behs	CG[1] background in ECE[2]		Cognitive play, Peer play	CG[1] w/ BA or Child Development Associate→ greater child language, play & most complex play w/ peers, most language activity CG[1] w/ BA ECE[2]→ children engaged in most complex play w/ objects & more creative activities
Howes & Olenick (1986)	89	18, 24, 30, & 36 mos		Low qual (higher C:A Ratios[3], no formally trained CG[1], < 2 primary CG[1]		Compliance Control	High quality centers→ children more compliant & less resistant, & children more likely to self-regulate. Low quality centers & at home, self-regulation increases w/ age M.R.: for girls compliance best predicted by combination of high quality DC[6], low life complexity, & low parental involvement. Task-resistance best predicted by combination of low quality DC[6], high life complexity, & high parent involvement. CC[5] Quality best predicted self-regulation in boys. *Low qual care missing dev approp experiences to promote compliance & self-regulation*
Howes & Smith (1995)	840	34.07 mos	ECERS, ITERS, AIS, Attachment			Cognitive Activity Scale	HMR: (1) positive social interact w/CG[1], attachment, & play activity (2) ECERS or ITERS. Classroom quality did not result in sig R^2 change. Quality→ indirect effect
Howes, & Stewart (1987)	55	20.2 mos	Family Day Care Rating Scale, Adult Play w/ Child Scale	C:A Ratio[3] & Group Size	Family Characteristics (nurturance & support, restrict & stress)	Peer Play Scale Play w/ Objects Scale	Girls: controlling for family characteristics (nurturance & support, restrict & stress), higher quality CC[5]→ higher level play w/ peers, objects, & adults, Boys: controlling for family characteristics: higher quality care→ higher play w/ objects.
Howes, Phillips, & Whitebook (1992)	414	14-54 mos	ECERS Infant-Toddler Envir Rating Scale, Dev approp activ	C:A Ratio[3], group size		AQS-(Attachment) Peer Play Scale (Soc Orient, Interact w/ peers)	CG[1] who practiced more appropriate caregiving→ child more secure with CG[1] CG[1] engaged in more developmentally appropriate activities→ children were more socially oriented w/ CG[1] Regulatable quality on social competence mediated through process quality variables & thru childrens relationship w/ adults & peers. Process mediated through children's relationship w/ adults & peers rather than direct influence on peer competence
Kontos (1991)	138	53 mos	Overall envir quality, COFAS, ECERS	C:A Ratio[3], Group Size, CG[1] Training, Child Development Program Eval-Indicator check	Child age Child Care history	Language, Intelligence, Social, Behavior Problems	Higher quality CC→ poorer intelligence, & poorer language HMR (child age, CC[5] history controls): quality did not predict language or intellect, Family Background did. HMR (child age, CC[5] history control): higher quality CC[5] (CDPE-IC: structural measure)→ children better socially adjusted, & more sociable

Concurrent Associations Between Child Care Quality and Child Developmental Outcomes							
CITATION	**N**	**Age**	**Process Quality Measure[a]**	**Structural Quality Measure[a]**	**Family Controls**	**Child Developmental Outcomes[b]**	**Quality Findings**
Kontos, & Wilcox-Herzog (1997)	114	51.7 mos	CG[1] Responsive Involvement CG[1] Verbal Stimulation		Child Age	Cognitive Competence Social Competence	Controlling for child age, more CG[1] involvement→ lower cognitive comp etence, but not social competence even when controlling for age. MR: More contact w/ CG[1] & more CG[1] involvement→ higher social competence. Less contact w/ CG[1] & more involvement in high yield activities→ higher cognitive competence.
McCartney (1984)	166	36-68 mos	DCEI, ECERS		Child Age, Parent as Educator Interview (values conformity, values social)	PPVT-R, PLAI, ALI, Experimental Communication Task	HMR: Controlling for child age, values conformity, & values social, higher total quality of center care scores (ECERS)→ children had higher PPVT, PLAI, ALI scores & performed better on the communication task. Quality of DC[6] → positive effect on language development. Controlling for total # functional utterances by CG[1] to child, family background & group care experience, more verbal interaction w/ CG[1]→ higher PLAI, ALI scores & better performance on communication task.
McCartney, Scarr, Phillips, & Grajek (1985)	166	2 years	ECERS, verbal interact w/ CG[1]	C:A Ratio[3]		PPVT-R & ALI: (Intellect, Lang) CBI & PBQ: (Social Skills)	Intervention Center highest quality rating. Intervention Center higher language, IQ, & Social ratings than other centers.
McCartney, Scarr, Rocheleau, Phillips, & Abbott-Shim (1997)	718	Infant=14.7 mos Toddler=27 mos Preschool =47.9 mos	ECERS, ITERS, CG[1]-C Interaction		Mothers education	AQS & Separation-Reunion Quest: (Attachment) CBS Q-sort (Social Behavior, Behavior Problems; Harter: (Competence & Social Accept)	Partial correlations, controlling for mom education, more CG[1]-C interaction related to more social bids (Toddlers & Preschoolers), more solitary play (Preschoolers) & fewer CG[1] ratings of negative separation/reunion for Toddlers. HMR: CG[1]-C interactions not related to child outcomes
NICHD ECCRN (1999-a)	97 118 163 250	6 mos 15 mos 24 mos 36 mos	None	C:A Ratio[3], observed group size, CG[1] training, CG[1] education	Income to needs, maternal education, concurr single –parent status, child gender, maternal sensitivity	Bayley MDI Bracken School Readiness Reynell Dev Lang CBCL, ASBI (Soc Beh)	Outcomes (cognitive, language, & social) better when children attended classes meeting recommended CA Ratio[3] at 24 mos & CG[1] training & CG[1] education at 36 mos. More standards met, better school readiness, language comprehension, & less behavior problems at 36 mos Older children more likely to be in classes meeting recommended standards.

Concurrent Associations Between Child Care Quality and Child Developmental Outcomes							
CITATION	**N**	**Age**	**Process Quality Measure[a]**	**Structural Quality Measure[a]**	**Family Controls**	**Child Developmental Outcomes[b]**	**Quality Findings**
Peisner-Feinberg, & Burchinal (1997)	757	M = 4.3 yrs	ECERS, CIS, AIS, UCLA ECOF		Mothers education, ethnicity, & child gender	PPVT-R, WJ-R (prereading, pre-math), CBI (Social skills)	Controlling for child & family characteristics, the observed quality index & the STRS CG[1]-child closeness score related to better PPVT-R scores (both quality indices), better WJ-R prereading scores (individually, observed quality index), better CG[1] ratings of child's cognitive/attention skills on CBI (individually CG[1] rating of closeness), and fewer behavior problems (individually, CG[1] rating of closeness), & higher sociability ratings. Higher quality CC[5] → better language, preacademic, sociability, & fewer behavior problems
Phillips, McCartney, & Scarr (1987)	166	36-68 mos	ECERS, DCEI	C:A Ratio[3], Directors years experience		CBI, PBQ: (Social dev)	Higher overall quality→ higher social competence ratings. Better C:A Ratio[3]→ higher social competence ratings, but lower social adjustment (anxious). More CG[1]-C interaction → better social competence ratings
Ruopp, Travers, Glantz, & Coelen, 1979	Natural Study = 64 centers Experi ment = 57 centers	3 & 4 yr olds	Observations of staff-child interactions; Observation of child behavior	C:A Ratio, group size, staff education, training	Looked at changes in child performance over time as a function of systematic changes in ratio and staff training	Preschool Inventory (PSI), Peabody Picture Vocabulary Test (PPVT-Revised)	Children had larger gains on the PSI and the PPVT when groups were smaller. Centers with higher proportions of caregivers with child-related training had greater gains on the PSI.
Schliecker, White, & Jacobs (1991)	100	4 yrs	ECERS		SES[7]	PPVT-R (Verbal)	Controlling for SES[7], higher center quality→ higher PPVT Family Structure analyses: *2 parent families*-Controlling for mom education, mom & dad age, & occupation prestige, children whose fathers have more prestigious occupations & are enrolled in high quality DC[6] have higher PPVT-R scores. *1 parent families*-Controlling for mom age, mom education, & occupational prestige, children whose mom were older & are enrolled in high quality D[6] have higher PPVT-R scores. Children w/ high vocabulary scores are in high quality care & come from highest SES[7] levels. One parent families, children w/ high vocabulary scores are in high quality DC regardless of SES[7].
Vernon-Feagans, Emanuel, & Blood (1997)	67	24 mos		Hi & Low quality defined by a composite of C:A ratio, group size, & CG training	All middle income, dual earner, white households	Sequenced Inventory of Communiction Development (SICD)	Poor quality child care associated with poorer expressive language scores. Poorest scores were obtained when poor quality care coupled with chronic Otitis Media.

Concurrent Associations Between Child Care Quality and Child Developmental Outcomes							
CITATION	**N**	**Age**	**Process Quality Measure[a]**	**Structural Quality Measure[a]**	**Family Controls**	**Child Developmental Outcomes[b]**	**Quality Findings**
Volling, & Feagans (1995)	36	18-24 mos		C: A Ratio[3], Group size	Child's Age, Age of entry, Hours/week in care	IBQ: (Temp) TBAQ & Vandell & Powers Quest: (Soc Comp)	Controlling for child's age & age of entry, higher C:A ratios[3] predicted more nonsocial play and less positive adult interactions. Controlling for child's age & hour/week in care, predicted more nonsocial play and less positive adult interactions. Child's temperament (social fear) interacts w/ quality of care. High quality care make act as a buffer for socially fearful children in positive peer interactions & nonsocial play w/ peers.

[a]**QUALITY MEASURES ALPHABATIZED BY ACRONYM: COF**: Child Observation Form; **DCEI**: Day Care Environment Interview; **DCHERS**: Day Care Home Environment Rating Scale; **ECERS**: Early Childhood Environment Rating Scale; **ECOI**: Early Childhood Observation Instrument; **ECOS**: Early Childhood Observation Scale; **FDCRS**: Family Day Care Rating Scale; **ITERS**: Infant-Toddler Environmental Scale

[b]**CHILD DEVELOPMENTAL OUTCOME MEASURES ALPHABATIZED BY ACRONYM: AQS**-Attachment Q-Set; **Adult-Child IRS**: Howes & Stewart's Adult-Child Involvement Rating Scale; **ALI**: Adaptive Language Inventory; **BSQ**: Behavior Style Questionnaire; **CBI**: Classroom Behavior Inventory-Preschool Form; **CBS Q-Sort**: Child Behavior Survey, Q-Sort version; **CPS**: Cognitive Play Scale; **CSBS; EOWPVT**: Expressive One-Word Picture Vocabulary Test; **Harter**: Pictorial Scale of Perceived Competence and Social Acceptance for Young Children; **MDI**: Mental Developmental Index; **PBC**: Preschool Behavior Checklist; **PBQ**: Preschool Behavior Questionnaire; **PLAI**: Preschool Language Assessment Instrument; **POS**: Play with Objects Scale; **PPS:** Peer Play Scale; **PPVT-R**: Peabody Picture Vocabulary Test-Revised**; PSI:** Preschool Inventory-Revised**; SCS**: Social Competence Scale; **SICD**: Sequence Inventory of Communication Development; **SSPS**: Spivack & Shure's Social Problem Solving Skills; **TBAQ**: Toddler Behavior Assessment Questionnaire

[1]**CG**: Caregiver, [2]**ECE**: Early Childhood Education, [3]**C:A Ratio**: Child:Adult Ratio, [4]**Exp**: Experience, [5]**CC**: Child Care, [6]**DC**: Child Development, [7]**SES**: Socioeconomic Status

Source: Vandell, O. & Wolfe, B. (2000). *Child Care Quality: Does it Matter and Does it Need to be Improved?* Report prepared for the United States Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation. Observational Record of the Caregiving Environment (ORCE)-NICH.