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Preschool Policy Report

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Building Early Childhood Facilities

What States Can Do to Create Supply and Promote Quality

by Carl Sussman with Amy Gillman

The early care and education field continues its decades-long expansion, experiencing a new phase of educationally oriented growth. Most states now fund preschool programs and enrollment continues to rise. Yet the field remains fragmented and insufficiently resourced. It lacks the institutional frameworks necessary to address basic challenges to continued growth and development. The design, development, finance and maintenance of facilities are key issues. State governments will need to more actively stimulate facilities investments —building the *supply* of facilities and making sure these spaces are designed to support programmatic *quality*. Otherwise, the benefits of early education—academic achievement and long-term savings in remedial programs to name just two—will not be fully realized.



What We Know:

- Well-designed facilities enhance child development and program quality.
- An adequate supply of facilities is needed to support rapidly increasing preschool education programs.
- The quality and location of the facilities can encourage enrollment and parent involvement.
- Facilities can help promote a positive workplace in an industry challenged to retain experienced teachers.
- Child care program income is typically meager, especially when compared with the full cost of delivering quality early education services.
- The cost of constructing facilities designed specifically for young children is relatively high when compared with standard commercial space.
- Few centers have the experience or personnel to handle the complexities of real estate development tasks.

Policy Recommendations:

- Facilities development policies need to address issues related to financial barriers, design and real estate development, and the policy and regulatory environment.
- Capital subsidies must be available in order for child care programs to substantially renovate or construct a state-of-the art facility.
- If providers use debt to raise capital, it must be affordable to preschool programs with limited means.
- Technical capacity needs to be developed —organizational, real estate development, and architectural to build early education facilities.
- Facility standards that address program quality, in addition to health and safety, need to be in place.
- A reliable system and supportive policy and regulatory environment are needed to enable the early education field to meet its physical capital needs.

Overview

The early care and education field continues its decades-long expansion.¹ Until very recently, these gains have been fueled by relatively steady Head Start enrollment growth, increasing female labor force participation, welfare reform-related expansion of federal child care subsidies, and other factors. While some of these trends may have leveled off, the field is experiencing a new phase of educationally-oriented expansion. Driven by a growing consensus about the economic and educational value of high-quality prekindergarten, most states now fund preschool programs and enrollment continues to expand.

Unfortunately, the field remains fragmented, insufficiently resourced, and lacks the kind of institutional frameworks necessary to address basic challenges to its continued growth and development. States are increasingly taking responsibility for addressing these conditions. They already regulate the health and safety of most child care settings. As the recipients of Child Care and Development Fund block grant funds, states administer significant child care subsidy programs and direct the policy mandates and functions built into that federal program. Now states are the locus of a growing early education movement that has resulted in publicly supported preschool for an increasing number of 3- and 4-year-olds. By default, state governments now shoulder the responsibility for providing the basic structural elements of a coherent and healthy early care and education system.

Consequently, states now engineer policies for blending funding streams, standardizing reimbursement policies, designing professional development systems, and setting quality standards. Facilities—the design, development, finance, and maintenance of physical places to house early care and education programs—are another key “infrastructure” issue that states have either begun to address or will need to address as they build a robust and rational early care and education system.

Both the politics and economics of delivering early care and education largely account for the existing fragmentation and lack of infrastructure. The real cost of delivering high-quality care and education too often exceeds the purchasing power of young parents, thereby depressing the market price for these services. Government subsidy levels reflect these market conditions, as do policies designed to maximize the number of children served with limited public resources. With these factors limiting revenue, the large majority of providers are stuck in a financial bind: after paying for the legally required yet barely adequate ratio of staff to children, center operators have very little left to cover other operating costs, including facilities. Except for the most prosperous communities, prices are generally too low to support the elements researchers associate with high-quality programs such as: salaries needed to attract and retain highly trained teachers; high adult-to-child ratios; small group sizes; and well-functioning facilities.

Despite the public sector’s efforts to increase access to early education and promote quality, the underlying economics and legacy of underinvestment in the field are likely to persist, resulting in supply bottlenecks and hindering the quest for quality. Unless state governments play a more active role in stimulating facilities investments, the benefits of early education—academic achievement and long-term savings in remedial programs to name just two—will not be fully realized. This means that states need to simultaneously address two policy goals: building the *supply* of facilities and making sure these spaces are designed to support programmatic *quality*.

Supply – The center-based early childhood industry, especially the segment serving lower-income families, is comprised of a mix of public school-based programs, Head Start grantees, a relatively small number of large multi-service organizations and, most commonly, small nonprofit and proprietary child care programs. Many of these programs are neither adequately capitalized nor sufficiently market-oriented to react to growing demand as other businesses do. Moreover, because it can take years to obtain sites, secure permits, arrange financing, and construct or renovate facilities, supply will tend to lag behind demand in any event. Without the public sector taking the initiative to plan and invest in new facilities, supply bottlenecks are inevitable. Meanwhile, children will either go unserved or public administrators will resort to stopgap policies, such as shortening the program day to accommodate double and even triple sessions or reducing program standards to expand the pool of eligible providers. Such measures can dilute program quality and threaten policy objectives.

Quality – The most important policy shift in the early care and education field is from healthy, safe, and nurturing care for the children of working parents to an increasingly education-oriented approach, more rigorous standards and specific, measurable developmental outcomes. Research demonstrating the developmental, educational, and even the economic benefits of prekindergarten programs link these benefits to program quality. While there are many important factors that contribute to programmatic quality, the physical environment is one ingredient that policymakers and early childhood educators generally overlook. Research indicates that well-designed physical space decreases behavior problems in the classroom, increases teacher-child interactions, promotes productive child-initiated play, supports curriculum goals, and raises staff morale.²

Ensuring an adequate supply of quality preschool facilities to house government-subsidized programs is a classic public infrastructure function. Underscoring the public role is the breadth of the need and the broader educational and economic policy objectives that preschools address. Thus, building the physical infrastructure to house early care and education programs will become an increasingly important public policy function.

This policy report explores common facility issues and outlines strategies policymakers can implement (and in some cases have already implemented) to address early childhood facility needs.

Policy Context

Most young children spend considerable time in child care outside the home. This is partly the product of changing economic and social patterns and the increasing proportion of households with two working parents. As a result, one primary function of child care is to enable parents to work. In that respect, child care plays an important role in supporting local labor markets.

Today, preschool programs serve another compelling function: early education. Where economic necessity, welfare reform, and women's increasing participation in the workforce fueled child care's growth during the last half of the twentieth century, science and economics are stoking its successor: high-quality early education programs. Relying on empirical evidence of its developmental benefits for children and on analyses that point to substantial economic gains for society from an "invest early" strategy, families, educators, policymakers, and business leaders are driving the current movement to improve the quality of preschool programs and subsidize them so more 3- and 4-year-olds can attend. Early education has also become a staple reform strategy for underperforming schools. For all these reasons, early education has moved toward the center of the public policy stage in states across the country.

According to the National Institute for Early Education Research's annual survey, only 12 states do not offer state-funded prekindergarten programs. The percentage of the nation's 4-year-olds enrolled in state-funded preschool programs jumped from 14 percent five years ago to 20 percent during the last academic year. States are spending \$3.3 billion to support these programs.³

Most of these states have focused on non-facility related early education initiatives: providing operating subsidies; creating new administrative frameworks to integrate the fragmented field; adopting quality standards; and engineering a professional development system for preschool teachers. All of these are essential, but not sufficient. As noted in a Children's Defense Fund report on state prekindergarten initiatives, "it is also important that states provide sufficient resources for facilities."⁴ However, most states have made only modest efforts to address the physical infrastructure needs of this expanding system. Connecticut, New Jersey, and Pennsylvania are exceptions:

- Connecticut's School Readiness Program for 3- and 4-year-olds includes three capital funding programs: small loans for home-based family child care businesses; a loan guarantee program for child care centers; and a largely state-financed revenue bond program targeted to the needs of nonprofit child care and Head Start centers in underperforming school districts.
- To comply with a court mandate, New Jersey's legislature appropriated funds to build and renovate public schools and preschools, and the state Department of Education adopted a set of preschool facility standards that exceed the minimal health and safety licensing requirements.⁵
- Between 2002 and 2004, the Commonwealth of Pennsylvania provided facility grants totaling \$30 million. Providers were eligible for grants of up to \$1 million in the first year and up to \$500,000 during the second and third years, if they raised a 25 percent match for each project.⁶

Several factors have spared most states from experiencing serious supply difficulties. Despite the increase in prekindergarten enrollments, the actual numbers of children served remain modest, currently a total of 943,000. Some regions have had space available in their public schools because of declining enrollments. Most state preschool initiatives are part-day programs, allowing split sessions. These conditions have enabled most states to get by with existing facilities for the time being.

Other circumstances have contributed to a delayed policy response. For example, the economic and regulatory environment for the early care and education industry is fragmented. In addition to parent fees, revenues derive from a variety of public sources, often driven by different policy objectives. These include federal Head Start grants, which some states supplement with appropriated general funds; various state child care subsidy streams, including two federally funded block grants to states, each with its own regulatory framework; and state and local public school financing. Two or more agencies in many states oversee different parts of the system, typically the department of education, human services agency, and public health department, yet none has the authority for building the system's physical infrastructure. As new public sector early education initiatives expand and quality standards are increased, financing and developing facilities will become an inevitable component of state early education policies and programs.

Why Facilities Matter: The Case for Public Action

In the current policy environment, early childhood facilities development should be on the public agenda for four reasons:

Supply – States need to increase the physical capacity to serve larger numbers of children.

Parent engagement and support – Facility design and location affect parents' willingness to enroll their children and their level of engagement in the program.

Workplace environment – As a workplace, facilities determine important aspects of the working conditions in an industry challenged to retain experienced teachers. Facility design should enhance job satisfaction, not undermine it.

Child development and program quality – Most importantly, well-planned facilities support child development and program quality.

Supply

The need for sufficient physical space is obvious. If society decides early care and education is important and government subsidizes its provision, classroom space needs to be available to house the growing number of children who will enroll. Lack of supply can force policy makers to trade off quality for access by shortening the program day or extending subsidies to lower quality programs. Both solutions defeat the purpose of supporting high-quality early education. Moreover, some of the most readily available space, such as classrooms in elementary schools with declining enrollments, require modifications to the campus, building, and affected classrooms. These adaptations will be needed to accommodate outdoor play needs, different drop-off and pick-up arrangements, and classrooms organized around activity areas that promote play-based experiential learning.

Parent engagement and support

Educators accept the premise that parent engagement contributes to a child's development and improves attendance, behavior, and self-confidence. Parent engagement is particularly important for very young children, but preschools can also provide invaluable support for youthful parents struggling with unfamiliar parenting dilemmas. The design and location of early education centers can and should promote parent engagement.

- **Location** – Programs should be located where parents will use the services: near homes, workplaces, and commuting routes. Otherwise, transportation and other barriers may cause parents to forgo the opportunity to enroll their children or substitute lower quality but more convenient child care arrangements.
- **Parental Perception** – To encourage wide utilization, facilities need to appeal to parents who naturally want their children to attend safe, physically attractive, and well-maintained centers. A center's physical attributes are especially easy to observe and exert a strong influence on parents as they decide where to enroll their children.
- **Supportive Environment** – As reflected in Head Start performance and national accreditation standards, parent engagement is a hallmark of quality in early education and care. The physical environment can facilitate and encourage parent involvement in their child's preschool experience. Well-designed centers feature space where parents can engage in quiet time to ease the transition for children experiencing difficulty separating. The layout and furnishings can encourage parents to linger and interact with staff and other parents and provide places for parents to confer privately with teachers or administrators. Many centers offer a parenting resource room stocked with videos, books, and other useful materials. Windows between corridors and classrooms enable parents to observe their children at play without disrupting the class.

Workplace environment

Staff retention is one of the greatest challenges early care and education programs face. Low compensation is the most obvious reason the industry has difficulty retaining experienced staff. Improving wages and benefits is essential if these programs are to attract and hold more highly qualified teachers. Better quality facilities also foster retention by using teachers' time more efficiently, creating physically and psychologically comfortable workplaces, and facilitating professionally rewarding interactions with young children, parents and coworkers.

- **Professional Setting** – Work with young children is demanding, both physically and emotionally. To avoid burnout, teachers need time to regroup during the day and outlets for their professional creativity and development. The physical setting conveys an important message to teachers about professionalism and the value placed on their contributions to the program's success. But with space at a premium, centers sometimes forgo out-of-classroom spaces where teachers can relax during breaks, or well-equipped resource rooms where they can prepare classroom activities and exchange curriculum ideas with other teachers.
- **Physical Conditions and Comfort** – A highly functional work environment is important in any profession, including early education. Space that is well-designed for children with appropriately scaled furniture and equipment can be particularly important to staff. It fosters children's independence by allowing them to use the bathroom, get a drink of water, and find and store play materials without asking for an adult's help. Equally as important, teachers require sensible measures to make their work less physically demanding, including adult-height work-surfaces; comfortable seating that brings them close to children without forcing them into child-sized chairs, and storage for their personal belongings. In addition, poor acoustics, harsh lighting, inadequate ventilation, uneven heating and cooling, and other adverse conditions cause physical discomfort and contribute to stress, fatigue, and low morale.
- **Rewarding Work** – Many teachers are drawn to early education for several reasons: the gratification from spending time with young children who by nature are enthusiastic learners; the satisfaction of witnessing a child's discovery or newly acquired skill; the creative outlet in coming up with projects and activities; and the enjoyment derived from the strong relationships preschoolers form with their teachers. Poorly-designed buildings and classroom environments can thwart all these motivators for teachers. For example, the lack of classroom sinks or sufficient classroom space to accommodate naps and mealtime without rearranging the furniture forces teachers to replace time for one-on-one interactions with custodial chores and additional classroom management demands.

Research on the Early Childhood Environment

In an influential review of research on early childhood development, Jack P. Shonkoff and Deborah A. Phillips conclude that “the positive relation between child care quality and virtually every facet of children’s development that has been studied is one of the most consistent findings in development science.” The research has found correlations between positive outcomes for children and specific program characteristics such as adult-child ratio and group size, to name just two.

However, as Shonkoff and Phillips note, “It is important to recognize...that other dimensions of quality...are rarely measured...” and “are, in all likelihood, important ingredients along with the structural dimensions of care that dominate the research literature.” The physical environment is certainly one of the other rarely measured dimensions of quality. As the authors go on to say, “Without attention to some of these subtle, but potentially powerful, influences on quality, it is difficult to predict how much can ultimately be accomplished by policy actions that focus on only one or two structural dimensions of care.”⁷

Although the major research studies in the early childhood field have neglected the physical environment as a critical contributor to the quality equation there is evidence to support the proposition. The fields of environmental psychology and architecture have produced numerous applied research studies demonstrating correlations between school design attributes and both student achievement and teacher retention. Much of this literature is available on the U.S. Department of Education’s National Clearinghouse for Educational Facilities web site, in academic journal articles in related fields, such as environmental psychology, and in collections such as *Spaces for Children: The Built Environment and Child Development* edited by Carol Simon Weinstein and Thomas G. David (1987).

Among the many studies linking early childhood settings to positive behavioral and developmental outcomes for preschoolers are a number asserting that the widely accepted 35-square feet per child standard for preschool classrooms is neither supported by research nor sufficient.⁸

Many other aspects of the physical environment have been scrutinized. For example, a Pacific Oaks Occasional Paper written in 1976 by Elizabeth Prescott and Thomas G. David explores the effects of the physical environment on day care – acoustics, density, climate control, lighting, bathrooms, sleeping areas, room layout and much more. The much admired Reggio Emilia preschools treat the physical space as one of the defining characteristics of its pedagogy. Finally, based on field observations, academicians and practitioners in the child development field have concluded that the physical environment exerts an obvious influence on program quality and teacher job satisfaction. Perhaps the most noteworthy example of expert opinion applied to the physical environment is Anita Rui Olds’ 2001 book, *Child Care Design Guide*.

Child development and program quality

The primary reason facilities matter is that layout, size, materials and design features influence the quality of an early education program and thereby contribute to child development.

- **Exploratory Learning** – “Current understandings suggest that cognitive development takes place in the context of the child’s interactions with others and with the environment—interactions in which the child is a very active participant. The implications for learning opportunities and for early childhood pedagogy are substantial.”⁹ In other words, young children learn through play and by exploring and interacting with their environment, both social and physical. They need classrooms and outdoor play space that are markedly different from conventional elementary school classrooms and playgrounds. Instead of filling classroom space with desks or tables, preschool programs subdivide classrooms into physically well-defined activity areas—a block area, a dramatic play area, and the like. These areas permit small groups of children to engage simultaneously in different activities without interfering in each other’s play. Architectural elements, such as ceiling height, lighting, corners, walls, and platforms, as well as furnishings, provide visual separation and a distinctive atmosphere appropriate to each activity. These design considerations support uninterrupted self-directed play and exploration. Achieving this type of environment requires classroom dimensions and layouts that lend themselves to these arrangements and architectural elements specifically designed and constructed to support active learning.
- **Behavior** – There is a strong link between behavior and spatial design and layout. A classic study on the topic described it this way: “Tired or irritable teachers; apathetic, hyperactive or uninterested children; high noise level; large amounts of time spent in routine management; and excessive use of teacher-directed activity all have a high likelihood of being spatially induced.”¹⁰ Poorly designed preschool classrooms can frustrate children, precipitating outbursts or aggressive behavior, or create an overly-stimulating environment where children find it difficult to engage in learning activities. On the other hand, a well-designed child care space facilitates a less stressful and more rewarding experience for both children and teachers.
- **Program Quality** – One of the most important structural indicators of preschool quality is adequate staffing. However, in centers where teachers must leave the room to accompany a child to the bathroom, or where inadequate classroom storage and absence of a classroom sink make it necessary for teachers to leave the classroom frequently, the effective teacher-to-child ratio drops, and, along with it, the program’s quality. Research conducted at St. Joseph College in West Hartford, Connecticut, found teachers interacting with children—a known indicator of process quality—on average only 3 percent of the time. However, after the program relocated to a new facility where each classroom had a utility sink, storage, telephone, and most importantly, a bathroom for children, adult-child interactions increased to 22 percent. Structural features such as these enabled teachers to spend more time in the classroom and increase their interaction with children. In addition, larger classrooms made it easier to configure the space into well-defined activity areas that supported cooperative and engaging play. Teachers also reported easier transitions and fewer tantrums.¹¹

The most widely recognized indicator of program quality is National Association for the Education of Young Children (NAEYC) accreditation. The NAEYC accreditation standards acknowledge the importance of a quality environment:

“The physical environment sets the stage and creates the context for everything that happens in any setting—a classroom, a play yard, a multipurpose room. It is a place where children and staff spend long hours each day; where routine needs are met; where relationships develop, skills are learned, abilities are enhanced, and attitudes toward school and learning are formed. For all these things to happen well, program planners must carefully design the physical environment...

[The physical environment]...conveys values and messages about who is welcomed, what is important, and what the beliefs are about how children learn.”¹²

However, the NAEYC accreditation guidelines do not include many specifics about the physical structure and design to guide practitioners as they strive to create a better-functioning environment. Nonetheless, since facilities play such a pivotal role in achieving educational objectives, they should be an important factor in public policies designed to build a system of quality early education.

Facility Policies

State early childhood facilities development policies need to address a variety of issues. These fall into three broad categories:

Financial barriers – Generating and increasing access to affordable capital.

Design and real estate development practices – Addressing the limited design and real estate development knowledge and skills in the child care field and the lack of familiarity with early education facilities among architects and developers.

Policy and regulatory issues – Creating a supportive policy and regulatory environment for facilities development.

Financial barriers

In developing early education facility policies, the most obvious challenge is to bridge the gap between the cost of quality facilities and the tough financial realities of delivering early care and education services. The challenge is on both sides of the financial ledger: revenue and expense. On the revenue side, with the exception of niche markets where operating margins are healthy, child care program income is typically meager, especially when compared with the full cost of delivering quality early education services. On the expense side of the ledger, the cost of constructing facilities designed specifically for young children is relatively high when compared with standard commercial space. Although costs can vary considerably from region to region, constructing, or acquiring and substantially rehabilitating a building costs between \$10,000 and \$30,000 per child.

In an environment where the imperative is to improve quality, meet more rigorous performance standards, and respond to higher expectations, costs (including facility costs) will increase, exacerbating this financing gap. As a result, the primary policy challenge is to fill the gap between the cost of building facilities and the lack of financial resources available to programs that need more or better physical space to serve additional children and meet emerging program quality standards.

Design and real estate development practices

A second and less obvious challenge is the limited technical capacity to develop facilities. Developing an early childhood facility requires certain organizational capabilities, real estate development expertise, and specialized architectural knowledge. Yet most organizations delivering early care and education are small and leanly staffed: Even if motivated to do so, few would have either the experience or personnel for the time-consuming and frustrating complexities of site assembly and evaluation; real estate finance; regulatory and permitting processes; and design and construction oversight. If not addressed, this capacity gap can seriously hamper the child care field's effective use of state-supplied facilities financing resources. Moreover, few professional architects have had experience with this unique building type. Therefore, the second policy challenge is to ensure the effective use of state financing assistance for early care facilities.

Policy and regulatory issues

Finally, it is not enough for state facility policies to make possible the construction of isolated projects. The objective is to create a reliable system—an infrastructure—and a supportive policy and regulatory environment that enable the early education field to meet its physical capital needs.

Thus, facility policies should address the full range of barriers—capital, technical and regulatory—that prevent the development of a sufficient supply of quality early care and education settings. The test of the system is its ability to operate at scale and on an ongoing basis, and in so doing, create a development model that can succeed in a broad range of situations.

Overcoming Financial Barriers

The most obvious barrier to facilities development is financial. The early care and education industry has long faced a difficult problem: without access to scarce grants or fortuitous sources of additional funding to supplement parent fees and modest public operating subsidies, programs make painful trade-offs, economizing in ways that compromise quality. This is evident in staffing levels, teacher qualifications, and compensation practices. This seemingly insurmountable economic calculus is also apparent in facilities, as scrimping on occupancy costs and capital improvements is a common concession to economic reality. Nonprofit centers typically occupy inexpensive rental quarters in churches, storefronts, community centers and residential buildings. The premises generally contain just enough space and receive only those modest improvements required to satisfy minimum licensing standards.

There are exceptions to this pattern, such as centers serving relatively prosperous families, larger nonprofit organizations with the capacity to mount a major fundraising campaign, some Head Start grantees, and large businesses that provide on-site child care to attract and hold employees. In these circumstances, new center construction and substantial renovations may be financially feasible. Access to capital as either grants or a revenue stream to support long-term debt is the key difference between those organizations and businesses that invest and achieve significantly higher quality standards for facilities and those that do not.

To substantially renovate a building or construct a state-of-the-art facility requires *access* to a substantial amount of capital. To the extent providers use debt to raise that capital, it must also be available on terms that are *affordable* to preschool programs with limited means.

Access to capital – Capital takes the form of *equity* or *debt*. “Equity” sources include selling shares in the case of a for-profit company, fundraising by nonprofit organizations, and investing business, personal, or organizational assets. “Debt” refers to borrowed funds which are repaid over time. An important distinction between the two types of capital is that loans impose an operating cost in the form of monthly principal and interest payments while equity does not.¹³

Organizational size, ownership structure, and sources of operating revenue are important factors influencing access to capital. For example, a for-profit company can issue stock while a nonprofit cannot, and a nonprofit can receive tax-exempt gifts while a for-profit cannot. A large organization is more likely to accumulate net assets whereas a small organization is less likely to. Early education programs serving a high proportion of publicly subsidized children have tighter operating budgets than those catering to children from high-income households. Public school-based programs can sometimes tap tax revenues and access tax-exempt bond debt. In general, nonprofit organizations, especially smaller ones and those serving lower-income populations, are less likely to qualify for debt than programs that are larger, serve higher-income children, or operate on a for-profit basis. After setting policy objectives, public policy makers need to design financing programs that overcome the unique debt and equity barriers faced by the various types of organizations targeted for assistance.

Affordability – Whether a child care program owns or rents its space, to support quality programming most centers need to make significant capital investments. The high cost of facility projects and their long useful life make loans a logical and necessary component of any financing package. But many child-serving organizations are unable to afford debt (assuming they can find a willing lender given the perceived risk). “Affordability” in this context refers to the impact loans have on the borrower’s operating budget.

The same three factors that a homebuyer considers in arranging a mortgage influence facility loan affordability:

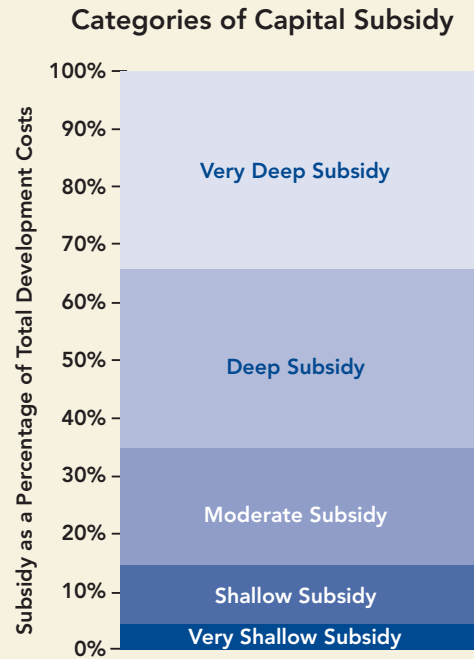
- **The principal amount of the loan:** the less money borrowed, the lower the monthly payments.¹⁴
- **The interest rate** charged on the loan: the lower the rate, the lower the monthly payments.
- **The loan term:** the longer the period over which the loan payments are made, the lower the monthly cost.

Policy makers can combine these measures. For instance, financing programs can substitute equity or equity-like capital to reduce the principal amount of the loan, thus lowering monthly loan payments. They can also decrease the impact of debt on the usually tight operating budgets of early childhood programs by extending repayment schedules and providing interest rate subsidies. This section describes various state policy responses and highlights the advantages and drawbacks of each.

What Level of Capital Subsidy?

Early care and education programs commonly face a financing gap between the amount of capital they can generate and the cost of a facility. The only way to fill the gap is with a significant public sector capital subsidy. Policy makers often refer to the level of capital subsidy as being “deep” or “shallow.” How does one define deep and shallow? One way to think about the level of capital subsidy is to calculate it as a percentage of a project’s total development cost. This graphic depicts various capital subsidy levels.

Deep capital subsidies are the most effective way to make the development of early care and education facilities affordable.



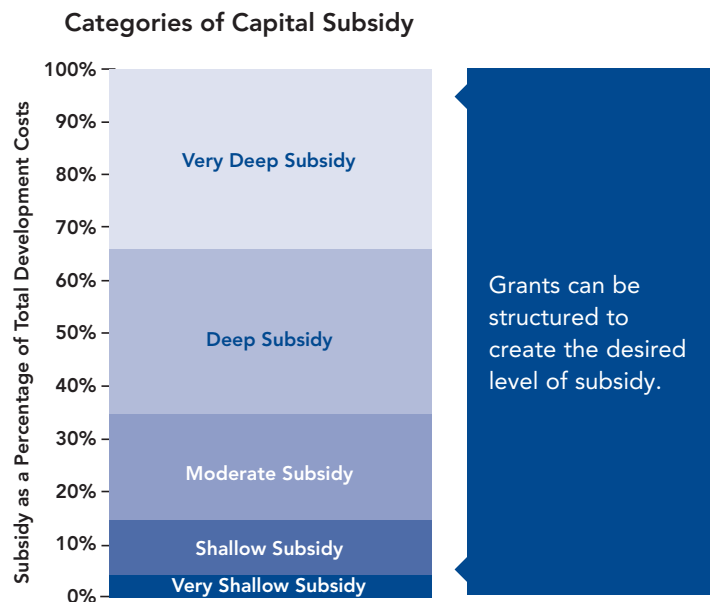
Policy Response: Offer Grants

A grant—a form of project equity—is the simplest means of providing capital and reducing the impact of a major facility investment on a center’s future operating budget. Since improving real estate is expensive, grants need to be large in relation to the total project cost to have a significant impact.

Grantmaking has the advantage of being more straightforward than lending. However, grantmaking has an important drawback for public agencies: Unlike loans, which spread the financial outlay over years, grant makers disburse funds in a “lump” sum, upfront. As a result, grant programs have a large budgetary impact relative to the number of centers assisted. This makes capital grant programs politically and fiscally challenging. Nonetheless, from time to time, the political will exists to make capital grants for facilities. For example, between 2002 and 2004, the Pennsylvania Departments of Community and Economic Development and Public Welfare collaborated in making Child Care Challenge Grants totaling \$10 million per year. Providers were required to match the state’s grant with one-quarter of the project’s cost. During the first year, grants could be up to \$1 million. In subsequent years, the maximum grant was \$500,000. The program resulted in the construction or renovation of 55 centers licensed to serve 3,365 children.

Advantages: Grant funding is an easy-to-understand concept and uncomplicated to implement for both the state and the grantee. Documenting a grant is often achieved with a letter agreement whereas a loan or loan guarantee involves a far more extensive review, due diligence process and, minimally, a loan agreement and promissory note.

Drawbacks: On the other hand, a state grant program, such as Pennsylvania’s Challenge Grants, has a large and immediate impact on the state’s budget. As a matter of capital finance it makes more sense to use debt to finance construction projects: Debt is a tool used to spread the cost over a capital project’s long useful life. Finally, while a grant is an easy transaction to document, state officials may need a substantive contractual agreement to ensure on-going accountability.



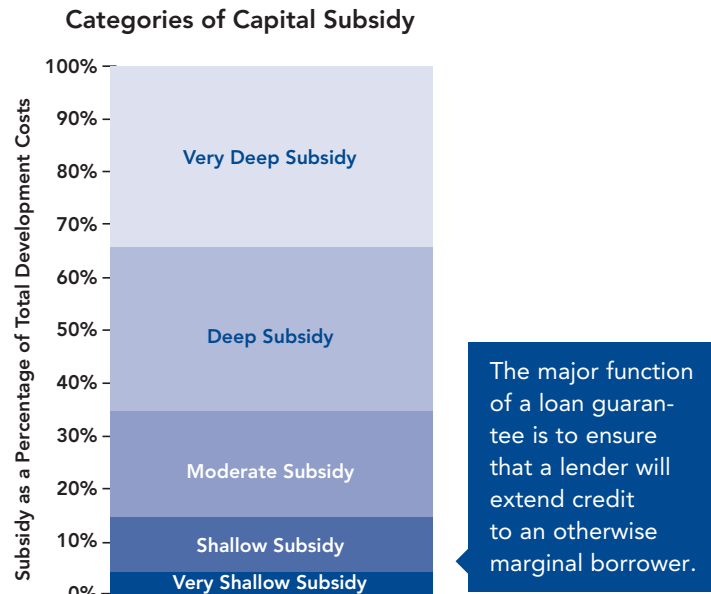
Policy Response: Access to Private Debt

If offering grants has the greatest short-term fiscal impact on public sector budgets, assisting centers to access commercial sources of debt has the least. There is a potential public sector role because commercial loan underwriting standards make it hard for many early childhood programs to qualify for large loans. A vehicle frequently used to bring conventional bank debt within the reach of marginally creditworthy businesses is to offer lenders a loan guarantee. Without removing all of the lending risk, some state agencies guarantee part of a loan (typically 50-80 percent) to reduce the bank's risk when the investment serves a public purpose. Since only a small proportion of borrowers actually default, and in those infrequent cases the bank can recover much of the outstanding debt through foreclosure, well-designed loan guarantee programs can be economical for the state.

Consider the following example. The Center for Community Self-Help, a non-profit community development finance institution, partnered with the state of North Carolina to construct a creative way to guarantee child care loans using the Child Care and Development Fund, the federal government's child care subsidy block grant. The state guarantees Self-Help's loans to small center-based and home-based child care businesses. The state requires that the borrowers serve children whose care is subsidized by the state. By augmenting the collateral available from borrowers, North Carolina's guarantee enables Self-Help to relax its underwriting standards and absorb greater risk. While this produces slightly greater loan losses, it also produces more loans, most of which succeed and would not otherwise have been made. Since 1994, Self-Help has used the state's assistance to make 214 loans totaling \$10 million.

Advantages: Lenders reject loans for many reasons. Some have to do with the borrower's business and earnings history, repayment risk, lack of sufficient collateral, or the lender's inability to resell the loan.¹⁵ If the chief barrier to a project's feasibility is a lender's reluctance to extend credit for one of these reasons, a partial loan guarantee as a modest public subsidy might add the margin of security that is needed. But a loan guarantee is only helpful in those cases where the center has the financial ability to support debt.

Drawbacks: The major drawback to loan guarantees in the early care and education industry is that most major facilities investments require a far deeper subsidy than a loan guarantee provides. In any event, even with the guarantee, most early care providers probably could not qualify for a loan large enough to complete a major facility development project.



Policy Response: Provide Debt

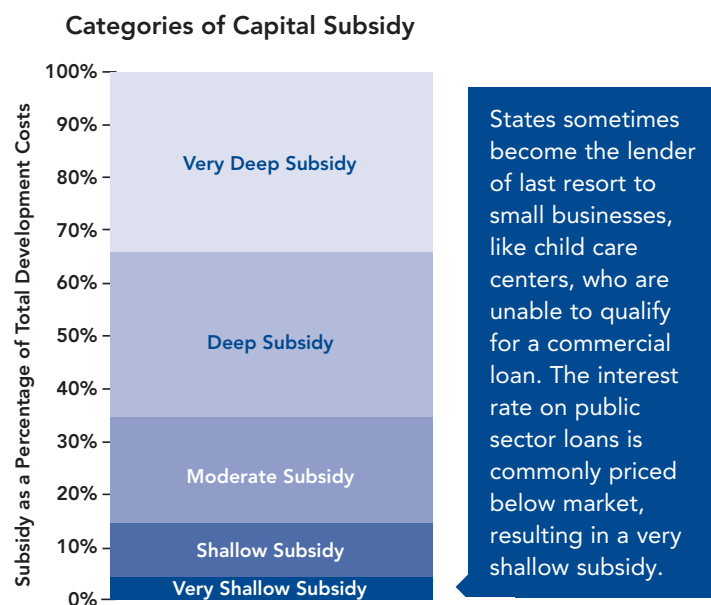
A more financially aggressive approach to public sector assistance is to make loans directly to child care enterprises, such as through a state economic development agency. Unlike loan guarantees, the state as lender absorbs the entire repayment risk. However, the borrower still bears the full capital costs through loan payments. The public subsidy is once again quite shallow.

It is good public policy to encourage early education organizations to take on debt, *to the extent that they can afford to do so*. First, it allows the state to minimize its capital subsidy outlays. Second, debt is the preferred method for raising large sums of capital for long-term investments: it gives borrowers immediate access to the capital they need while creating, through affordable monthly “debt service” payments of principal and interest, a mechanism through which they can spread the cost over future years. Since a newly constructed or renovated center has a useful life that spans decades, loans enable the facility owner to evenly allocate a portion of the cost to succeeding annual operating budgets.

As part of their economic development programs, most states offer small business loans, and for-profit child care businesses are typically eligible. However, relatively few states have loan products targeted specifically to the early care and education industry. Maryland is an exception. Since 1988, Maryland’s Department of Business and Economic Development has made child care facility loans and loan guarantees to nonprofit and for-profit center-based programs. Its direct loans can be as large as necessary but cannot exceed the “hard” construction costs. The state seeks private bank participation in the financing, and if the center can support the debt, it will subordinate its loan to the private lender’s. The state charges market or slightly below market rates and writes the loans for 15 to 20 years. The department receives many inquiries, reflecting the need for capital. However, actual loan demand is weak, most likely because of the difficulty child care programs have supporting debt.

Advantages: As the lender of last resort, states enable providers to make capital investments that they would not otherwise be able to make and to invest more heavily to expand, build, or renovate child care centers. Loans also place the burden of paying for facilities on providers rather than shifting such costs to the state.

Drawbacks: Although it is not the case in Maryland, eligibility for direct loans is often restricted to for-profit businesses. While some providers serve markets that enable them to support debt, many are unable to afford debt and are therefore more likely to need a far deeper form of capital subsidy.



Thus, direct loans fill a narrow gap in the capital market for early childhood facilities. Moreover, as the lender rather than the guarantor of private debt, the state bears the entire lending risk and administrative burden of loan origination and servicing.

Proposed Best Practices for Capital Finance and Subsidy

Developing facilities requires a very large upfront investment. Programs that cater to higher income families can afford to borrow the capital to finance a facility, although some may require a loan guarantee. In other cases, a direct government loan is necessary either in lieu of private debt or to supplement it. The Small Business Administration and many state economic development programs offer this type of financial assistance to for-profit ventures.

Programs that serve lower- and middle-income families face greater challenges. Parent fees and various government-funded operating subsidies generate insufficient revenue to support much of the cost of a well-designed facility. As a result, many public school and community-based programs require a deep to very deep capital subsidy equal to half to two-thirds of a facility's cost. The subsidy can take the form of a lump sum grant, or smaller annual disbursements that enable the provider to make monthly payments if the project is financed with loans rather than grants.

As with any long-term capital investment, borrowing much of the money makes sense because it spreads the cost over the center's useful life and over multiple state fiscal years. When borrowing, the state should seek the longest-term, lowest-cost debt available to fund both the state's capital subsidy and the provider's share of the project's cost. By reducing the interest rate and providing access to longer repayment schedules, tax-exempt debt enhances the provider's ability to bear costs and maximizes the amount of capital the state has available to invest in facilities. Connecticut and Illinois have successfully used tax-exempt bonds with an innovative debt service repayment feature through which the state repays a major portion of the bond debt for the providers. This strategy spreads the cost of the capital investment over many years, and makes the financing affordable to both the state and the provider.

States that subsidize public school construction could also amend existing school financing statutes to extend similar subsidies to preschool facilities. States should give local school systems the flexibility to operate their own preschool programs or partner with community-based providers for service delivery—ideally in a combination of school and community settings to accommodate local needs.

Finally, given the scale of the public subsidy required, states need regulatory agreements that safeguard the public's investment during the facility's useful life. Financing agreements should enable the state to replace operators if the program quality fails to meet specified standards or if it ceases to serve the targeted population.

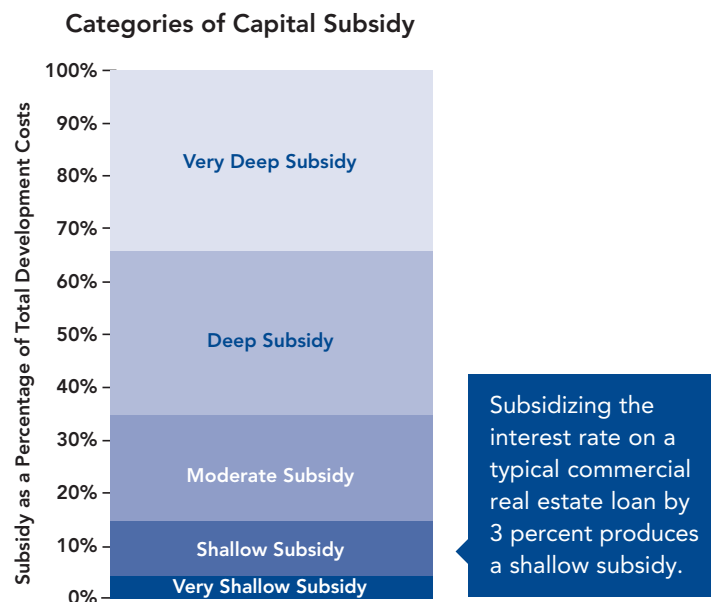
Policy Response: Subsidizing Debt

Lenders set loan interest rates based on the cost of money and the credit risk associated with each loan—adjusting the rate up or down depending on the perceived risk of a loan default. This leads to what borrowers see as a paradox: lenders charge a higher rate to those borrowers least able to support debt.

Reducing the interest rate burden on less credit-worthy borrowers makes repayment more likely and increases the chance that the loan will be sufficient to meet their capital needs. As part of the state’s School Readiness facilities financing program discussed above, the Connecticut Health and Educational Facilities Authority (CHEFA) partially guarantees private sector child care loans to improve the creditworthiness of loan applicants who would not otherwise qualify for financing. CHEFA has also sought to increase the feasibility of child care borrowing by combining an interest rate subsidy with its loan guarantee. Thus, if the collaborating banks make a loan at 8 percent, CHEFA provides a 3 percent interest rate subsidy, reducing the borrower’s rate to 5 percent. CHEFA covers the difference between what the bank charges on the loan and what the borrower pays.

Advantages: Although demand has been modest, Connecticut’s program caters to a segment of the child care industry, including for-profit businesses and some larger, multi-site nonprofit organizations that generate enough revenue to qualify for and support debt. Although the subsidy is shallow, lowering the interest rate can be useful for two reasons: The borrower can use the savings to support a larger loan and therefore address more capital needs. Or, by reducing monthly payments, the loan is easier to manage financially.

Drawbacks: The disadvantage of interest rate subsidies is that they fall on the shallow end of the capital subsidy scale. It is the right solution in a limited number of situations, but most often it will be insufficient to bridge the significant financial gap between the cost of securing quality space and the revenue available to most centers serving lower income families.

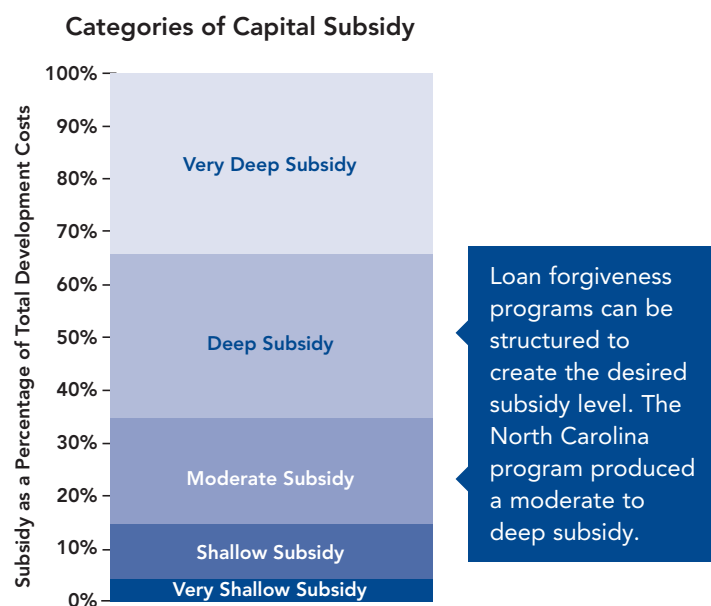


Policy Response: Performance-Based Loan Principal Forgiveness

A form of capital subsidy that is rare in the early childhood industry involves forgiving loan principal to reward a provider for meeting stated public policy objectives.

One such example is the Center for Community Self-Help’s Child Care Revolving Loan Fund in North Carolina, described earlier to illustrate the operation of a state loan guarantee program. To spur child care programs to use borrowed capital to rebuild child care facilities damaged by Hurricane Isabel and to create an incentive to improve program quality, the state funded a loan forgiveness program. Providers who maintain or increase the quality of their program, as measured by the number of stars awarded under the state’s Quality Rating System, are entitled to have 30 to 50 percent of their loan forgiven after four years. On a substantial renovation project, loan forgiveness at that level provides a capital subsidy in the moderate to deep range.

Advantages: This type of disaster recovery loan gives providers a strong incentive to pursue two of the state’s policy objectives: to restore the state’s licensed supply of child care and to maintain or improve the quality of early care and education programs. If program quality deteriorates, the provider bears the full cost of the improvements. Tying the subsidy to the attainment of public policy objectives based on *future* program performance increases the “social” return on the state’s capital subsidy investment.



Drawbacks: Loan forgiveness programs have two potential drawbacks. First, they only benefit providers who qualify for loans, leaving out many providers who might be equally or more deserving based on the quality of their program or population served. Second, some borrowers whose loans are eventually forgiven might have made the same investment without the state’s financial inducement.

Policy Response: Debt-Service Support

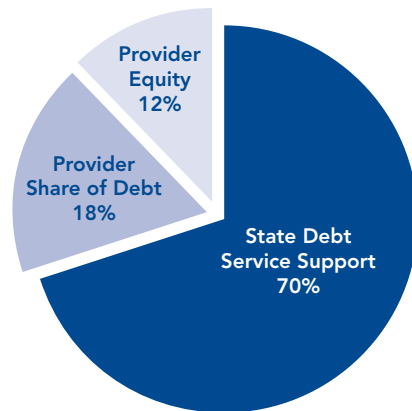
The strengths and drawbacks of the various policy responses reviewed thus far suggest that an effective and practical facilities policy needs to combine deep subsidies and debt financing. Moreover, to generate the highest public return on these investments, state resources to improve quality must also reach programs serving low-income children.¹⁶

To overcome the political and fiscal barriers to deep subsidy grants, such as Pennsylvania's Child Care Challenge Grant, a few states have turned to debt strategies to achieve scale while dramatically reducing the immediate budgetary impact. These states have provided subsidies by making long-term commitments to "debt service support," thereby repaying debt on behalf of nonprofit early care and education programs. In other words, the states deliver a deep or very deep subsidy by paying a specific proportion of each month's debt service until the loan is completely repaid. The higher the proportion of public debt service support, the deeper the subsidy.

Illinois, in partnership with the nonprofit Illinois Facilities Fund (IFF), pioneered the debt service support model in 1992. Through a pilot Child Care Facility Development Program, the state made a one-time commitment to service 100 percent of the debt to retire a ten-year tax-exempt bond issued on behalf of seven nonprofit agencies serving low-income children. With IFF's assistance, each agency constructed or renovated a center.

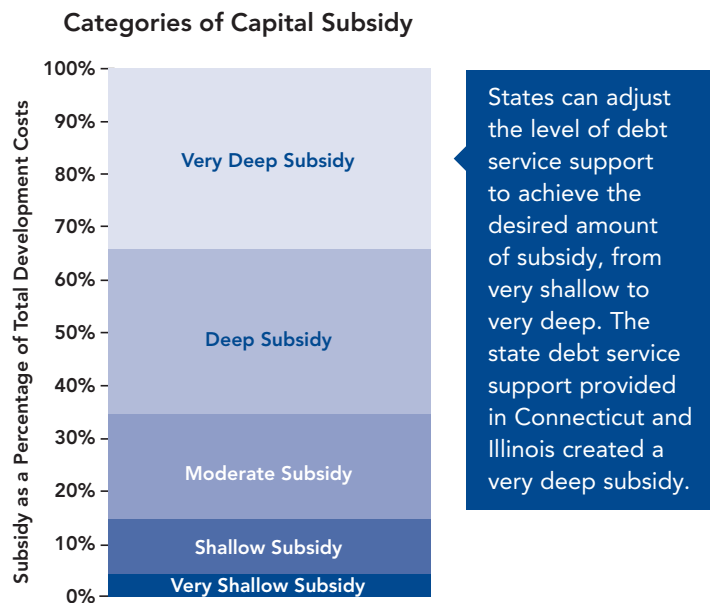
Five years later Connecticut passed the School Readiness Act that statutorily created a debt-service support program patterned on Illinois' pilot, administered by the Connecticut Health and Educational Facilities Authority with the Department of Social Services. Connecticut used tax-exempt bonds and secured bond insurance to guarantee the lowest interest rates available.¹⁷ Moreover, by issuing 30-year bonds that permitted a long amortization period, the state's modest \$2.5 million annual debt service appropriation resulted in the immediate construction of a significant number of facility projects. Low monthly payments mean providers can shoulder a share of the debt, and in turn, their debt payments allow the state's investment to support more projects. For a typical center, Connecticut delivered a very deep subsidy, paying 70 percent of the capital cost (see Figure 1). Meanwhile, each of the preschool programs paid the remaining 30 percent, including roughly 12 percent in project equity raised from philanthropic and public sector grants and gifts. The combined state and provider debt payments supported \$41.6 million in bond proceeds and yielded 18 high-quality centers serving 3,150 children in some of the state's most distressed communities. Since that initial appropriation, the state twice increased spending on the program by \$1 million, bringing the annual budgetary support for early childhood facilities to \$4.5 million.

Figure 1. Connecticut School Readiness Loan Program: Sources of Funds



Advantages: This model combines a number of valuable features. It relies heavily on debt financing, thereby improving the program’s political and fiscal feasibility. The state’s annual investment is modest relative to the capital cost of the facilities it was immediately able to renovate or construct. It uses a tax-exempt bond to achieve an especially low interest rate and long loan term, which enables providers with limited capacity to repay enough debt to support roughly 20 percent of the bond debt. The capital subsidy from the state is *very deep*—covering roughly 70 percent of total project costs—which is enough to induce providers to invest in facilities and encourage other public and private entities to contribute equity.

Drawbacks: Although the bond program has a low annual cost to the state, the state nonetheless assumes most of the capital cost. Moreover, the debt-service support agreement commits the state to continue its current debt service appropriation level for the 30-year life of the bond. Since bond underwriters rely on the state’s debt-service support agreement, the liability represents a moral obligation of the state. In the future, should the state debt burden become very high relative to its tax base, these moral obligations might contribute to a lowered credit rating. Finally, in using 501(c)(3) tax-exempt bonds, the provider ends up owning outright an asset largely paid for by the state. By incorporating ongoing contractual performance requirements and use restrictions and by enforcing them over time, the state can limit the risk of losing its investment. Alternatively, a state could create a public or private entity to own the facilities, and lease them long-term and at below-market rates.



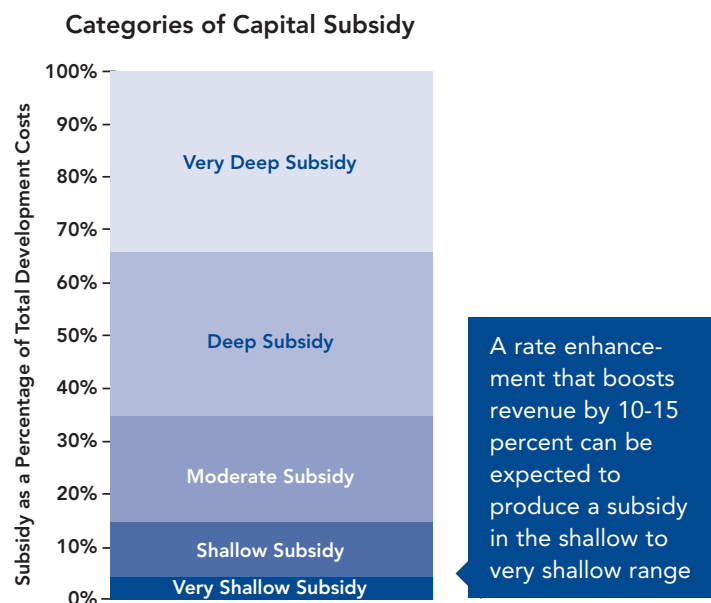
Policy Response: Rate Enhancements

States are increasingly adopting rating systems to determine child care program quality and reward it. The designation, which is usually expressed by awarding “stars,” denotes the level of quality. Awarding stars bestows obvious marketing advantages and provides an incentive for programs to invest in quality. It also helps parents make informed choices about where to enroll their children. In some states, centers receive an annual grant based on the number of stars they have earned. In Maine, providers who have earned a “quality certificate” are eligible for a variety of state financing incentives as well as a 10 percent to 15 percent bonus over the state child care subsidy fee.

States could apply the same concept to facilities finance. States might offer selected providers a facility development rate enhancement, supplying an additional revenue stream to secure and service a loan. The rate enhancement might be awarded competitively based on a center’s quality rating and the need to expand supply or improve physical environments in a particular geographic area.

Advantages: An enhancement targeted to facilities development might be a logical extension of this new payment model for state subsidized early childhood services. It also speaks more directly to the underlying structural problem in the field—the fact that fees in most cases are insufficient to cover the cost of quality care. Rate enhancements may be an incremental strategy to introduce market-based incentives and set rates based on the actual cost of delivering quality care.

Drawbacks: The contribution that rate enhancements might have on facility financing is unknown. However, the rate differential required to generate enough capital to service the debt for a new or substantially renovated facility would need to be far greater than the modest bonus or grant some states currently offer to reward high-quality programs. For the program to translate into new borrowing capacity, states would need to provide the rate enhancement for a period of years equal to the term of the borrower’s facility improvement loan. Without a multi-year commitment from the state to provide the rate enhancement, a loan slated to be repaid with that revenue would become too uncertain for most prospective lenders.



Policy Response: Public School Finance

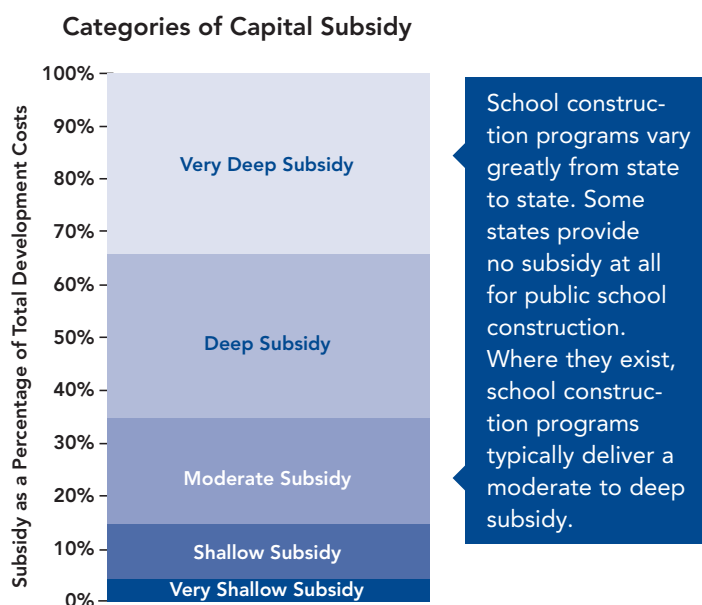
Growing public support for early education rests on the now well-established link between quality preschool experience and later school achievement. Historically, early education occurred exclusively in community-based settings. However, there are now a growing number of preschool programs operating in public schools. To house these programs, school districts often need to build new facilities or, where declining enrollments permit, to renovate existing classrooms and school buildings to meet the needs of younger children. To institute these changes, districts naturally turn to established school financing mechanisms.

Many states subsidize school construction. These programs vary considerably from state to state. California's program illustrates two common practices: state-local cost-sharing and deeper subsidies for some districts to mitigate economic inequities. Under its School Facility Program, California matches 50 percent of the cost for new construction projects. The state finances its share through the sale of general obligation bonds. Localities use several sources of local revenue, deriving most of it from the sale of municipal bonds. However, where school districts can demonstrate a financial hardship, state financing can cover up to 100 percent of project costs. States could make preschool classrooms and facilities eligible for comparable assistance or offer further incentives for facilities that house publicly supported prekindergarten.

Connecticut has taken this approach: the School Construction Program includes a 5 percent bonus on the proportion of the costs attributable to early childhood classrooms. The bonus is in addition to the state's routine school construction grants.

Advantages: Covering the cost of preschool classrooms under state school financing programs makes sense given the contribution early education programs make to the educational mission of public schools. Moreover, state school construction assistance often enjoys strong public support. States might take this further, as Connecticut has, and provide a more generous subsidy for prekindergarten facilities.

Drawbacks: Since school construction programs rarely cover the full cost of a facility, school districts typically issue municipal bonds to finance their share, a step which generally requires voter approval. Selling local taxpayers on the need for new school facilities is rarely easy. The fact that the state will cover a share of the cost may mitigate some voter resistance but still requires local officials to expend a lot of political capital to win voter approval for new borrowing.



The School-Based – Community-Based Conundrum

There is a growing debate about the wisdom of housing publicly funded prekindergarten in school buildings rather than in community-based settings. One concern is the economic impact school-based programs will have on the enrollment in community-based programs. The financial viability of infant and toddler care offered in community-based centers often depends on internal cost sharing with preschool programs.* If school-based programs cause preschool enrollments to fall at community-based centers, it would also reduce supply and drive up the cost of infant and toddler care.

A further challenge school-based programs must address is the need for “wrap-around” care. Publicly funded prekindergarten programs typically operate part-day. However, most children need some form of child care for the remainder of the day, which can involve a difficult transition for children and costly transportation to a different site.

While school construction financing normally flows exclusively into public school system buildings, one alternative is for school systems to permit community-based providers to deliver child care services during the balance of the day within the schools. Or, part-day public preschool programs could operate in community-based settings. Those community-based settings might include buildings whose construction is subsidized by the school system and state.

This suggests the need to adopt more flexible approaches to which entities develop new facilities, own the buildings and operate the programs. As the National Association of State Boards of Education’s Task Force on Early Childhood Education advised in *Right from the Start*, policies and programs “need to see young children in context rather than simply as ‘students’ in a specific program. Our policies need to reflect sensitivity to how a part-day preschool program fits into the full waking hours of a four-year-old...and how early childhood experiences relate to the world of public schools for children and parents.”

* Because the ratio of teachers to children is lower for older children, per child costs decline as they get older. This means programs can often generate a small surplus with high 3- and 4-year-old enrollments, which they then use to subsidize the higher costs of caring for infants and toddlers.

Promoting Sound Design and Real Estate Development Practices

The need to address the capital side of the facility development equation is obvious. The public sector must play a major role in filling the gulf between the financial resources available to deliver early childhood services and large sums of capital needed to create state-of-the-art environments that support quality programming and serve more children. Less apparent are the demand side barriers to facilities development.

Chronic undercapitalization and tight operating budgets in the early care and education field have led practitioners to adopt a pragmatic “make do” attitude. Many center directors are conditioned to expect makeshift conditions. Capital subsidies alone may be insufficient to overcome the ingrained belief that quality space is beyond the reach of the early care industry.

Constructing early care and education facilities is a complicated, unpredictable, and expensive endeavor involving real estate finance, land regulation, property rights, contracting, building design, construction, and project management skills. Every property presents a unique set of obstacles which often require a team of lawyers, architects, and other technical consultants to overcome. Yet most early care and education programs are small-scale operations run by directors who were trained as educators, not business people with MBA degrees or real estate development experience. Moreover, because of lean staffing, few have the time to devote to the process.

Small businesses in most other industries are probably equally ill equipped to develop facilities. However, in other industries space needs are better understood and less specialized. As a result, small business owners in other arenas are more likely to find suitable facilities on the market or secure a developer experienced in serving similar firms.

This is not the case in early care and education. Because of historically weak market demand for child care facilities, developers with appropriate experience are virtually nonexistent. Consequently, once a provider decides to renovate, relocate, or expand, they must either develop it themselves or select and actively manage a developer—and most likely one without prior experience developing early childhood facilities. There is a similar scarcity of architects experienced in designing buildings to meet the developmental needs of young children or familiar with the functional requirements of a high-quality early education program.

Compared with the range of strategies used to overcome the financial barriers to facilities development, policy options to address non-financial hurdles such as these are rare. However, failing to address these issues can inhibit demand for a state’s new facility financing resources, prevent some of the most worthy programs or underserved children from benefiting, result in higher than expected construction costs, and slow the pace of development.

Creating Effective Demand

A sufficiently deep capital subsidy will generate applications for funds. However, given the small size of many early care programs and their lack of real estate development expertise, will the pool of applicants be sufficiently broad to ensure state resources produce the highest public return? What “pump-priming” measures should be taken to stimulate demand? This section outlines some proposed policy responses to create effective demand for facilities capital and ensure more strategic use of public resources.

Policy Response: Training and Awareness Campaign

Given the scarcity of resources in the early childhood arena, many early childhood educators may be unaware of how facilities affect program quality, enrollment, staff recruitment and retention, parent involvement, programmatic stability, and financial sustainability. Moreover, many center directors and head teachers may not have toured a center designed and built to create a high-quality learning environment for preschool-age children. Professional development opportunities that expose these practitioners to well-designed facilities and emerging research about the relationship between facilities and quality can help kindle a vision that leads to action.

A number of nonprofit community development finance institutions that offer debt and equity for child care facilities have implemented a variety of demand-stimulating activities such as delivering training workshops and publishing educational resource guides.

The Children’s Investment Fund in Massachusetts, a nonprofit affiliate of a state quasi-public authority, adopted a concept pioneered by New Jersey Community Capital and offers an intensive, one-week, off-site training institute for teams from child care and Head Start centers. The Fund aggressively solicits applications, and conducts site visits and interviews before accepting organizations into the program. In addition to teaching facilities development skills, the curriculum also emphasizes leadership abilities, organizational development, and financial management. Participants view slide presentations of quality facilities, visit a model center, hear from other center directors who have successfully completed major construction or renovation projects, meet architects and development consultants, and learn about the development process and its demands on organizational time, energy, and resources. Although Massachusetts does not offer any capital subsidy, 50 percent of program participants complete a significant facility improvement project within three years of the training institute, and 70 percent do so within five years.

Advantages: Training workshops, especially intensive, high-quality, comprehensive ones like the Fund’s, appear to be one effective strategy to overcome knowledge, skill, and aspirational barriers to facilities development. States seeking to stimulate facilities development or planning to offer capital subsidies should accept the need to spur interest in order to ensure a broad-based pool of quality providers competing for its financial resources.

Drawbacks: Intensive training institutes such as this may stimulate interest in the physical environment, but they are expensive and benefit a small number of centers. The Fund’s follow-up technical assistance contributes to the positive outcomes it reports but also adds to the program’s overall cost. Moreover, few states have personnel with the experience to organize and deliver such a specialized training program, although states can contract with organizations that do.

Policy Response: Funding Technical Assistance Intermediaries

Another common impediment to demand is the lack of technical assistance at the earliest stage of conceptualizing and planning projects. Technical assistance providers need to be experienced and knowledgeable in both real estate development and early childhood education to support early educators as they formulate and explore the feasibility of undertaking a project which is likely to be that organization's most ambitious initiative.

In addition to skilled one-on-one advice and support, early technical assistance often requires access to small grants to pay for third-party professional services. For example, the child care center may need an architect to determine the program's space requirements and identify any special design or site considerations. This information establishes a starting point for a financing plan and site selection.

In a number of states, nonprofit "intermediary" organizations, like New Jersey Community Capital and the Children's Investment Fund mentioned above, have formed to fill this need. In some cases, intermediaries like these receive the financial support of state agencies as well as philanthropic organizations. An intermediary acts as a third party, agglomerating resources and brokering services for multiple organizations. Facilities technical assistance intermediaries are emerging as an important component of the infrastructure states rely on to aid the early education field. A few states devote a portion of the four percent quality enhancement set-aside from their federal Child Care and Development Fund grant to contract for the services of a technical assistance intermediary. Although nonprofit intermediary organizations attract private philanthropy to support start-up or new programmatic initiatives, once the facility technical assistance activity is established, ongoing state financial support is necessary to sustain this function.

Vermont contracts with the statewide nonprofit Vermont Community Loan Fund to provide facilities development-related technical assistance to center and home-based child care and Head Start programs. The contract includes the administration of a capital grant program funded by a modest annual state appropriation and sales of a special "Building Brighter Futures" child care license plate.

In Rhode Island, a public-private funding collaborative which includes the state's human services agency, foundations, corporations, and individuals, supports the Rhode Island Child Care Facilities Fund, a program of the national nonprofit Local Initiatives Support Corporation (LISC). The Fund advises centers who are renovating, expanding, or constructing new facilities; offers planning grants; conducts training workshops; and produces resource guides on how to finance, design, and develop early childhood facilities.

Advantages: Several states have helped launch or build the capacity of an independent nonprofit intermediary to deliver essential technical assistance services for the early childhood industry. These technical assistance providers offer a highly specialized entrepreneurial service that is difficult to find, create and sustain within a state government agency.

Drawbacks: It is not always possible to identify an appropriate and capable organization that is willing to diversify its services into the early childhood facilities arena. Moreover, once the state has identified a candidate to serve as the facilities intermediary, it will often need to support the intermediary as it familiarizes itself with the field of early childhood education.

Proposed Best Practices for Creating Effective Demand

To stimulate provider interest in facilities development and guide their efforts, states need to identify and support intermediary organizations capable of delivering technical assistance tailored to the needs of the early childhood field. The experience to date indicates that, with outside training, existing community development intermediaries can be strong candidates to become a state's early childhood facilities intermediary.

Intermediaries can heighten awareness within the early education field about the importance of facilities in supporting program quality. They can also provide child care organizations and school systems with the technical advice and resources to formulate and achieve realistic and well-conceived projects.

While philanthropic organizations have often made grants to help launch child care facilities intermediaries, state government needs to provide ongoing financial support for this function to ensure that there is an effective and lasting infrastructure for developing early childhood facilities. That support needs to cover the intermediary's staff and related overhead as well as grant and high-risk loan capital to fund third party consulting and out-of-pocket expenses during the preconstruction planning phase of facility development.

The Real Estate Development Function

Providers require assistance to navigate the thicket of legal transactions, regulatory approvals, neighborhood and abutter resistance, geotechnical hurdles, and other common yet unpredictable obstacles that can derail plans for a new or improved early learning facility. States might select one of three approaches in assisting child care operators to secure the real estate development services they will need. One is the "public works" approach: This model empowers a public agency to assemble land, design and construct facilities, and then either convey or lease the completed properties to providers. A second method might be described as the "do-it-yourself" or "bootstrapping" approach. This arrangement requires the state to support technical assistance intermediaries (described above) who assist child care operators in developing facilities on their own. The third and final model is a "turnkey" developer. Under this arrangement, the provider contracts with a firm that develops the facility to the operator's specifications. A more modest role for a technical assistance intermediary can be helpful to the provider under the turnkey scenario as well. Relying on the intermediary's advice, the provider (and the state) gains a measure of consumer protection as it navigates a complicated and expensive contractual relationship. This section describes these three approaches.

Policy Response: The Public Works Approach to Development

An established mechanism for planning, developing and operating public real estate projects from airports and bridges to power plants and redevelopment districts is the special-purpose quasi-public authority. States can adopt the same approach to develop, lease and maintain early childhood facilities. By centralizing the development function in this manner, a state can create a highly specialized vehicle capable of capturing lessons from each newly constructed facility, and realizing savings by contracting simultaneously for multiple projects.

The agency could be set up to transfer facility ownership upon completion. Presumably, it would convey title to the property with appropriate use and performance restrictions to preserve the public purpose and safeguard the state's investment. Or the agency could retain ownership, providing center operators with favorable long-term lease agreements. Such an arrangement would also likely be acceptable to providers who might prefer a high-quality state-of-the-art center, security of tenure, and affordability without the property management burdens and financial risks associated with ownership.

One of the hurdles in developing early care and education facilities is site assembly. In many communities, it is difficult to find sites that are large enough or appropriately located. Among other location-specific considerations, these facilities need sites sufficiently large to accommodate outdoor play space and parking, and ideally situated near the families they will serve. To satisfy these requirements, the agency may require eminent domain powers.

Under court order to invest in school facilities, New Jersey formed the Schools Construction Corporation (SCC) with over \$8 billion in state bond financing, eminent domain authority, and the mandate to build public schools including early childhood facilities in 31 low-income school districts covered by the *Abbott v. Burke* court decision. The SCC's efforts have been complicated by the tremendous scale of the undertaking, the pressure to complete projects rapidly, and rising construction costs.¹⁸

Advantages: Creating a specialized public-purpose real estate development entity for the early childhood field overcomes a series of barriers to the development of facilities while offering a range of potential efficiencies. Turning the real estate development function over to experienced professionals should speed the process, relieve providers of the burden and headaches associated with real estate development, save money, and, because of specialization and operating scale, yield better-designed buildings.

In New Jersey, the Schools Construction Corporation conveyed completed schools to the local school district to own and operate. However, if a district developed facilities for non-public entities (either for-profit or nonprofit) it could maintain performance accountability by awarding a lease permitting the agency to replace the tenant if its program failed to meet certain program quality benchmarks.

Drawbacks: Except in extraordinary circumstances, such as those that existed in New Jersey in the wake of the *Abbott* decision, creating a new public development authority can be politically controversial. The number of public entities that exist, and how independently they operate, can be a source of political and policy concern in state government. The power to exercise eminent domain is especially controversial.

Centralizing the development function within a public instrumentality has other potential drawbacks. For example, the process may lead to bureaucratic standardization and discourage creativity and variety. Moreover, a public development authority offers no guarantee that it will operate more efficiently than other development methods. For example, state examiners are investigating charges of mismanagement within New Jersey's SCC. It is unclear how much of the alleged problem may lie with the size and pace of development, the accelerated organizational start-up, political influence or some combination of factors.

Policy Response: The Do-It-Yourself Approach to Development

A “do-it-yourself” or “bootstrapping” approach puts the responsibility of real estate development in the hands of providers. Generally, only early childhood programs that are part of larger institutions, e.g., a multi-service agency such as a YMCA or a school system, are likely to have the experience, institutional relationships, and management capacity to hire and actively oversee their own real estate development team.

To assist the many smaller providers who comprise much of the early care and education field, states need to support technical assistance intermediaries (such as the ones in Vermont and Rhode Island described earlier) to provide intensive project-specific support. In particular, these intermediaries can help early childhood programs be effective consumers of professional development services including the architect, attorney, real estate development consultant, construction manager, and other consultants on their development team.

States that rely on this type of “do it yourself” approach need to ensure that technical assistance intermediaries are adequately resourced. These intermediaries need to be able to hire well-qualified staff, make grants and or “soft” loans,¹⁹ and maintain a manageable ratio of projects to staff to deliver intensive services and respond expeditiously to time-sensitive issues.

Pennsylvania’s Challenge Grant and Connecticut’s first round of School Readiness bond financing relied on the development capacity of the providers themselves or their ability to find their own technical resources and preconstruction funding. Both programs succeeded in quickly generating enough projects to absorb the available funding. However, in a private evaluation of the Pennsylvania program, some state administrators noted that this approach rewarded organizational size and sophistication, not necessarily program quality or other policy objectives, such as where centers were located or how many low-income children were served.²⁰ This experience has influenced subsequent policy planning in both states. For example, Connecticut has begun to contribute financially to support the work of a nonprofit statewide technical assistance intermediary, the Connecticut Children’s Investment Partnership (CIP) operated by the LISC.

Advantages: The “do it yourself” approach maximizes a provider’s control over its project. As the user of the facility and the party that best understands programmatic needs, providers should be directly involved in a host of decisions, both large and small. Having to live with design and materials decisions that impact program quality and impose short- and long-term costs, center directors are likely to make very different decisions than a private developer, especially a developer whose contract may provide financial motivation to favor short-term savings over programmatic necessities and long-term savings. To exercise effective control under circumstances like these, most early childhood organizations need the kind of independent advisors, high-risk loans, and planning grants that technical assistance intermediaries supply.

Drawbacks: Relying on mostly small, nonprofit child development organizations to develop real estate, especially with deep public capital subsidies, is an inefficient and unreliable way to develop properties and manage large public investments. While the presence of a technical assistance intermediary mitigates some of the risk, if the intermediary is under-resourced or poorly managed, the results are likely to be unsatisfactory. Moreover, although most states have community development intermediaries of some kind, many provide financing, but not technical assistance. Rarely do these organizations already have child care facility development expertise.

Policy Response: The Turnkey Approach to Development

Designating a firm or nonprofit organization with the real estate skills and experience to develop state-financed facilities provides a middle ground between the “public works” and “do it yourself” approaches. A typical turnkey project involves a private developer constructing a facility under contract for the owner. There are certain tensions inherent in such business arrangements, since the motivations and interests of the owner and developer may diverge at certain critical points. Retaining a nonprofit developer, especially one familiar with early childhood programs, can be less risky for a child care provider since the missions of the partners may be more closely aligned.

Nonprofit developers in Illinois and Georgia provide good examples of development entities that have worked effectively with child care organizations to produce very high-quality early learning centers. The Illinois Facility Fund (IFF) served as the real estate developer and owner, simultaneously developing centers on behalf of seven child development organizations that participated in the debt service reimbursement bond program described earlier. Each organization worked closely with IFF’s staff and the architectural firm hired to design the facilities. However, IFF had sole responsibility for developing the projects on time and within budget, therefore retaining ultimate decision-making authority. Because of the structure of the financing, IFF retained ownership of the centers until the state retired the revenue bond used to finance the construction. At that point IFF conveyed the properties to the centers operating in them.

Concern about the quality of Head Start facilities in the greater Atlanta, Georgia, area prompted a number of philanthropists to launch Early Learning Property Management (ELPM), a nonprofit developer of preschools. Since 1999, ELPM has built or renovated 10 facilities, several of which were developed on a turnkey basis with ownership transferred after construction, while ELPM retained ownership of others. It leases the latter properties to the providers at the deeply subsidized rent of \$5 per square foot. In one case, it developed a hybrid of the two approaches using a lease-purchase structure.

Advantages: The turnkey model can simplify the development process for child care providers. The early learning center selects a developer who is then contractually obligated to build the facility as the parties agree. This allows the professionals who work with children to maintain their primary focus while acquiring the services of a firm or organization with the real estate development expertise to deliver the building. The provider has more control over the product than the public works approach permits but without the day-to-day burdens it would experience with the do-it-yourself approach. If a compatible and able nonprofit developer were available to turnkey the project, it would further mitigate concerns about losing control or input into some of the decision-making. For state administrators, the turnkey approach increases the likelihood that projects will be successfully completed in a timely manner.

Disadvantages: Regardless of how well-crafted the contract is between the provider and the developer, the provider must sacrifice a measure of control in the process of relinquishing day-to-day development responsibility. The state must also be concerned with the qualifications and integrity of turnkey developers hired by providers. To some extent, nonprofit developers might offer a more appealing turnkey option; however, many states and localities do not have organizations with the skills and experience to serve in this capacity.

Proposed Best Practices for Building Development Capacity

How facility development is carried out can influence the rate at which facilities are completed; the quality of the final product; the state's ability to meet policy objectives; and the cost-effectiveness of the capital program. Each of the three approaches to facilities development described in this report has its advantages and drawbacks:

- Relying on a public development entity recognizes the overwhelmingly public character of these state-financed facilities. If most of the capital invested in the facility is public, there is a compelling rationale for providing strong public control over the development and long-term operation of the facility. Moreover, by centralizing the development function, a public development entity should be able to achieve savings because of economies of scale. On the other hand, this is the least tested model in the early education arena, and is likely to be opposed by advocates for small government and privatization. If the agency has the authority to use eminent domain to assemble sites, it may also be challenged by those seeking to curb this power.
- The do-it-yourself ("bootstrapping") approach puts the burden of developing facilities primarily on child care providers, but confers on them a greater degree of control over the final product. However, it is unrealistic to expect early childhood educators to bear so much of the real estate development responsibility without access to well-resourced and capable technical assistance intermediaries.
- In theory, the turnkey approach has the advantage of balancing the provider's influence over key development decisions while offering the comfort of having experienced real estate developers oversee planning and construction activities. The most effective turnkey approach is to use a nonprofit developer, especially one familiar with early childhood education.

Physical Design Practices

Buildings fall into distinct categories based on their intended use, such as retail or warehouse. The use dictates specific site and design considerations. Child care or early learning centers represent a new building type. Rarely have centers been specifically designed and built for this purpose; therefore, few architects have developed a specialization in early education facilities design. Moreover, published resources, professional journals, and reference materials on the topic are scarce.

A building's functionality and the overall design quality depend on the architect's understanding of the factors that contribute to program quality. If state policy makers leave design professionals to acquire experience through trial and error, many of the first generation of facility investments will fail to deliver the programmatic value public officials seek. Therefore, states should sponsor professional development and other initiatives intended to ensure good design. The following outlines a range of policy responses crafted to support the sound physical design of early care and education facilities.

Policy Response: Professional Development Workshops

In many states architects must earn continuing education credits by attending professional development workshops to retain their license to practice. Even in states that do not have such a requirement, architects hired to design state-funded early childhood facilities should be required to attend a training workshop on child care center design or demonstrate certain professional experience.

To familiarize more architects with facilities for young children, LISC has created a one-day workshop for design professionals conducted by the architect who leads Harvard Graduate School of Design's one-week summer Child Care Design Institute.

Advantages: Requiring training or experience in early childhood facilities design is a reasonable threshold to qualify for a commission designing a state-financed center. Training is relatively easy to arrange and inexpensive, and could result in a new crop of architects better prepared to design future early childhood facilities.

Drawbacks: The state might encounter resistance from architects who feel their architectural training and experience is sufficient to qualify them to design such facilities. In addition, while exposure to best practices through training will help educate architects about early childhood design needs, an isolated training experience is no substitute for the kind of nuanced understanding of early childhood education that architects glean from years of experience designing facilities for this industry.

Policy Response: Design Reviews

Another modest investment in good design is for states to retain experienced child care architects to review and comment on project plans as they evolve. The consulting architects should share their opinions with the state agency administering the capital subsidy program and with the client. Ideally, periodic progress reviews throughout the facility design process would provide expert third-party input when it can most easily be incorporated into the plans.

Advantages: If the primary project architect is inexperienced in the design of child care facilities, a review conducted by a more experienced consulting architect should be a cost-effective way to improve design quality.

Drawbacks: Design reviews may slow the development process and increase costs because of scheduling delays and proposed design changes.

Policy Response: Practice-Oriented Research and Resource Development

The lack of architectural commissions for early learning environments is also evident in the scarcity of reference materials and research-based design guidelines for such facilities. By contrast, there is a wealth of reference material and ongoing research to inform elementary and secondary school construction.²¹ For example, architects need reference materials that provide body measurements for children of different ages and lists of specialty suppliers of building fixtures and materials designed for use by younger children.²²

It will take years of accumulated experience, documentation, and research to obtain the kind of knowledge base currently available to those designing elementary schools. The task exceeds the capacity of any individual state; however, states can significantly contribute to this process. For example, states could expand the mandate of educational technical assistance centers to carry out post-utilization reviews and other evaluations of early childhood facilities and disseminate the results.²³

Advantages: Compared with a capital investment in facilities, funding follow-up research to evaluate newly constructed and renovated centers entails a small additional cost which will pay long-term dividends. Knowledge developed by studying facilities housing early education programs for 3- and 4-year olds can be expected to have important implications for classroom, playground, and building design for younger elementary school children as well, especially those in kindergarten and first grade.

Drawbacks: The cost of research, knowledge management, and resource development is commonly borne by the federal government and foundations, not state government. However, since early care and education now falls into state government's domain, states may have to bear this cost.

Proposed Best Practices for Physical Design

States currently investing in early childhood facilities are on the leading edge of a new specialty in the building industry. Once states commit to provide deep capital subsidies for early childhood facilities, the next critical step is achieving quality design. States should take advantage of opportunities to ensure a thoughtful and well-informed design process:

- States should themselves, or through collaborations, conduct professional development workshops for architects, and even require attendance for those hired to design state-financed centers.
- The state's process for awarding deep capital subsidies should incorporate design reviews conducted by architects experienced in early childhood facility development.
- The state agency administering the facilities development program should commit resources to design research and knowledge development.

States can tap the expertise of specialized nonprofit technical assistance intermediaries to support all these activities. These intermediaries have proven to be effective vehicles for promoting high-quality facility design.

Creating a Supportive Policy and Regulatory Environment

To create a coherent and reliable system capable of producing a sufficient supply of well-designed early childhood facilities requires more than money and expertise: for optimal impact, these resources should exist within a supportive policy and regulatory environment.

While states have initiated a variety of programs to stimulate facilities development, most have relied on short-term funding and have generally not been part of a comprehensive, strategic, and ongoing effort to expand access to quality early education. By focusing on the facilities component of a comprehensive policy approach, this report emphasizes the need to build a reliable institutional infrastructure to address the industry's physical capital needs over the long term and in a comprehensive way—recognizing that facilities policies fit into a larger fabric of measures designed to improve teacher compensation and training, establish higher standards for programs, and the like.

Policy Response: Integrated Early Childhood Policies that Include Facilities Finance

While most of the elements of a coordinated system have been tested, no state has yet created a comprehensive early childhood education policy for children from birth through age 8 that includes a stable infrastructure for facilities development, although a number are moving in this direction. One such state is Connecticut, where Governor M. Jodi Rell formed an Early Childhood Education Cabinet composed of the commissioners from all state agencies with responsibilities involving young children.

Other steps include:

- Renewed commitment to expanding operating subsidies for the state's preschool education program;
- Local School Readiness Councils to encourage coordinated school- and community-based program planning;
- Expansion of the tax-exempt bond financing program that provides deep capital subsidies for facilities development;
- Funding for a nonprofit intermediary that offers facilities development technical assistance to providers;
- A professional development system for early educators;
- Formation of an Early Childhood Research and Policy Council to bring together educators, business leaders, and philanthropists to advise the Cabinet.

Connecticut's effort is particularly noteworthy because of its early and ongoing attention to facilities development policies. It takes years to secure a site, design a facility, and obtain the regulatory permits before construction can begin. The construction itself can take over a year. Therefore, to have facilities available when they are needed, states need to nurture a facility project pipeline. States should:

1. embrace facilities development at the outset of their early education planning and systems-building policy work, and
2. operate capital financing programs in a stable, ongoing, and predictable manner.

Advantages: If states embrace facilities development as an essential component of an expanding early care and education system and have the foresight to create a reliable capital financing mechanism early in that process, they will have both the space needed to successfully serve larger numbers of young children and the facilities that support programmatic quality.

Drawbacks: Achieving this level of policy commitment to a comprehensive early childhood system that includes stable support for facilities development is especially challenging. It takes strong political and civic leadership to marshal the public will to make state resources available to expand and improve the early education system in general and to invest in costly facilities in particular. Committing early in the process and sustaining the effort over time imposes an even greater burden on policy leadership.

Policy Response: Quality Rating Systems

Increasingly, states are implementing market-based incentives in the form of Quality Rating Systems (QRS), which are described earlier in this report. As of 2005, at least 11 states had adopted them.²⁴ By awarding points for a physical environment that exceeds minimum licensing standards, policymakers can signal that the program's facility is among the factors providers should attend to in order to enhance quality.

From the very beginning of the process, Rhode Island prioritized the inclusion of facilities standards in the development of its Quality Rating System. It is currently the only state that has included a set of specific guidelines related to the physical structure and design of the facility.

Advantages: Rating systems are attractive because they are voluntary and promote quality. The extra earnings achieved through quality designations (e.g., stars earned) supplement tight operating budgets, increasing a provider's capacity to invest in facilities. By including new standards for facilities, rating systems could have an even more direct and immediate influence on the investment decisions made by center directors and administrators.

Drawbacks: States strive to make their Quality Rating Systems evidence-based. However, research related to the physical environment is less extensive than for other aspects of early childhood education, and the research that does exist is often not familiar to practitioners in the field. Moreover, there is no tool comparable to the Early Childhood Environmental Rating Scale to measure attributes of the physical environment. This void makes it especially difficult for state administrators to objectively rate facility quality.²⁵

Policy Response: Setting Higher Program or Regulatory Standards

Quality Rating Systems capture a state’s aspirations to lift program quality, but until now facility design has been at best a minor QRS consideration. Licensing regulations, on the other hand, deal more extensively with the physical attributes of the space—such as square feet per child, number of toilets, ventilation, lighting, etc. But they only define what is minimally acceptable from a health and safety perspective. In practice, program administrators and architects frequently accept licensing regulations as the standards to which they create facilities—either because of scarce resources or limited experience with best practices in design.

Regulations are a powerful tool states can use to influence practice. Research into early childhood program quality has found that “when facility regulations are more stringent, children show more advanced cognitive, social, and language development and have more secure attachments to teachers and fewer behavioral problems.”²⁶ States might consider re-examining the adequacy of the current regulatory framework for facilities as a strategy for raising the bar on standards for the physical space. Licensing standards should reflect new understanding about the relationship of the physical environment to child behavior, development, and learning as well as to teacher workplace satisfaction and productivity. Updated regulations might, for example, increase the common mandate of 35 square feet per child of classroom space, require new centers to have bathrooms directly accessible to each classroom, or provide more detailed requirements for lighting and acoustics.²⁷

States should periodically revisit regulations to ensure that they reflect emerging thinking on the kind of environment children need. Revised licensing regulations should provide existing programs with a generous phase-in period and capital subsidies to enable them to comply with these evolving standards. It is also important that state inspectors be well trained and conduct regular inspections and enforce regulations.

New Jersey’s Department of Education promulgated regulations setting new facility standards. These more rigorous thresholds apply to new early childhood facilities developed using state-financed school construction funds. Most notably, the guidelines have increased the minimum classroom space requirement from the nearly universally accepted 35 square feet per child to 50 square feet.

Advantages: Adopting more rigorous and up-to-date standards for the physical environment is an important strategy to lift the quality of the early childhood education system. New centers licensed under the higher standards will put pressure on other centers to upgrade their facilities. At the very least, more rigorous licensing requirements should raise the bar on what is acceptable quality.

Drawbacks: Given the tight economics of early care and education, new and more costly standards could limit supply by discouraging new entrants to the field. If applied to existing programs, some centers might be forced to close, resulting in a loss of supply. Because of the cost of compliance, only increased operating revenue or capital subsidies will enable most providers to meet higher facility standards.

Proposed Best Practices for Creating a Supportive Policy and Regulatory Environment

It will take decades to expand and upgrade the existing supply of center-based programs. Therefore, policymakers should focus on long-term strategies and financing structures and on institutionalizing the capacity to develop high-quality facilities over time. State facility development policies should:

- be incorporated into the state’s overall approach to expanding and improving the early care and education system.
- be initiated at the earliest possible stage of early childhood policy development because of the time it takes to develop facilities.
- create an orderly system for determining the appropriate mix of public school and community-based programs.
- be legislated, not funded as temporary or one-time initiatives, to create a sustainable process and achieve scale.
- be part of an institutional infrastructure—financing agencies, technical assistance intermediaries, policies, and interagency planning bodies—with clear public mandates and resources to produce high-quality programs and facilities.
- be explicitly incorporated into Quality Rating Systems to encourage early childhood programs to aspire toward facilities that exceed regulatory minimums.
- be reflected in state licensing regulations to capture a new appreciation for how facilities can promote a child’s emotional and cognitive development. States should also ensure that inspectors appropriately interpret and consistently enforce existing and revised requirements.

Conclusion

The most straightforward approach to improving the supply of early childhood facilities would be to fund early education and care at a level that reflects the full cost of quality. If program revenues were sufficient to hire and retain well-trained and experienced teachers and to build centers that are larger, better equipped, and designed specifically to meet the needs of young children, market forces would accomplish those objectives. However, despite evidence of increased state government action to make quality preschool experiences more broadly available, full funding remains a distant prospect.

States are intervening at multiple points with incremental measures designed to create greater coherence and quality in the emergent early education system. From the patchwork of public programs and private initiatives to improve physical environments, states can stitch together the elements of a comprehensive strategy. Comprehensiveness in this context constitutes a strategy that includes a sustained effort and mix of deep capital subsidies; gap-filling design and development capacity building; and a regulatory and standards-setting framework that consciously changes expectations of an optimal quality early childhood environment. This multi-pronged strategy has the potential to transform the industry's physical infrastructure over time and to bring about meaningful improvements in quality.

Investing in the physical capital needs of this growing industry is part of the process of building a system of quality early care and education. State facility policies are in their infancy. However, stimulated by the national trend toward expanded state-supported preschool education and the emphasis on elevating program quality, early facility development efforts, such as those described in this report, will continue to be replicated and adapted state by state. These measures, along with new state administrative structures and better-funded professional development systems, are forming an emerging infrastructure that will gradually change the face of the fragmented and unevenly resourced array of publicly supported child care, Head Start, and early education programs. That system will be incomplete without public policies and investments that result in facilities purposefully designed to support quality programming and to house a growing number of young children who need and deserve the very best services.

Endnotes

- ¹ This policy brief uses a variety of terms interchangeably: prekindergarten, preschool, early education, child care, early learning, and early care and education. As an important report on preschool education noted, “Historically, there have been two separate and at times conflicting traditions in the United States that can be encapsulated in the terms child care and preschool. A central premise of this report, one that grows directly from the research literature, is that *care and education cannot be thought of as separate entities in dealing with young children.*” Bowman, B.T., Donovan, M.S., & Burns, M.S. (Eds). (2000). *Eager to Learn: Educating Our Preschoolers*. Washington, DC: National Academy Press, p. 17.
- ² Kritchevsky, S., Prescott, E., & Walling, L. (1977). *Planning Environments for Young Children: Physical Space*. Washington, DC: NAEYC. Proscio, T., Sussman, C., & Gillman, A. (2004). *Child Care Facilities: Quality by Design*. New York: Local Initiatives Support Corporation.
- ³ Barnett, W.S., Hustedt, J.T., Hawkinson, L.E., & Robin, K.B. (2006). *The State of Preschool 2006: State Preschool Yearbook*, New Brunswick, NJ: National Institute for Early Education Research.
- ⁴ Blank, H., Shulman, K., & Ewen, D. (1999). *Seeds of Success: US State Prekindergarten Initiatives 1998-1999*. Washington, DC: Children’s Defense Fund.
- ⁵ The program has been hampered by rising construction costs and other problems with the state’s school construction process. Associated Press. (2005, December 21) New report on school construction agency finds project management problems. *Newsday*. Retrieved from <http://www.newsday.com>.
- ⁶ Weinraub, M., Armando, T., & Shlay, A.B. (2006). *Building Better Child Care: An Evaluation of the Pennsylvania Child Care Challenge Grant Program*. Philadelphia, PA: Family and Children’s Policy Collaborative at Temple University and the Women’s Community Revitalization Project.
- ⁷ Shonkoff, J.P. & Phillips, D.A. (Eds). (2000). *From Neurons to Neighborhoods: The Science of Early Childhood Development*, Washington, DC: National Academy Press, p. 318-320.
- ⁸ White, R. & Stoecklin, V. (2003). *The Great 35 Square Foot Myth*. Retrieved from White Hutchinson Leisure & Learning Group website: <http://www.whitehutchinson.com/children/articles/35footmyth.shtml>.
- ⁹ Bowman et al. (2000), p. 39.
- ¹⁰ Kritchevsky et al. (1977), p. 42.
- ¹¹ Proscio et al. (2004).
- ¹² Ritchie, R. & Willer, B. (Eds). (2005). *Physical Environment: A Guide to the NAEYC Early Childhood Program Standard and Related Accreditation Criteria*. Washington, DC: National Association for the Education of Young Children, p. 9.
- ¹³ In the for-profit arena, equity also has a cost in the form of dividends distributed to those who provide the business’ equity, or in the case of an owner’s personal investment, in the form of forgone income.
- ¹⁴ A borrower’s design and development decisions affect their borrowing need. However, programs need to balance cost control against the impact that specific cost-saving measures might have on a building’s quality and utility. Reducing the quality and size of a building too dramatically can greatly diminish the value a thoughtfully-designed center can bring to an early education program. Finding the right balance is difficult but essential.
- ¹⁵ Most financial institutions originate loans and sell them rather than holding them in their own investment portfolio. Therefore, in addition to the lender’s normal underwriting criteria, a loan needs to satisfy other financial risk thresholds to be sold on the secondary market. A guarantee may help overcome problems caused by either the lender’s or the secondary market’s threshold standards.
- ¹⁶ RAND Corporation. The Costs and Benefits of Universal Preschool in California. (2005). *Labor and Population Research Brief*. Santa Monica, CA: Author. Rolnick, A. & Grunewald, R., (2003, March). Early Childhood Development: Economic Development with a High Public Return. *FedGazette*.

¹⁷ Illinois “enhanced” its bond by creating a foundation-financed debt service reserve in lieu of bond insurance.

¹⁸ Just three years after its establishment in 2002, the SCC ran into trouble. The state’s Inspector General has issued an interim report charging a lack of internal controls for excessive spending.

¹⁹ Loans and grants supply the “working capital” to pay for professional services, make a payment to bind a purchase and sale agreement or cover a variety of fees during the pre-construction phase. The loans are “soft” because they are high risk and unsecured. Therefore, unless a project achieves a construction start, a borrower cannot, and should not be expected to repay it. Since those loans cover necessary professional planning services that are routine project development costs, they can be repaid from the proceeds of the construction financing.

²⁰ Weinraub et al. (2006).

²¹ The U.S. Department of Education funds the National Clearinghouse for Educational Facilities (www.edfacilities.org) and contains a wealth of information on primary and secondary school design and construction. The site also covers early childhood facilities but fewer resources exist about facilities for children 5 years old and younger.

²² Although such resources are limited, a number of federal agencies have produced design guides for early childhood facilities. The U.S. General Services Administration (GSA) publishes a Child Care Center Design Guide which is available on the GSA’s website. The Head Start Center Design Guide is available at http://www.headstartinfo.org/publications/hs_design_guide/index.htm.

²³ A post-utilization or post-occupancy review generally involves interviews with participants in the design, development, and use of the building after some period of time to identify and capture lessons about how to improve future facilities and the development process. In addition to practice-oriented research, there is a lack of large-scale academic studies of the effects of the physical environment on child outcomes and staff retention in preschool programs. Foundations and the federal government should be encouraged to fund this type of research.

²⁴ National Child Care Information Center. (2006, November). *Quality Rating Systems and the Impact on Quality in Early Care and Education Settings*. Retrieved from <http://nccic.org/poptopics/qrs-impactqualitycc.html>.

²⁵ Perhaps the most widely used tool for rating program quality is the Early Childhood Environmental Rating Scale (ECERS) and its equivalent for infants and toddler programs. However, the term “environment” refers to the overall program. With only minor exceptions, the observational guidelines used in determining the ECERS scores fail to include characteristics of the physical (i.e., “built”) environment.

²⁶ Bowman et al. (2000), p. 303.

²⁷ For example, the most common physical requirement for child care centers is the licensing requirement that classroom have a minimum of 35 square feet of useable activity space per child. In a financial environment where physical space is a major cost driver, 35 square feet has become the standard to which most programs build. However, early childhood researchers consider this insufficient. Various research reports recommend from 42 to 54 square feet per child to be more appropriate. See Butin, D. (2000, July). *Early Childhood Centers*. Retrieved from the National Clearinghouse for Educational Facilities website: www.edfacilities.org/pubs/childcare.html; and Legendre, A. (2003). Environmental Features Influencing Toddlers Bioemotional Reactions in Day Care Centers. *Environment and Behavior*, 35 (4): 523-549. Design guides typically cite either 45 or 50 square feet as the appropriate standard. Anita Olds considered 42 square feet per child to be workable but recommended 50 square feet (See Olds, A.R. (2001). *Child Care Design Guide*. New York, NY: McGraw-Hill). The Head Start Technical Assistance Center recommends 50 square feet while the two federal agencies with design guides, the Department of Defense and the General Services Administration, recommend at least 45 square feet.

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