ABSTRACT
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program evaluation; (4) communication; (5) demonstration; (6) data systems;
(7) comprehensive planning; and (8) coordination of support elements. The
paper next discusses barriers to policy implementation that would result in a
coordinated support infrastructure. These barriers are institutional,
psychological, sociological, economic, political, and geographic in nature.
The paper then suggests strategies that might be implemented to bring about
change, including identifying and cultivating powerful political forces,
establishing planning structures, mounting a media initiative, and involving
professional organizations. The paper concludes with suggestions for
financing the infrastructure. (Contains 40 references.) (Author/LPP)

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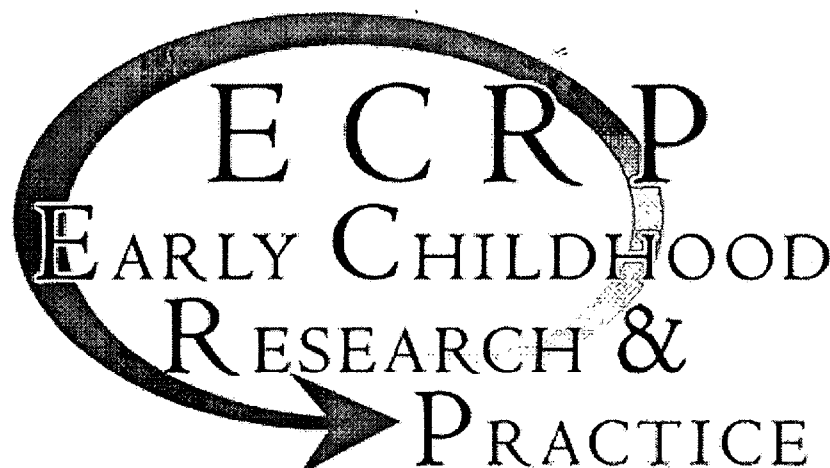
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Volume 2, Number 1

The Missing Support Infrastructure in Early Childhood

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Editors' Note:

The Gallagher and Clifford paper presented below addresses one of the central issues in the field of early childhood education and care: the creation of an infrastructure to support early childhood personnel so as to optimize the care and education of young children in this country. Because the authors have raised such critical issues, we are using this opportunity to take advantage of the electronic medium of the journal by providing a forum for readers to contribute to a continuing discussion of them.

We invite you to be part of this ongoing electronic discussion. We have provided a "dialog box" that makes it easy to comment on the article to suggest additional considerations, to contest or agree with the authors' assertions, or to focus on how we might move this discussion forward in the policy arena. We will post selected substantive contributions by topic on this Web site for further discussion. Please join us in this important discussion.

Lilian G. Katz & Dianne Rothenberg

Abstract

Noting that current programs for young children outside the home lack a comprehensive infrastructure or support system to stand behind the delivery of services to the child and family, this paper proposes the development of a support infrastructure designed to provide continuing and effective assistance to those who work with young children. The paper notes that a support system for early childhood services would include the following components: (1) personnel preparation, (2) technical assistance, (3) applied research and program evaluation, (4) communication, (5) demonstration, (6) data systems, (7) comprehensive planning, and (8) coordination of support elements. The paper next discusses barriers to policy implementation that would result in a coordinated support infrastructure. These barriers are institutional, psychological, sociological, economic, political, and geographic in nature.

The paper then suggests strategies that might be implemented to bring about change, including identifying and cultivating powerful political forces, establishing planning structures, mounting a media initiative, and involving professional organizations. The paper concludes with suggestions for financing the infrastructure.

Introduction

As we move into the 21st century, young children under the age of 5 are still without comprehensive public policies to protect or enhance their status. While there are some subgroups in that age range that have received policy attention, for example, children in poverty and children with disabilities, most young children remain outside society's protective umbrella. There is currently no comprehensive or universal set of policies designed to provide a blanket of care and developmental enhancement for young children birth through 4 years without regard to their particular individual circumstances.

The issue as to *where* young children should be raised, and *by whom,* has been muted by the fact that currently over 60% of mothers with children under 5 are in the workforce (Galinsky, Howes, Kontos, & Shinn, 1994). While there should be very few barriers erected to parents raising their children as they choose, there obviously needs to be some public and societal answer to the question "Who cares for young children?"

One of the most striking characteristics of the current programs for young children outside the home is the absence of a comprehensive infrastructure or support system to stand behind the delivery of services to the child and family. The definition of the term "infrastructure" by *Webster's New World Dictionary* is "a substructure or underlying foundation; esp., the basic installations and facilities on which the continuance and growth of a community, state, etc., depend, as roads, schools, power plants, transportation and communication systems, etc." (Guralnik, 1972, p. 723).

The characteristics of high-quality child care programs do not really stir many debates within the professional community. A definition of high-quality child care has been presented by many observers (see Kagan & Cohen, 1997; Gormley, 1995; Bredekamp, 1987) who agree that there should be well-trained personnel, working in an attractive setting, with materials designed to enhance children's development. The children should work and play in small groups with a reasonable child-to-teacher ratio, and there should be opportunities for continued staff training. The policy issue is how to engineer these favorable conditions in the face of the many problems and limitations that child care workers and directors are confronted with, namely, limited government support, restricted family resources, and a fragmented support system (Helburn, 1995).

As Gormley (1995) has pointed out, "Child care is a labor problem, a social problem, a regulatory problem, and, of course, a familial problem" (p. 32). Given the range of issues to be addressed, it seems unlikely in the extreme that such problems can be solved by a local day care center director and staff without substantial help from many different agencies and institutions in the broader society. The purpose of this paper is to propose the development of a support infrastructure designed to provide continuing and effective assistance to those who work on the "firing line" with young children.

Societal Infrastructures

There are many analogous enterprises in this society devoted to delivering services to the public that have designed infrastructures to support the significant activities that we value and need (Schopler, 1987). Two

examples of such infrastructures are the support systems behind the medical practitioner and the infantry soldier. In each instance, the person doing the "hands-on" work relies on many different people and institutions in order to do his or her job effectively. Physicians' work relies on research conducted in the medical schools and in the private sector designed to generate effective treatment procedures for their patients. Physicians have an active pharmaceutical enterprise designed to alert them to the latest in drugs for their patients, they have laboratories and X-ray capabilities for more effective diagnosis, a variety of nurses and paraprofessionals to provide support for their practice, plus hospitals available for intensive service delivery when needed.

In many instances, the patient may be unaware of these various support or infrastructure features. She knows that the doctor has examined the patient and prescribed a treatment. If such treatment works, the patient is convinced that she has a "good doctor" and may not be aware that what she has is, in fact, a *good system of health care,* of which the physician is one important feature.

In a similar fashion, though with different purposes, infantry soldiers have been lionized for their heroism in combat—justifiably so, but consider the research and development effort to produce better weapons, a vast communication and logistics enterprise designed to have the forces and right materials in the right place at the right time, a major intelligence effort to seek information on the intentions of the enemy, and so forth. With this impressive support, the infantry soldier is free to do his job in the most efficient way.

Compared with these two examples, and many more that we can draw upon from our complex society, the support mechanisms available to the child care provider are scattered and uncertain. Instead of focusing our concerns on the poorly paid child care workers and overcrowded centers, we might find useful a review of what would be needed to transform early childhood programs into a high-quality system of services.

The Quality Support System

We have known for some years about the various elements of a support system for early childhood services, including an infrastructure that can be introduced to upgrade this human service system (Gallagher, 1994). Some of these components are (1) personnel preparation, (2) technical assistance, (3) applied research and program evaluation, (4) communication, (5) demonstration, (6) data systems, (7) comprehensive planning, and (8) coordination of support elements.

Personnel Preparation

There is little disagreement about the important role that the personnel preparation of a wide variety of specialists can play in the design of high-quality services for young children (Kagan & Cohen, 1997). Yet these programs for personnel preparation are widely scattered by discipline, by geography, and by institution, and they are rarely linked directly to the service delivery enterprise. If we are to have competent staff, a wide array of personnel preparation programs (preservice and in-service) are necessary, with considerable stress placed on upgrading the capabilities of persons now on the job through short-term training. There needs to be an agreement on a *career ladder* that would allow a person working in early childhood to continuously improve herself or himself through personnel preparation. Universities, community colleges, resource and referral agencies, as well as state and federal agencies, should all participate collaboratively in the design and execution of a total personnel preparation program (Bredekamp, 1987). One example of specific attempts to improve personnel preparation is the TEACH program in North Carolina that provides subsidies for child care workers willing to make a commitment to further education (Blank & Poersch, 1999).

This TEACH program, designed to upgrade the education level of the teacher and provide additional compensation for the teacher, is now in operation in 13 states. In addition to improving staff quality, the program also aims to reduce the high turnover in such positions.

Personnel preparation may well be the greatest stumbling block to the development of high-quality service for young children. Available research notes the critical role of personnel preparation but also documents the low level of general education and specialized training of those working with young children in the United States (Helburn, 1995). A major national initiative is needed to raise the level of trained personnel available to teach our young children.

Technical Assistance

Many early childhood programs have existed as lonely castles without easy access to professional support or assistance. Consequently, they have only the skills and knowledge of the on-site staff to guide them in their decisions regarding high-quality child care. The establishment of various technical assistance programs, perhaps regional centers within a state, would allow local providers to have access to a wide variety of consultation and support personnel that seems necessary for high-quality programs.

One source of technical assistance has been the network of resource and referral centers (http://www.naccrra.org/) funded by a combination of state and local sources with additional help from the Child Care Bureau (http://www.acf.dhhs.gov/programs/ccb/index.html) in the U.S. Department of Health and Human Services. These centers have been established to aid parents in finding proper child care resources for their children, but they also provide some short-term training and assistance to early childhood programs, depending on the staffing and commitment of the individual centers.

The Head Start Bureau has established a series of Quality Improvement Centers (QICs) providing technical assistance to Head Start programs on a regional basis. In addition, there are other centers that provide support to personnel working with children from a variety of special populations. For example, QIC-D centers are designed to help the Head Start programs and staff cope with the special problems of children with disabilities (Zigler, Kagan, & Hall, 1996).

The Office of Special Education Programs has had a long history of supporting a variety of programs stressing technical assistance. The Regional Resource Centers provide a series of support functions for programs in their areas, and the National Early Childhood Technical Assistance System (NEC*TAS) (http://www.nectas.unc.edu/) has recently celebrated 25 years of consecutive service as a technical assistance center to programs for children with disabilities. NEC*TAS is now assisting state-level personnel in planning the allocation of resources for programs for young students with disabilities (Trohanis, 1985).

Each of these major federal agencies identified the need for technical assistance, more or less independently of each other. Many state departments of education have also become aware of the need for technical assistance but are currently struggling with limited personnel and the problem that the same individual who monitors programs also is expected to provide technical assistance for them—two incompatible roles. The vast majority of programs for young children have little or no technical assistance available to them.

Applied Research and Program Evaluation

High-quality programming and delivery of services require that early childhood educators are reflective

about our own performance and ourselves. Calls for "accountability" have become increasingly strident but are rarely accompanied by the necessary tools, strategies, or resources necessary to achieve that goal. There are several complicating factors that will require much attention before an acceptable level of accountability can be satisfactorily reached (Wiggins, 1993).

Issues of program evaluation in early childhood are complicated by the lack of general agreement as to the goal or goals from one program or community to another. Are the program goals the enhancement of cognitive development, the mastery of social skills, the attainment of effective attention and self-control, or other compelling goals?

Most early childhood programs must face the fact that, at their best, they may control only one-quarter of the influences or variance of the key developmental variables of the child. The neighborhood, family, siblings, and so forth, to say nothing of genetics, constitute the rest of the influence on the child. How can we sort out the program's influences in the face of these other forces?

Some states have attempted to begin an effort at evaluating early childhood programs such as the Smart Start program in North Carolina (Bryant et al., 1999) and the Georgia Prekindergarten program (Henderson, Basile, & Henry, 1999). The experience of the North Carolina program is instructive. Each of the counties was responsible for the design of its own early childhood program, and so the goals and program emphasis varied from one county to another. There were no generally agreed upon goals such as one would find in the primary grades, where mastery of reading and arithmetic skills makes broad state assessments more interpretable.

There remains the problem of how to organize or institutionalize an evaluative effort. Where will the headquarters and leadership of this effort be? Will it be contracted out to higher education? Will it be monitored through state agencies? And where will the necessary funding come from? We have, so far, greatly underestimated the cost of serious efforts in accountability. All of these issues and more suggest that this part of the infrastructure will be in a formative stage for at least the immediate future.

As is the case in medical research, the federal government has taken the lead in supporting funds for education and social science research. The Office of Educational Research and Improvement (OERI) and the Office of Special Education Programs (OSEP) in the U.S. Department of Education and the National Institute for Child Health and Human Development in the National Institutes of Health, as well as the Head Start Bureau and the Child Care Bureau in the U.S. Department of Health and Human Services, have made major investments in such investigations. Research findings can, and should, be universally applicable without regard to geography, and so it is less important that individual states sponsor this research activity—that is, what we learn about the enhancement of social skills in Texas can be easily adapted in Massachusetts.

One major initiative for collaborative research at the federal level has been a federal partnership among the National Science Foundation (NSF), the Department of Education's Office of Educational Research and Improvement (OERI), and the National Institute for Child Health and Human Development (NICHD). This Interagency Education Research Initiative is designed to improve prekindergarten–12 student learning and achievement in reading, mathematics, and science by supporting rigorous research on large-scale implementations of promising educational practices. It is noteworthy that this $30–50 million initiative includes prekindergarten programs. Our overall investment in research for young children remains small and scattered compared with other age groups.

Communication

In this era of advanced electronics, it is surprising not to find more programs for young children linked, through a dozen different networks, to the latest knowledge and practices in what we know about young children, their care, and stimulation. Some coordinated efforts at devising a communication network and establishing an ongoing network on a statewide level would provide an important support service for the child care provider. The National Child Care Information Center (http://www.nccic.org) and the ERIC Clearinghouse on Elementary and Early Childhood Education (http://ericeece.org) have begun the task of charting and disseminating what we collectively know on this complex topic.

One of the many potential uses of our advanced technology for communications has been in personnel preparation. Distance learning classes designed to upgrade the capabilities of child care workers and early childhood specialists are becoming increasingly evident. To this date, the technology has run ahead of the administrative and political support necessary to institutionalize such efforts.

There are a number of states that have been active in establishing a stronger communication bond between the various elements of an early childhood program. In addition, there appears to be a substantial willingness on the part of public decision makers to spend more money on necessary technological additions so that such communication systems can become a reality. The Web site of the National Association for the Education of Young Children (NAEYC) (http://www.naeyc.org), in 1999, exceeded one million hits during several one-month periods. We have seen only the beginnings of an effective communication system devoted to young children.

Demonstration

One strategy that has been often used to improve program quality is to identify outstanding programs, establish them as demonstration centers, and then urge other professionals to observe and emulate what is happening in those centers or programs that could be transferred to their own program. One of the oldest demonstration efforts in early childhood has been the Handicapped Children Early Education Program (HCEEP) that funded a variety of centers across the country illustrating high-quality program elements for young children with disabilities (DeWeerd, 1974). Those who direct or work in such demonstration programs are often valuable consultants to similar programs. Some demonstration centers can also play the role of a technical assistance center or in-service training unit. The High Scope Educational Research Foundation (http://www.highscope.org) is another rare example of a demonstration program in early childhood. There has been virtually no funding for demonstration programs outside those that focus upon "at-risk" populations.

Data Systems

One of the key elements in an effective early childhood infrastructure for a state would be the design of a data system for the systematic collection of information related to early childhood programs. It is often taken for granted by policy makers that information about various programs should be available automatically. So, when policy makers ask for the number of children cared for at home, or in family day care, or by relatives, they react with great surprise when they are told that no one knows the answer to those questions, or where to go to find the answers.

Since knowledge of the number of children in need of various services is critical to determining the projected cost of a program or services, it is a key element in comprehensive planning. A data system can also be useful to answer any number of questions, such as "Are minority children with special needs being served in the same proportion as their demographic proportion in the state?" (Hebbeler, 1993).

Federal agencies have been aware of the need for such basic data for their own planning purposes. The

National Center for Educational Statistics has added an early childhood education segment to its reporting (http://nces.ed.gov/fastfacts/index.asp), and the National Child Care Information Center State Profiles (http://nccic.org/cctopics/stats.html) have been helpful in gathering statistics on personnel status and development. Still, these federal data sources must rely on the capabilities of the states to collect accurate information from local communities. Systems that deal with the prekindergarten data confront more problems than systems that deal with school-age children who can be conveniently found in one place—the schools. There is the additional problem of obtaining unduplicated counts of children receiving multiple services, and the problem of "confidentiality" because some mental health agencies are not able to share their files with other agencies.

While progress has been made in building some data systems at the federal level, the same cannot be said of data systems at state and local levels. A number of states have begun efforts to develop comprehensive data systems. It remains to be seen if such systems will receive the consistent support needed for their maintenance.

An interdisciplinary committee, with help from consultants with demonstrated expertise in data systems, will likely be necessary to carry out the initial design and implementation of a comprehensive early care and education data system. The persons who will have to provide the data for the system (early care and early education personnel) should have input into the design of the system.

It should not be imagined that the sizable technical problems involved in operating and upgrading data systems are the only difficulties facing those wishing to establish an early childhood data system. There are policy makers who do *not* wish to know some of the data that would come forth from such a data system because knowing such data (e.g., the number of children not being served) may force action that will result in expenditures that the policy maker might well wish *not* to make. The principle of *deniability* ("I never knew that things were in such bad shape!") is well established in the political realm, and a well-functioning data system may prevent the exercise of such denial.

Comprehensive Planning

One of the key aspects of an infrastructure is the ability to do comprehensive statewide planning and to be able to allocate resources over time and in a systematic manner to more easily reach the goals of the program. Such planning should bring together all of the various players and stakeholders in the early childhood domain; Head Start, child care, public schools, early intervention, parents, and citizens should all be represented in such a planning effort. Part of the plan would be devoted to determining the degree to which various other elements of the infrastructure (e.g., personnel preparation) should be receiving support. The Smart Start Program (http://www.smartstart-nc.org/) in North Carolina represents a multidisciplinary statewide effort to bring comprehensive planning to the delivery of services to all children and families in need from birth to school age (Bryant et al., 1999).

There is widespread recognition among the states of the need to develop comprehensive plans so that early childhood programs have some degree of continuity and stability in the face of widely varied state income from one year to the next. The budget problems of allocating resources often result in states not being able to make final budget decisions until late summer. This timing causes additional problems for the early childhood leaders who often do not know what resources they will have until a few weeks before they must start a new school year. So there is little argument that multiyear planning is needed—the issue is how to carry it out within the existing political system and how to coordinate the various support elements.

One dramatic case for the need for collaboration involves the transition of young children with disabilities from Part C of IDEA (birth to 3) to Part B of IDEA (3 to 5 years). In a number of states, different agencies

have the responsibilities for each of these developmental periods. Written interagency agreements have been developed to ease the transition (Wischnowski, Fowler, & McCollum, in press). Such agreements need the full cooperation and authority of the concerned agencies, plus a strong desire to implement the agreement. Otherwise, it becomes only another document ignored in favor of the status quo, turf battles, personal status, and other impediments to useful change (Harbin & McNulty, 1990).

Coordination of Support Elements

It is not enough to have all of these components present in a particular state; they must be linked together for maximum payoff. Yet, there are enormous barriers to be overcome because of the "parallel play" that the key agencies are engaging in, often not knowing what other agencies are doing, but each convinced of their own legitimate role in early childhood. Head Start is organized and funded at the federal level. Child care is governed largely at the state level with significant funding from the federal government. Prekindergarten programs in the schools are funded and governed through some combination of federal programs (Title 1), state special initiatives, and local government. Services for children with disabilities receive a major amount of oversight through federal legislation and regulation, but they are operated mostly through locally administered programs. With these overlapping responsibilities, providers and policy makers often find themselves making decisions that can be undone by the actions of others, unaware of the broad consequences of their own actions (Fowler, Donegan, Lueke, Hadden, & Phillips, in press). Currently, one could truthfully say no one governs or coordinates the early childhood services in the United States (Clifford, 1995).

The needed collaboration will take place under admittedly painful conditions so that there needs to be strong motivation to take this painful step. Gray and Hay (1987) believe that successful implementation of interorganizational consensus relies upon the perceived legitimacy of the project involved and the ability to include all key stakeholders. What type of interorganizational arrangement is made is dependent upon the "exchange relations" between groups (Cook, 1997). Two reasons for such collaborative efforts to be tried are *specialization* and *scarcity*. Specialization may mean that an agency representing the health field may be needed in comprehensive planning because of its special knowledge and expertise in that field. The issue of scarcity comes into play when interorganizational cooperation can have the advantage of creating economies of scale. The manifest shortages of personnel call for collaboration among higher education, community colleges, the providers, and supporting agencies.

Conflict among agencies can be expected because of the stress that inevitably occurs in a domain where scarce resources are to be divided. The actual study of conflict between agencies, however, has been quite limited; therefore, there needs to be an analysis of the advantages and disadvantages of conflict for a given agency (Di Stefano, 1984). Alexander (1995) has developed a series of examples of coordination between organizations, stressing the positive aspects of the links between elements rather than the overall properties of systems.

Unfortunately for those seeking simple answers to complex questions, our understanding of the development of young children becomes more and more complicated, requiring the attention of many diverse disciplines. The young child is swimming in a cultural sea that will shape that child's future reaction to events, and that shaping process never stops. Elder (1998) pointed out how individuals are shaped by their historical context (those who lived in the Great Depression or World War II, for example). So it is not just the child alone, or the child and the family alone, but the entire cultural environment that, in some manner, determines the child's reaction to school and education (Bronfenbrenner, 1989).

If we accept the persuasiveness of the arguments for a coordinated support infrastructure for young children, then we face another issue: "Why hasn't such an infrastructure been put into place?" In other

words, why don't we, as professionals, do what we know we should do? The answer to this question is considerably more complex than ignorance or malfeasance. This puzzle is at the heart of why change is difficult, and why the status quo has so much power. A careful review of the array of barriers to change would seem to be helpful in answering the key question above.

Barriers to Policy Implementation

In some respects, change appears to come easily to Americans—particularly when they adopt a new technology, such as the computer or VCR. Yet, when one tries, deliberately, to create change in services to citizens through policy shifts, there are often many barriers to overcome. For example, Gray and Hay (1987) propose that "unless other compelling incentives exist, powerful stakeholders will resist collaborative interventions so that they can preserve their individual control over the domain" (p. 99).

Figure 1 provides a summary of various types of barriers that the implementation of new policies must overcome: institutional, psychological, sociological, economic, political, and geographic barriers. In the case of programs in early childhood, there are a variety of potential barriers at work.

There are few policies that do not find some barriers that stand in the way of implementation. Success in policy implementation often depends on knowing the nature of these barriers, how they interact, and how they can be portrayed, so that an effective strategy can be devised to overcome them.

Institutional

These barriers arise when the proposed policy conflicts with the current operation of established social and political institutions. A call for interagency coordination might create difficulties in blending the existing policies and operations across health, social services, and educational agencies. If a lead agency is identified to carry out the policy, is that agency given sufficient authority and resources?

Psychological

A proposed policy can come into conflict with deeply held personal beliefs of clients, professionals, or leaders who must implement the policy. Perhaps some persons resent the fact that they were not consulted before the policy was established. Any time someone loses authority or status, there can be personal resistance.

Sociological

Sometimes the new policy runs afoul of established mores or cultural values of subgroups within the society. For example, it may be traditional in some cultural subgroups for family members to show deference to those in authority (e.g., physicians or agency heads). The notion of family empowerment might be a difficult one for them to entertain.

Economic

Often, the promise of resources to carry out a program is not fulfilled, not because of deviousness, but because of the multitude of issues to be met and the limited financial resources at the state or federal level.

Political

Some programs become identified with one or the other political party, and such programs become hostage when the opposing political party comes into power. There is a periodic overturn of political leaders through retirement or elections—changes that can cause disjunction in the support or understanding of the program on the part of political leaders.

Geographic
The delivery of services to rural and inner-city areas has long plagued those who have tried to provide comprehensive health and social services. Personnel resources tend to remain in large- or middle-sized urban areas, causing substantial difficulties in covering outlying areas.

Figure 1. Barriers to policy implementation.
Adapted from: Haskins, R., & Gallagher, J. (1981).
Models for analysis of social policy: An introduction (pp. 68-74). Norwood, NJ: Ablex.

Institutional Barriers

Institutional barriers include the separate structures that have already been established to carry out special programs to meet the diverse responsibilities of Head Start, child care, public schools, and early intervention, and which now exist apart from each other (Fullan, 1993). It is a challenge to blend these separate structures. None of these separate elements of early childhood services has a comprehensive structure, but each has some elements of a total structure in place. There are, in addition, separate professional organizations tied to various governmental agencies, often in separate departments of government. Each may be tied, in turn, to some part of the system of higher education.

Psychological Barriers

Psychological barriers can hinder policy development or change. These barriers are unique to a particular individual and can hardly ever be predicted. However, some policy change can run counter to the interests of a senior administrator who has been accustomed to doing things in a particular fashion for years, if not decades. Regardless of the merits of new ideas, some resistance to change can be expected.

Similarly, if we have an agency head who thinks that the changes are going to eclipse her own influence in the professional domains of her state, some considerable time and effort may be needed to try to mollify or reduce the anxiety of individuals who see the change as affecting them personally in a negative fashion.

Sociological Barriers

Sociological barriers can be some of the most frustrating to all concerned. The diversity of American society means that there are many subgroups that may not completely share the mainstream idea of the American dream and can certainly have child-rearing ideas that differ from the mainstream. When these child-rearing differences are complicated by the presence of a child with disabilities, the opportunity for misunderstandings and different views are many. Even if there is solid mainstream support for some policies, they can run counter to the values of a particular subgroup and create substantial resistance to a new policy initiative (Harry, 1992).

While it is possible to establish policies through majority rule, there may be in the community a substantial and active minority group, whose members resent the fact that their interests have been overridden. They can, at the local level, twist and bend the general policies to fit their own group's needs. Cultural barriers constitute one reason why the same policy appears to be implemented differently in different communities.

Economic Barriers

Many of the economic barriers to policy implementation are obvious. Early childhood personnel are being paid at a scandalously low level relative to the responsibilities that they carry. The American public is not yet sure whether they should assume financial responsibility for preschool children, as they have for older children in public schools. Every suggestion for change carries with it a price tag that the general public or

its representatives have to assume if this change is to be accomplished. While the public has been willing to invest in programs for children with special needs or problems, most policy makers have resisted support for universal programs for early childhood.

A recent report has identified over $7 billion in state and federal money being spent on child care and early education services (Mitchell, Stoney, & Dichter, 1997). That amount is surely increasing every year, but it is still far short of the needs of the target population of children. A recent National Academy of Sciences report estimates that we spend one-quarter the amount on children birth to 5, on average, as we spend on children 6 to17, on average (Ladd & Hansen, 1999). A variety of sales taxes, property taxes, state income taxes, tax credits, and state lotteries are being used to generate additional income at the state level. Increases in federal programs such as Head Start and programs that serve young children with disabilities add to the available funds.

Political Barriers

Political barriers can appear when early childhood programs become too closely associated with a particular political leader who retires, or whose political party loses an election, so that the opposition party downgrades the program when it comes into political power. There are definitive time constraints in the political arena marked by elections, legislative calendars, and retirement, for example, so that meaningful steps toward change have to be taken at particular points in time. The politics of change also mean that a continued program of education for decision makers has to be conducted to orient the new entrants to the political scene to the issues at stake. As long as many members of the public see early care and education as a service to parents rather than as developmental enhancement for the child, they will be unlikely to pick up the cost of comprehensive programs.

The positive role that can be played by the media to enhance interest in early childhood is illustrated by such efforts as the "I Am Your Child" campaign, led by actor and producer Rob Reiner, and the recent efforts to disseminate brain research, which was well covered by the national press. Since many public decision makers get their information about early childhood through the media, attempts like those noted above appear to have made a positive difference in how the building of an early childhood infrastructure has been perceived.

Geographic Barriers

The geographic barriers to policy implementation have remained relatively constant over many decades. The delivery of services to children with special needs has been hindered by the logistics of distance or accessibility. Distance can keep the professionals who work in rural areas from coming into easy contact with each other and so limits the collaborative work that might otherwise be organized for the benefit of the child with special needs. But distance is not the only dimension to the barrier. Many professionals are less likely to wish to work in a rural area or in the "inner city," and the areas themselves are often poor, limiting the amount of specialized help that can be made available. Even in the relatively well-supported areas of serving young children with special needs, a half-century has gone by without a solution to the problem of providing sufficient services to rural areas or inner-city areas. Geographical barriers remain a persistent problem (Kirk, Gallagher, & Anastasiow, 2000).

Power of the Status Quo

There has not been much written about the status quo as a force, but it obviously is one of the more

significant barriers in policy initiation or change. In any people-serving operation (e.g., health, education, and social work), there are a number of professionals who have become used to carrying out their jobs in certain ways. To ask the pediatrician to give up the use of her standard blood pressure equipment, or the psychologist to give up his intelligence tests, or to ask the teacher to "team teach" with another is asking a lot, even if the changes might be clearly beneficial to those being served.

Changing to new procedures always takes more psychic and physical energy than maintaining the status quo, and that fact alone can cause a lack of enthusiasm for new policy (Fullan, 1993). Resistance to new methods and procedures is routine, and there has to be a very powerful reason for changes to be instituted in order for people to overcome that resistance. Psychological inertia can be as powerful as physical inertia.

In order for change to take place, we must also overcome inertia in the form of a quasi-stationary equilibrium that is the main impediment to change (Schein, 1996). Fortunately, such a change in equilibrium seems to be upon us. Weick and Quinn (1999) point out that "to understand organizational change one must first understand organizational inertia, its content, its tenacity, its interdependencies" (p. 382). They separate *episodic change* from *continuous change* and believe that there has to be a serious lack of equilibrium to justify and sustain episodic change. Such a lack of equilibrium would seem to be that the majority of mothers with children under 5 years are in the workforce and families require some type of high-quality child care.

Resistance to change and the maintenance of equilibrium is heightened by what has been referred to as *deep structure* (Gersick, 1991). Deep structure refers to a series of choices made and procedures adopted while establishing a system. A set of basic activity patterns has evolved to maintain the system's existence. Together, the patterns make up what might be called "the rules of the game." Having made these choices over time in such a structure as the child care system, for example, one would be extremely loathe to leave them for some alternative path of action, hence the equilibrium-maintaining nature of the deep structure.

One reason that is often given for change is that the old ways or processes have never proven their usefulness and that the newer approaches are more effective and efficient. The new ways will improve our performance and make us seem modern and up to date in our professional work (Zigler, Kagan, & Hall, 1996). This side of the argument is the "carrot side." The "stick" side of the argument is that you may not be allowed to continue the status quo in any event. Your very job, or professional role, can be considered outdated and could be threatened with replacement. At the very least, if you don't change, the funds that you have counted on may disappear. Some combination of the "carrot and stick" approach may be necessary to convince people who are being asked to change to accede to these requests.

It should be clear that change in early care and education policy will require a change in attitude on the part of the public who must pay the bill. This barrier is not a reason for rejecting this systems-building option but rather a reason for a call for a comprehensive campaign to highlight the long-range benefits of such a system (e.g., fewer referrals to special education, fewer grade retentions).

What Next?

Each of these infrastructure elements is in place somewhere. There are research centers and regional education laboratories already established; major technical assistance systems are present in Head Start and in programs for children with disabilities (NEC*TAS). On-site personnel preparation is being handled through a variety of groups such as state agencies, resource and referral agencies, and community colleges. There are communication efforts through a variety of national clearinghouses. Long-range planning efforts have begun in many states. We now are faced with reorganizing these efforts in the interests of maximum payoff for young children and families. The virtues of all of these support system components have been

recognized. What we need now is sufficient numbers of these efforts at the state level to ensure some payoff at the local or center level.

With all these barriers and problems, it seems wondrous that some planned change takes place at all. It is clear that we can no longer accept the rationale that "It just make sense to change." It might make sense in terms of some logical argument, but we have to remember that we are dealing with "self-interest," one of the most powerful of human motives. If the new policy offends the values of individuals or communities, or just threatens the status quo, then the proponents of change are likely to have a fight on their hands.

Another point made by those who study the process of change is that there are various stages that must be traversed in order for change to take place. Prochaska, DiClemente, and Norcross (1992) describe four stages—*precontemplation, contemplation, action,* and *maintenance*—and have noted that many persons flow from one stage to another. Even when persons reach the *action* stage, they often relapse and change back to previous habits three or four times before they maintain the newer sequence. So there is a spiral pattern of contemplation, action, and relapse before reaching the maintenance stage.

Policies for Building Infrastructures

There has been enough sad experience to suggest that the laissez-faire approach as a means to cope with implementation barriers does not work. The opposition will not go away, nor are they likely to "see the light" without some definitive action being taken. One interesting exercise would be to pretend that one was starting from scratch in building an educational infrastructure instead of trying to paste together already existing entities with their own histories and mandates to be considered. Under such circumstances, it would be relatively easy to assign authority for different roles in the system with personnel preparation assigned in one direction, demonstration in another, and the responsibility for communication assigned to a third.

But existing agencies are likely to have components of all of these roles already active within their organizations because the absence of an overarching infrastructure has caused them to fill in the gaps themselves. For example, a large number of agencies dealing with early childhood (e.g., Head Start, programs that deal with child care or children with disabilities, and Title 1 for young disadvantaged students) all have personnel preparation activities because of the universally recognized importance of high-quality and well-prepared staff. Now the task is to see how all of these efforts can be synthesized or coordinated to a central purpose for the benefit of young children and their families.

If we accept the importance of the support infrastructure and the powerful barriers standing in the way of change, then our task is to design a public campaign that would encourage states to consider such an infrastructure. The many different contexts and forces at work in different states make it impossible to provide a simple recipe for such actions, but there would seem to be some general strategies that should be considered.

Identify and Cultivate Power Sources

We need to identify and cultivate various powerful political sources in the states that could be supporters of the infrastructure concept. Such a power source could be a governor, or a key state legislator, but it could also include professional organizations and business leaders who are convinced of the importance of high-quality early care and education. As noted earlier, it would be desirable to have bipartisan political support to prevent the early childhood effort from becoming a political football or a pawn in the inevitable

conflict between the two major political parties. An early declaration of the intent to be bipartisan could be helpful in keeping the hostility or anxiety in check.

Establish Planning Structures

While many states have found it useful to organize interagency or multidisciplinary planning groups, few of these groups have been given a mandate that would allow them to pursue the support system infrastructure concept. Some form of such a mandate needs to be given by one or another of the power sources. Once given such authority, this planning group, representing the various stakeholders in the early childhood field (including parents), could prepare a multiyear development plan as the basis for a policy initiative for creating a support infrastructure.

An example of such a technical planning group comes from the National Education Goals Panel (http://www.negp.gov/) (1997), which addressed the subject of what would be necessary for each child to be able to enter kindergarten "ready to learn," the first of the National Education Goals. The panel believed that attention should be applied to five major developmental domains: *physical well-being and motor development, social and emotional development, approaches toward learning, language usage,* and *cognition and general knowledge*. The panel recognized the importance of a proactive strategy to enhance performance in all of these domains:

> Attention is needed in both policy and practice in order to recognize that preparing children for school means helping them become healthy, adjusted, curious and expressive, as well as knowledgeable. . . . The best way to reach high standards may be to attend to children's general well-being and then provide learning environments and experiences rich in opportunities to explore, rather than to provide earlier formal academic instruction. (National Education Goals Panel, 1997, p. 35)

In order to promote all five of these dimensions, the panel recognized the importance of coordinating human service delivery among health, education, and other social service agencies at the local, state, and federal levels. As the panel noted, "It is not simply the development of new policies that must be accorded attention; it is the development of *new structures* and new public will" (p. 34).

Mount a Media Initiative

The general public has a poorly developed understanding of the infrastructure concept, and there needs to be a long-range media campaign mounted by a variety of individuals and organizations committed to this idea. Research documenting the impact of infrastructure on outcomes in young children is needed. Reports of exemplary program efforts in support systems and clear examples of how the system would work are also required.

In a more targeted fashion, the media effort should also focus on decision makers who would be responsible for creating and implementing the system, because many decision makers may have an incomplete appreciation of the value of a support system for early childhood. They probably already are aware of the costs of such components and need to see the advantages more clearly.

Involve Professional Organizations

A potentially powerful but little used resource are the state professional organizations, some of whom may be adjuncts to national organizations such as the Association for Supervision and Curriculum Development (ASCD), National Association for the Education of Young Children (NAEYC), Council for Exceptional Children (CEC), National Education Association (NEA), and American Federation of Teachers (AFT). These organizations can provide continuity for the planning effort. They have often been used only to

convene professionals from their own discipline, but a major effort to win such organizations over early could generate a purpose and direction for the state organization agenda that they often lack.

The recent president of NAEYC (Clifford, 1997) has urged his organization to move on these issues:

> NAEYC has an obligation to deal with these issues. As the largest organization representing early childhood professionals, we must face up to the issues which directly affect our current and future membership. We must develop new capacities to address the public policy issues. We must craft effective means to provide assistance to affiliates—particularly those at the state level—as key decisions are devolved to state and local authorities, to enable them to effectively advocate for quality services and equitable and forward thinking decisions affecting early childhood professionals. (Clifford, 1997)

Be Realistic about Time

Given all that would have to be done, any expectation for a quick and glorious victory for our efforts would have to be muted. It is more realistic to think in 5-year blocks of time during which a series of activities would be taking place to build the necessary groundwork.

Financing the Infrastructure

The establishment of these support system components is much more economical than the "across-the-board" increases in service delivery strategies (e.g., raising teacher salaries) or extending services and should be attractive to policy makers.

As the complexity of our social and economic enterprises becomes more evident, the need to develop system-type answers will hopefully become more acceptable. The 21st century is likely to be filled with structures designed to cope with the multiple interactions of various social forces or influences. The most creative act of the professional and the professional community may be to design structures, such as these support systems, that will help our complex society work more effectively to provide needed services for young children and their families and to use our understanding of the change process to see the system implemented.

Earmarking

One of the financial strategies used by other programs to insure that certain things happen is to earmark certain funds to make sure that a particular proportion of resources will go to that interest. Head Start funds have been earmarked in the sense that 10% or more of the students are mandated to be children with disabilities. Another example is the Child Care and Development block grant where 4% of the funds are set aside for "quality expenditures" (Personal Responsibility and Work Opportunity Reconciliation Act of 1996, PL 104-193).

It is necessary to earmark such funds for the infrastructure because when funds become tight, the direct service money is politically protected, while the cuts are often made in the less politically sensitive infrastructure areas such as personnel preparation or research. Over time, this cutting results in a shrinking proportion of funds devoted to infrastructure. The earmarking in this case could be a sum of money that becomes a percentage of the total allocations. How these sums are allocated among the various components can be decided in individual states with help by an advisory committee in the state government that would be guided by the comprehensive state plan.

Kagan and Cohen (1997) have addressed the issue of infrastructure in one of their recommendations in *Not by Chance*. They state, "Ten percent of all public early care and education funds will be invested directly in the infrastructure" (p. 35). They continue:

> As public investments in early care and education increase, a larger percentage of government funding—we estimate at least 10 percent—needs to be invested directly into building and maintaining the infrastructure, including support for resource and referral agencies; parent information and engagement; data collection, planning, governance, and evaluation; practitioner professional development and licensing, enforcement, and improvement; program accreditation; and other quality improvement activities. (p. 36)

Subsidies

We already have many examples of governmental subsidies that the public willingly pays for, expenditures that are in the public interest. Transportation is a major example. Mass transit cannot pay for itself from the fares charged to individual passengers. Public subsidies are required to bring the fares to a reasonable level. We can look at child care and early education similarly. Parents should pay fees, but these fees should be at an affordable level. This subsidy would help us cope with Morgan's trilemma of early childhood care: low teacher salaries, low educational preparation of personnel, and high parental cost (Morgan, 1996).

These subsidies would represent a major increment in what we are spending on children. Establishing such subsidies will require strong and persistent political and professional leadership. It may help to point out that we now spend $6 to $7 on the elderly for every dollar we spend on young people.

Wishing Will Not Make It So

There is no linear, straight-line path from where we are now to where we want to go in terms of building a viable support system or infrastructure for early childhood. One of the advantages of these ideas for a comprehensive support system is that many stakeholders can see how such a support system will benefit their programs, if such a system is established in the right fashion. Nevertheless, the barriers that are predictably in the way of the development or coordination of such a system, plus the power of the status quo, guarantee that a long and sustained effort will be needed to bring about an infrastructure for early childhood education.

One thing is certain—infrastructures such as those described here do not happen by accident. They have to be constructed. We cannot substitute wishful thinking for action. If the infrastructure for young children eventually emerges, it will be because of concerted and prolonged effort by many persons who believe in this concept.

We have reported on a variety of initiatives being taken that will help build the infrastructure described here. These initiatives represent desirable steps on a long journey to a comprehensive service system for young children and their families.

Acknowledgments

policies of the National Institute on Early Childhood Development and Education, the Office of Educational Research and Improvement, the U.S. Department of Education, or any other sponsoring organization.

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