

School Finance

The term "school finance" refers to the process by which tax revenues and other resources are derived for establishing and operating elementary and secondary schools as well as the process by which those resources are allocated to schools in different geographical areas and to types and levels of education. The term, school finance, has generally been limited to the elementary and secondary levels, although it has also been applied to preprimary institutions.

The area of school finance draws heavily from other fields. Since laws must be passed and administered, it is closely related to the politics of education and educational law. Since various aspects of economics and finance are involved, it must draw upon principles from the economics of education and government finance (Monk 1990). And, since the overall plans for financing education must be translated into the operations of schools, it must necessarily relate to school administration.

1. Structural features of School Finance

It is important to provide brief definitions of a number of terms that are commonly used in school finance. School revenues refer to the financial receipts of schools for supporting their operations. Such revenues can be derived from taxation, tuition charges, and student fees as well as from contributions and income from the provision of goods and services. School expenditures refer to the financial disbursements of schools for the purchase of the various resources or inputs of the schooling process such as administrators, teachers, materials, equipment, and facilities. Costs represent the value of all resources used in the schooling process, whether reflected in school budgets and expenditures or not. The costs of school resources include the values of any inputs that are used, even if they are donated or not reflected accurately in expenditure accounts.

Capital expenditures are those incurred for providing school plant and facilities. Although capital investment requires a large initial expenditure, the plant and facilities have a lifetime that extends over many years. In contrast, operating or recurrent expenditures refer to financial outlays for school resources that are used each year for the operations of the schools, such as teacher salaries and disposable supplies. Budgetary provisions must be made for operating expenditures each year.

School finance begins with the major decisions about education, such as who will be educated in what ways. The financial aspects must necessarily be based on the translation of these decisions into resource requirements, which will be satisfied through tax revenues, family expenditures, and donated resources. Since these decisions will differ substantially from society to society, so too will

school finance arrangements. Although the principles of school finance can be applied to many different societies, their actual application must reflect the unique economic, political, social, and cultural attributes of each setting. There is no universal tax or expenditure approach for schools that will be found appropriate for all situations.

One reason for the importance of school finance is the fact that a considerable part of the gross national product (GNP) of nations is devoted to education. Available sources of data such as those in the UNESCO *Statistical Yearbook* (e.g., UNESCO 1991) tend to combine expenditure at all levels, including those for higher education. In the 1980s, about 2-9 percent of GNP was devoted to public educational expenditures among nations. In general, those countries with higher proportions of their young enrolled in school and with higher per capita incomes spent a larger proportion of GNP on education. In a worldwide survey of this phenomenon, Eicher (1982) found that for every 1 percent increase in GNP, there was an increase of over 2 percent in public educational expenditure among countries from all major regions of the world in 1960-65. This declined to about a 1.3 percent increase in the 1965-76 period, but educational expenditures still maintained a faster rate of growth than did GNP.

There are at least two reasons why educational expenditures tend to increase at a faster rate than GNP. First, at relatively low levels of per capita income, most of what is produced must be used for consumption with little surplus available for investments in schooling or other areas. But at higher per capita incomes the available resources for both social and private investment rise. Second, as countries become more industrialized, there is a greater private and social demand for schooling. What is clear is that education makes a prodigious demand on the resources of almost all societies, and even these amounts do not reflect the sizeable private expenditures on schooling and related educational needs such as books, transportation, and uniforms (Schiefelbein 1987, Tsang and Kidchanapanish 1992).

2. Decisions in School Finance

The best way to understand the field of school finance is to consider it as a decision-oriented phenomenon in which educational decisions must be translated into ways of financing schools. Each society has its own educational priorities, system of government finance, political mechanisms for making decisions, and administrative structures for implementing them. School finance reflects these structures and processes.

2.1 How Much Schooling?

Every society must decide who will be educated and how much education will be provided? Depending

upon the answers to these questions, particular populations will be eligible, or even compelled, to attend school. Further, given the availability of schools, noncompulsory schooling (e.g., upper-secondary and higher education) will rise over time as more and more persons complete the compulsory years. When these phenomena are combined with the size and growth of the eligible youth populations, financial provision must be made for adequate numbers of places in elementary and/or secondary schools. The financial implications arising from who will be educated represent the most fundamental building blocks of a system of school finance. Both the projection of capital costs and operating costs depend upon an understanding of who will be eligible to attend school and who will actually participate.

The ability to ascertain the number of students that should be planned for at each level is essential to designing an adequate system of school finance. The most basic tool is that of demographic studies of the population which transform birth rates and the size of the youth population at each schooling level into anticipated enrollments for specific target dates in the future (Davis 1980b). To a large extent, this type of analysis must ascertain not only who is eligible to attend each schooling level, but what proportion will actually attend if schools are available. Social demands for schooling can be developed statistically to make these estimates (Davis 1980a).

In wealthier societies it may be suitable to let schooling expand as rapidly as the demands for it grow, particularly if there is evidence that the additional benefits of that schooling exceed the additional costs. However, most countries are subject to severe constraints in following this approach, given the dearth of resources, and even the richer industrial societies face serious problems of unemployment among their educated populations. Accordingly, some societies may choose to plan the expansion of schooling beyond the compulsory years according to some sense of social or economic need for the nation.

The personnel planning approach attempts to estimate the required number of workers with different levels of schooling according to the occupational needs for meeting specific objectives of economic output at some future target period. It has been criticized severely for the lack of realism of its assumptions and its projections (Blaug 1972). (See *Manpower Forecasting and Educational Planning*.)

The rate-of-return approach provides a method of assessing the expansion of schooling in terms of an investment where the future increase in economic output from an investment in education is compared with the cost of additional schooling (Becker 1964, Psacharopoulos 1973). In this way one can compare the returns for social investments in schooling with investments in other public goods such as health or capital investment in plant and equipment. Pre-

sumably, further investment in schooling should proceed only when its rate of return exceeds those for alternatives. This technique has been criticized because of its crucial assumption that increases in social productivity of workers can be assessed according to higher earnings that they receive when they have obtained more schooling (Berry 1980). Further, the lack of data availability on future earnings may also introduce distortions into the estimates (Eckaus 1973). These analytical tools are considered to be helpful, primarily, at a heuristic level, in planning for future enrollments, even if they cannot be applied mechanically to the issue (Blaug 1972).

2.2 How will People be Educated?

Once having established who will be educated and how much education will be provided, it is necessary to ask what types of education will be provided. There are at least three basic dimensions to this question. First, what type of education will be offered at each level? Of particular concern is the nature of the primary curriculum and the emphasis on vocational versus academic education at the secondary level as well as the specific requirements of each. Second, what quality of education will be offered? Clearly a system of large classes using minimal facilities with modest instructional material and poorly trained teachers will require fewer resources than one with greater qualitative depth. Third, what provisions will be made for children with special educational needs, such as the physically and mentally handicapped, intellectually gifted, immigrants, and those from impoverished backgrounds? It is widely recognized that such groups have particular educational requirements that may necessitate supplementary resources (Kakalik et al. 1981, Levin 1973).

The nature of the primary educational curriculum and the division of secondary students between academic and vocational training have major cost consequences, since each is associated with different resource needs (Hu and Stromsdorfer 1979). This is obviously true for differences in school quality, with the cost per student increasing as a function of teacher preparation, reduction in class size, and the facilities and instructional materials that are provided. Because of the predominance of teacher costs, the decision on class size alone can dominate cost patterns. Essentially, a reduction in class size by 50 percent will tend to increase the cost per student by almost 100 percent. Finally, the greater the attention to the special needs of particular students, the more resources will be required to meet educational commitments (Kakalik et al. 1981).

The quality issue must be assessed with respect to the benefits of any particular level of resource utilization in meeting the goals of schooling relative to the costs of those resources. One criterion that has been used on an international basis is that of the

contribution of educational resources to cognitive achievement as reflected in test scores (Heyneman and Loxley 1982). The literature on this subject, that of educational production functions, seeks to determine how changes in different educational inputs such as class size and teacher quality create differences in student achievement (Hanushek 1986). However, it is important to note that the quality of education should not be judged on the basis of test scores alone.

One major concern is the impact of public school investment on the relation between public and private sectors. In many societies, the low investment in and resulting quality of the public schools relegates them as institutions for the poor who have no other alternatives. Middle- and upper-income families send their children to private schools which are more highly endowed with educational resources. Often there are substantial public investments in these private schools. The result is the existence of a dual system of schools: a low-quality public one with large classes, modestly trained teachers, poor materials, and inferior facilities that is attended by children from low-income families, and a higher quality private system with smaller classes and better teachers and other amenities. The latter charges fees that are beyond the resources of poor families.

A related issue is what provision of educational resources will be made to those students with special needs such as the handicapped, intellectually gifted, immigrants, and the poor? This is a matter of social and political priorities which may require considerable economic resources to address fully.

2.3 Who Should Pay?

The resources that are required for elementary and secondary schools include those that are used directly to provide instruction and those that must be present in the schooling process. Included in the first category are teachers, buildings, materials, equipment, and so on. Within the second category are the time and efforts of students to undertake instruction and to study. In many societies the use of student time at the upper-primary level and secondary level represents a cost because children who are attending school must reduce their provision of productive labor for the support of families and society. Thus the student's time must be considered as a resource that is usually "paid" for by the family and society in terms of reduced income, and the total cost of schooling must include this element as well as the direct instructional costs.

Each society must decide which constituencies should pay the costs of the resources that are required for schooling. One principle that is used is that of benefits received. That is, the various constituencies should bear the costs of schooling according to the benefits they receive. For example, schooling is supposed to have considerable benefits for the entire

society in the form of a more literate and productive nation with a common language and common set of values (Weisbrod 1964, Bowen 1977). Schooling also provides advantages for individual students and their families in the form of higher status, earnings, and access to opportunities. The problem of allocating costs between the larger society and the individual participants in the schools is that it is difficult to determine in a precise sense the social and private benefits for schooling.

2.4 What is the Appropriate Government Structure?

The appropriate government structure for the sponsorship of schools has important implications for school finance. Different societies rely on different principles of school organization. Some societies provide a highly centralized form of school organization and governance in order to maximize the uniformity of school operations and to benefit from presumed economies of scale. Others are organized largely according to region and locality within certain national laws or guidelines. One based upon regional and local sponsorships provides greater potential for responding to the specific needs of the school populations that are being served. The balance between central and regional or local governance of schools will determine the balance between uniformity and diversity. Such a decision on governance can have profound implications for school finance, since decision-making responsibilities at any governmental level often entail financing responsibilities as well.

To the degree that there is some reliance upon regional and local authorities in the finance of education, issues of school finance inequalities arise. Units of government may differ in the level of educational support for their students according to their relative priorities for education as well as their wealth and tax bases relative to the number of school-eligible children. Especially important in this regard are differences between urban and rural areas, where the latter are usually considerably poorer than the former.

In many cases central governments take responsibility for providing grants to states and local governments to provide a minimally acceptable quality of schooling for all eligible youth (Sherman 1980). The state or regional governments may also provide such equalizing grants to individual local schools. In some cases higher levels of government will also provide categorical grants to their decentralized school authorities to induce them to provide specific categories of educational services such as those for disadvantaged and handicapped children.

A final aspect of governmental structure is the choice between government and private sponsorship of schools. Friedman (1962) has argued that although the government should provide resources for schooling because of its important benefits for the society as a whole, the actual operation of schools should be

under private auspices to create choice and competition among schools. This issue will be addressed below.

3. Obtaining and Allocating Resources

How will resources be obtained and allocated to different levels of schooling, different types of students, and different regions and locality? There are two criteria that can be used to analyze each of these issues: efficiency and equity. Efficiency refers to using available resources in a way that maximizes the welfare of a society (Levin 1976). Equity refers to distributing the benefits and costs of any endeavor in a way that is considered to be fair. It is clear that both concepts are socially determined in that what is assumed to be efficient and equitable in one society might be considered to be inefficient and inequitable in another. However, the two criteria are of great assistance for any particular society in evaluating the most appropriate methods for both obtaining and allocating resources for the schools.

3.1 Obtaining Resources for Schooling

The first issue that arises with respect to obtaining resources for schooling is how the burden of support will be distributed between the government and families. Even when the government pays the direct cost of instruction, families must often pay for the costs of books, uniforms, athletic equipment, and the loss of forgone earnings of their older children who are enrolled in school rather than being employed.

In general, it is argued that primary and most secondary education provides social benefits of such an important nature that the entire society should support them (Friedman 1962, Weisbrod 1964). These benefits include a common set of values, knowledge, a standard language, skills for modern work enterprise, the development of latent scientific and cultural talents, and many more. Further, widespread participation in modern societies requires that all individuals be exposed to a set of common experiences that are requisite to obtaining access to available opportunities. This democratization of access to opportunities is considered to be an important social benefit in itself. Because of the perception that elementary and secondary schooling are necessary for the functioning of modern societies, most nations take the view that the direct costs of providing schooling should be subsidized through public funds.

A central question that arises is what type of tax system is most appropriate for the support of elementary and secondary schools from the perspectives of efficiency and equity. In general, there are two concepts of tax equity that might be considered: benefits received and ability to pay (Musgrave and Musgrave 1976). The benefits-received principle assumes that the tax burden ought to be levied according to the benefits received by different con-

stituencies. Unfortunately, the very nature of most social benefits means that they are difficult or impossible to apportion to different constituencies.

The ability-to-pay principle assumes that those taxpayers with greater ability to support the tax system—usually those with greater income and wealth—ought to provide larger contributions to tax revenues than those with lesser resources. The actual application of this principle will depend upon the specific tax base and the particular assumptions regarding how to minimize social sacrifice for obtaining a given level of revenue (Musgrave and Musgrave 1976).

Efficiency in taxation refers to the effects of the tax system on the entire economy as well as the collection and compliance costs for raising any particular revenues. If one believes that the "natural" workings of a free economy produce the most efficient allocation of resources, then it is important that any system of taxation minimizes the distortions to that system (Musgrave and Musgrave 1976). Of course, monopoly concentration in many industries and the effects of trade unions and government raise serious questions about the existence of a free and competitive economy. Further, sometimes the tax system is used to provide "desirable" distortions such as taxation on tobacco products, liquor, and luxury goods, which is designed to reduce consumption of those products. However, the design of a tax system should always be scrutinized to minimize any distortions that are considered to be undesirable.

Efficiency in collection and compliance refers to minimizing the costs required to obtain a given level of revenue. In this respect, costs refer not only to the governmental resources that are required to collect the tax, but also the cost to the taxpayer of complying with the demands of the tax system. Different taxes are associated with different costs of collection and compliance.

Thus far the discussion has referred to the characteristics of systems of taxation in general terms rather than with regard to school finance. A system of public revenues for school finance has two other characteristics that are desirable: stability and growth. Stability refers to the yield of a tax system from year to year. An educational system will have predictable revenue needs, and it is important that the tax system provide those needs with high reliability. Some systems of taxation will be characterized by large fluctuations from year to year depending upon economic conditions. For example, a tax on the export of primary commodities will tend to be highly unstable as market conditions vary.

To the degree that school enrollments are expanding or improvement of school quality is desired, it is also necessary that tax revenues grow adequately to meet the rising resource requirements.

Some tax bases have greater growth potential than others. Any tax approach should be assessed for

whether the tax revenues that it will produce will keep pace with the rising demands upon it.

The most widely used taxes are corporate and personal income taxes, sales and consumption taxes, and property taxes. Each is associated with different equity and efficiency consequences, depending upon how it is applied. In general, equity in taxation is determined by ascertaining the incidence of a tax on households in different income classes (Musgrave and Musgrave 1976). For purposes of defining tax equity, a tax may be characterized as progressive, proportional, or regressive. A progressive tax represents an increasing proportion of household income as income rises; a proportional tax is a constant proportion of income at all income levels; and a regressive tax is one that carries a greater proportional burden on lower incomes than on upper ones.

Business taxes and some property and sales taxes are not levied directly on households, so it is not always possible to know in any precise sense how the tax is shifted to different income groups in higher prices or lower incomes. However, there is a vast literature which has provided broad conclusions on the equity consequences of different taxes (Musgrave and Musgrave 1976, Break 1974, Pechman and Okner 1974).

The personal income tax is highly flexible and can be progressive, proportional, or regressive depending upon the structure of tax rates, the definition of taxable income, and provisions for tax deductions, exemptions, and credits. Typically, the official tax rates reveal little about the actual incidence of the tax. For example, the United States has a highly progressive income tax on the basis of the official tax rates, but the large numbers of tax loopholes that are to the particular advantage of upper income taxpayers have meant that the actual incidence has been more nearly proportional (Pechman and Okner 1974).

It is difficult to know who ultimately pays business taxes since they can be shifted to the consumer in higher prices or to their workers in lower wages. One type of income tax that is commonly used is the payroll tax. This tax tends to be highly regressive, because it is a tax on the earnings from labor, while not taxing property income. Since property income is concentrated among the highest income groups, a payroll tax does not tax a major source of income for these groups while taxing the major or only income source for lower income households.

Sales taxes can be divided into specific excise taxes and broad-based or general sales taxes (Musgrave and Musgrave 1976). The former are usually levied on luxury goods or those for which a society wishes to discourage consumption such as cigarettes, liquor, and gasoline. General sales taxes or consumption taxes—as they are called—apply to a much larger set of goods and services. These include the turnover

tax or value-added tax which is a tax applied to the increased value of goods at each stage of production. Such taxes are common throughout Europe and other industrialized countries. The incidence of the excise tax will obviously depend upon the incomes of families that consume the taxed goods. If the tax is on luxury goods, it will tend to be progressive. Sales or consumption taxes are generally considered to be regressive, because a low income household must allocate a higher proportion of its income to consumption than a richer one. However, the incidence can be made less regressive by excluding such necessities from the tax base as food, basic clothing, shelter, and medical care.

The property tax can be applied to both real property (land and its attachments) and personal property. A tax on real property is particularly attractive at the local level, since local taxes on sales and income may induce rapid shifts in location of household and purchases to avoid the tax. A tax on real property is less subject to such avoidance, especially over the short run. To the degree that the property tax is a tax on shelter it is believed to be regressive, since shelter constitutes a higher proportion of income when income is low. To the degree that the tax is on capital, it may be progressive, since capital ownership is concentrated heavily among high income households (Aaron 1975).

In general, the personal income tax is considered the most efficient with respect to its economic impact in that it does not distort prices of goods and services and market allocations, although very high marginal rates of taxation could reduce the incentive to work or invest. Each of the other taxes does alter the relative prices and returns to different goods and services or sources of income with some effect on the after-tax allocation of resources (Musgrave and Musgrave 1976).

Collection and compliance costs will differ from country to country. In most nations the collection and compliance costs are lowest for payroll and turnover taxes because the collection mechanism can be routinized among the firms providing employment and producing goods and services. Sales taxes and property taxes generally require a more elaborate administrative apparatus for the government. In countries where the income tax has had a long history of acceptance, as in the United States, it too will have relatively low costs of collection and compliance relative to its yield. However, in countries where such a tax is not well-accepted, there may be great difficulties in collection.

3.2 Allocating Resources for Schooling

In addition to the concern for how resources will be obtained for schooling, decisions must also be made on how to allocate resources to different levels and types of schooling, different types of students, and different regions. These decisions, too, can be ana-

lyzed according to the criteria of equity and efficiency where public expenditure is the principal measure of resource distribution. Equity in school expenditures refers to fairness in the distribution of subsidies to students with different educational needs and from different educational and geographical backgrounds. Efficiency in school expenditures refers to using them in the most effective way to meet particular goals, such as economic growth or citizen participation.

When defined in this way, equity and efficiency may be complementary to each other, or may be in conflict. As with the case of taxation, each society must determine what is meant by equity in schooling expenditures. For example, if all students are to be given an equal public subsidy for schooling, then it is only necessary to provide equal expenditures for each student, adjusted for differences in the cost of resources from region to region (Chambers 1978). However, equal expenditures will not provide an appropriate or adequate education for each child if some children need different and more costly resources than others. Children from poor backgrounds often lack the investments in health, nutrition, and intellectual stimulation that will enable them to succeed in school (Levin 1973). Such students may need compensatory resources such as health services, meals, and remedial assistance in order to benefit from the schooling experience (Levin 1989). Of course, this is also a potential efficiency argument in that it is conceivable that much of the standard instruction is wasted on such youngsters without ensuring their basic well-being. A similar case can be made for children from immigrant backgrounds who must develop linguistic competence to be able to benefit fully from instruction.

However, not all cases will be characterized by such a compatible relation between equity and efficiency implications of school expenditure patterns. In some cases, equity will require greater investment in the schooling of a particular group of students without contributing in the most efficient way to other educational goals. In those instances, the issue of equity must be viewed as an end in itself, rather than a means to greater efficiency. For example, some physical and mental impairments among handicapped children may be so serious that no amount of schooling will prepare the young for productive work or to take care of their own needs. They will always require a high level of custodial care. Yet, providing access to special educational programs that will assist them in caring for many of their needs and developing social skills and relations may be considered to be a high priority, even though it will be a relatively expensive undertaking that cannot be defended on narrow efficiency grounds.

In the situation where equity and efficiency considerations are in conflict, a particularly important issue is that of cost. If the costs of the resources required to achieve equity detract only nominally

from the achievement of other schooling goals, equity is easier to pursue than if the conflict between the use of resources is substantial. In this case one must examine the trade-offs in using resources for one goal rather than the other (Levin 1991b).

In addition to the equity decisions among different types of students, there is a particular issue that arises when schools are financed at several levels of government. Since regional and local governments will have different capacities to provide schooling based upon their income and wealth, the same tax effort will create rather different amounts of school revenues among governmental entities. In general, urban areas will have more taxable wealth income, so at the same tax effort they will be able to provide higher expenditures for the schooling of each student. Inequalities in expenditure that emanate from differences in the taxable resources of subunits of government do not have an educational rationale, even though they may reflect accurately the regional distribution of income and wealth. Accordingly, many societies make at least some attempt to equalize expenditures among regions and municipalities (Dares 1972).

One view about equalizing school finance capacity among decentralized units within a country has stressed the concept of fiscal neutrality. Under this approach, the amount of funding spent on each student should be neutral with respect to the fiscal capacity of the unit of government (Feldstein 1975). One method of ensuring a measure of fiscal neutrality is for the central government to assume all responsibility for funding the schools, but such a change also removes much of the source of autonomy and responsiveness of regional and local schools. An alternative method that preserves this autonomy is to permit the decentralized governments to determine their level of tax effort with respect to the tax rate that they choose for supporting the schools. The central government can guarantee that at any level of tax effort the same amount of funding will be available for each child, regardless of the income or wealth of the subunit of government (Coons et al. 1970). In essence, the central government provides a grant to the regional or local government which represents the difference between what is guaranteed at a particular tax rate and what is raised by the state or local government at that rate.

One of the major efficiency questions in allocating schooling expenditures is that of supporting different levels and types of schooling. For example, what should be the appropriate ratio between expenditures on elementary and secondary schooling? Given an expansion of secondary schooling, what proportion of the additional resources should be placed in vocational versus academic education? One method that has been used to address these issues is to look at each type and level of schooling as an alternative investment in which earnings and employ-

ability of graduates represent a major benefit and the costs of instruction and forgone earnings of students during the period of schooling represent the major costs (see *Rates of Return to Education*; also Psacharopoulos 1973, 1981). In principle, those levels and types of schooling with the highest rate of return on investment will represent the best candidates for expansion. However, such analyses do not account for equity issues or other benefits that are not reflected in employment and earnings.

A different type of concern is the effect of different forms of financing on the efficiency of resource use. The most provocative proposal in this regard is that of Friedman (1962) to provide a system of educational vouchers to finance elementary and secondary education. Under a voucher system, parents would be given certificates that could be used to pay a specified maximum level of tuition at any school approved by the state. Schools would be sponsored under both public and private auspices to compete for the vouchers. Presumably, the increased competition for students and greater choice would lead to a more responsive and efficient educational system as the marketplace replaces government decisions on schooling. The dearth of voucher experience means that this contention is largely untested. The voucher approach has been criticized as having the potential to destroy the social and democratic benefits of schooling by stratifying schools according to social class, race, political orientation, and religion. It has also been asserted that the administrative arrangements for centralized record-keeping and administration of a voucher plan that must account for every school-age child would be extremely costly, offsetting any gains in efficiency from competition. These arguments have been strongly debated (e.g., Levin 1991a, West 1991).

4. Summary and Future Issues

School finance is tied intimately to both educational and social commitments of a society as well as the resources for meeting those commitments. There is no overall model that provides the most appropriate approach to financing schools for all situations. Each society will need to consider its own educational and social priorities as well as its means for addressing them. However, there exist a number of analytic concepts and tools for evaluating different approaches to school finance from the perspectives of both equity and efficiency.

Perhaps the most important challenge to school finance is presented by the rising costs of schooling at a time when world economic crisis has limited severely the capabilities of most societies to meet concomitantly all of their aspirations. Schooling is a labor-intensive activity, and as the costs of labor rise, educational salaries must keep pace. If enrollments increase at the same time that expenditures per stu-

dent are maintained, the overall cost of schooling must continue to rise. Even this phenomenon does not allow for raising quality at a time when it is believed that educational quality is too low.

There exist three ways to constrain such costs: restricting the growth in enrollments; reducing the quality of instruction; and finding ways to maintain or increase quality at lower cost per student. The first of these has severe political and ethical implications, but it may be unavoidable in the long run unless other alternatives emerge. The second seems to be an unwise choice at a time when most countries are concerned that existing quality is too low. The third represents the challenge of our times. Can new technologies such as computers and educational television as well as new organizational arrangements reduce or contain costs, while maintaining or even improving quality (Levin and Lockheed 1993)? The future agenda of school finance must necessarily be preoccupied with the search for answers to this question (Schiefelbein 1986, Wolff 1984).

In the meantime, much public policy in the 1990s and beyond seems to be directed toward encouraging greater responsibilities by local communities and families for the financing of education. The potential of greater community contributions—even among poorer communities—seems great in terms of contributed labor for facilities and other functions (Bray and Lillis 1987). However, dependence upon this source of financing would tend to exacerbate the differences in opportunities between rich and poor communities. Likewise, empirical studies have found that considerable funding of education from family resources already exists in some countries, and it leads to systematic differences in educational resources among children from different economic backgrounds (Tsang and Kidchanapanish 1992). Accordingly, the shift in emphasis by agencies such as the World Bank may have severe repercussions for equity.

See also: Financing Public Education: Practices and Trends; Resource Allocation in Schools and School Systems

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School Improvement

While society has been transformed during the twentieth century, and the knowledge base has doubled or tripled in size every few years, public education in general has changed relatively little. Over the next few decades there will be continued pressure for restructuring, renewal (particularly of curriculum), and increasing reflection and adaptiveness in schools (Schlechty 1991). This entry discusses some of the key issues that will determine whether pressure leads to improvement: the presence of school policies for improvement, the focus of school improvement policies, the character of change processes, and the nature of support for developing strategies to effect school improvement.

1. School Policy and Quality Improvement

Research indicates that successful reform should be based on the school as the unit and the teacher as the pivot of change (van Velzen et al. 1985, Fullan and Stiegelbauer 1991). Marx (1987) argued that this requires a capacity for policy formation at the school level: the school must be able to transform a shared school concept into a relatively unambiguous strategy that is evaluated and adjusted from time to time. Engaging in a reform process is thus, by definition, a collective endeavor that demands collective efforts above and beyond those of individual teachers perfecting their craft in the classroom (Lieberman and Miller 1984, Jansen 1987).

1.1 Definitions

Educational changes typically stem from unhappiness with the existing state of affairs. When sufficiently pressing, this results in (a) sustained effort inside the school(s) to (b) change the conditions for teaching and learning which (c) is directed toward accomplishing existing or new educational goals (see van Velzen et al. 1985 p. 34).

When a school faculty decides to work toward some end and publicly discusses its intentions, it has developed an explicit improvement policy. More often, however, strategic decisions can only be inferred from behavior and the school's improvement policy remains implicit. Nevertheless, where there are shared assumptions within the school about the directions in which it should be moving, a school-based improvement policy can be presumed to exist.

1.1.1 What is to be improved? The goal of school improvement is to increase the quality of education. The operational definition of quality is not fixed, because it is embedded in a society's beliefs about the purposes and relative importance of education compared with other endeavors supported by the state. Nevertheless, there are some enduring components of quality that often serve as the focus of school policy.

Most improvement policies focus on educational process, which includes instruction (learning processes and environments) or subject matter contents. School improvement can also be aimed at other aspects of organizational functioning that are of concern to the members but indirectly linked to student achievement, such as school climate, staffing, and school organization. Both educational process and organizational functioning are assumed to be strategies to increase student achievement. While large-scale assessments of student achievement tend to be matters of national or state policy, in many countries (for example, the United Kingdom, the Netherlands, Belgium, and the United States) schools are increasingly concerned about improving student scores in comparison with other similar schools due to policies supporting parental choice of schools.

1.1.2 Developing an improvement policy. The process of developing school policies varies widely between schools. Synoptic or rational processes involve identifying desired goals and means, and developing a relatively detailed plan to carry out policy. Large-scale national reforms have typically assumed that this model was most appropriate, but a large body of research has challenged the feasibility of this approach (van den Berg et al. 1989).

Incremental processes exhibit gradual, inductive changes based on applying the existing policy to actual problems, and shaping new directions based on accumulating information. Some countries, such as Denmark, have established policies for supporting