

Maps and Blueprints: The Social Organization of Schools

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Abstract: This paper sets out evaluative criteria that planners must consider in organizing school systems and applies them to systems where student populations and communities are diverse. Specifically, school systems should allow for families to exercise some degree of freedom of choice in what schooling options they take; but they should also be efficient, be fair, and promote the social good. To apply these criteria to education systems characterised by diversity, it is necessary to understand what diversity entails. Diversity will impact in terms of curricular or pedagogical changes, but its most fundamental effect will be in the way students group with each other, i.e. the formation of peer groups according to ethnicity, learning need, religion, family wealth, or social status. Thus, these evaluative criteria need to be considered in the context of peer group diversity. Three key policy instruments may be used to influence how peer groups are formed. These instruments are: eligibility (which students, which schools, and which curricula are to be permitted within the school system); financing (what resources should be allocated to different types of students); and support services (what information, transportation, and adjudication services are available for students). This allows us to draw lessons for planning and influencing peer groups. We draw on examples from the U.S., contrasting the system of decentralized local financing with targeted programs to enhance school choice, from the U.K., where public school choice is extensive, from Chile, where a large scale voucher program exists, and from New Zealand, where school-level peer effects are explicitly identified in the funding formula.

Paper prepared for the IIEP/UNESCO Conference "Planning for Diversity : Education in Multi-ethnic and Multicultural Societies", June 2003. The authors appreciate comments of Michaela Martin, as well as those of the Conference participants.

1. Introduction

The development of multiethnic and multicultural societies has significant implications for national education systems. Schools have always been charged to serve broad social purposes (Guttman, 1986); but these purposes have historically been defined in terms of nationhood, and with populations that were somewhat varied along only a few dimensions (for a description of the 'golden age' of secondary school expansion in the US as an example, see Goldin, 1999). However, with mass migration and recent cultural and demographic shifts, the purposes of schooling have now become more equivocal, at the same time that populations are more varied across more dimensions (see Fukuyama, 1999; Putnam, 2000). To take linguistic diversity in the U.S. as an example, by 1990, 8 percent of households did not have a family member over the age of 14 who spoke English well; and figures for the year 2000 indicate that 18 percent of the population does not speak English at home (Schuck, 2003, 116). Plus, many immigrants tend to be young, and with young families, placing further demands on educational resources.

The resulting challenges for planning education systems are immense and complicated. Most discussions of multiculturalism, including the present papers, set out two phases. First, each society must set goals for addressing the educational needs of diverse populations, whether a strong centralized and integrationist perspective or one that permits decentralized solutions. Second, the implementation of these goals can be largely satisfied through curriculum, textbooks, and pedagogy. Indeed, most educational discussions of multiculturalism focus on what will happen in classrooms. Of course, incorporating values and perspectives from immigrant cultures into the national education system is not a simple matter. Indeed, countries (such as India, but also in some African nations) may have many different languages, sometimes within a context where no 'official' educational system that reflects a dominant cultural perspective has been established. Nevertheless, a conventional approach to understanding diversity is to consider its curricular and pedagogic implications; and responses to diversity will be governmentally - designed.

In this paper we suggest that the mixture of students in the classroom and the school is, in itself, an important determinant of educational outcomes. We focus on a dimension that is often missing from the discussion of diversity, that of 'peer effects'. The basic component missing from the conventional description of the challenges of diversity is that families – given their particular and diverse characteristics – exercise choices, and these choices have wide ramifications. Family choices – either of school (public or private), school district, or community – determine the peer groups that their children face. The strength of these pressures for choice and the peer effects they generate may overwhelm any palliative to diversity through changes in the state-mandated curriculum.

In Section 2 we offer a framework for understanding these peer effects, an analysis of how such diversity is manifest, and we consider some possible strategies for educational planning. We outline four criteria that may be used to understand the challenges of diversity, within the context

of existing school provision. At this general level it is possible to offer some indication of the impact of diversity, and the overall trade-offs that planners will face. To better understand how diversity influences education systems, it is necessary to investigate other, more fundamental inputs into the education process.

In the main Section we investigate directly how schools can be organized to address issues of diversity by focussing on the key input of peers. By peer formation, we mean how student peer groups are formed through the enrollment choices of families. Characteristics of peers which may influence parental choices include: gender; socioeconomic status (SES) or family income; race; religion; learning needs/interests; language; culture; and political affiliation. Given the overall importance of peers, they are likely to play a central role in parents' choices of schools. Once parental choices are understood, we can then consider the possible consequences of different peer groupings in terms of efficiency, equity, and social cohesion. In the following Section we consider how planners may influence the formation of peer groups, or offset any adverse consequences therein. Such influence may be obtained through the use of three policy instruments: the setting of eligibility requirements; the financing of schools; and the amount and resourcing made available for support services. To illustrate the arguments, we draw on examples from the U.S., contrasting the system of decentralized local financing with targeted programs to enhance school choice, from the U.K., where public school choice is extensive, from Chile, where a large scale voucher program exists, and from New Zealand, where school-level peer effects are explicitly identified in the funding formula. A final Section offers some conclusions about planning to accommodate diversity at the school system and school site level.

2. Criteria for Evaluating Education Reform

2.1 Four Criteria: Choice, Efficiency, Equity and Social Cohesion

Education systems must satisfy multiple goals, beyond educating students in particular academic subjects. For simplicity, we evaluate education systems using four basic and mutually exclusive criteria: freedom of choice, efficiency, equity, and social cohesion (for an extended discussion see Levin, 2002).

Freedom of choice has long been recognised by economists as having value *per se* (Friedman, 1962). Parents have a fundamental right to decide what is in the best interests of their children; in the majority of cases, their incentives are most closely aligned with those of their children.¹ This freedom may extend to choice of school, of curriculum, of pedagogy, and (absent compulsory school laws) choice of the amount of education. Such freedom may be particularly important if the society is diverse. Without such freedoms, many parents will be dissatisfied with

¹ Freedom of choice is important for a second reason. Where parents directly express their preferences for the most appropriate type of education, they are signalling to schools their desired educational needs. Thus, the school system may be more directly accountable and responsive.

their schools, either because standardized provision does not sufficiently match their preferences or because educators impose an alternative cultural or religious belief system onto students.

Equity is an important attribute in evaluating education reforms. By giving all children an adequate education, we are ensuring that everyone has at least a reasonable opportunity to be successful and obtain a tolerable standard of economic well-being. However, identifying and redressing inequities in the education system is not straightforward. There is no clear agreement about what the equity principle for funding and organizing education should be. In particular, to what extent should the education system offset differences in socioeconomic circumstances, or family background or cognitive ability? Giving an answer to this question is fraught with difficulty: much of the debate (both in political and academic circles) implicitly assumes that the equity principle is paramount, and that no trade-off exists between this and other evaluative criteria.² Nevertheless, some allocations will be more equitable than others and educational professionals must balance competing claims in allocating funds.

A third criterion to consider is that of efficiency. Education systems absorb substantial resources and involve many years of investment. It is therefore imperative that they are efficient in how resources are deployed to meet educational objectives. For the education sector, efficient allocations may be difficult to determine because few of the inputs to learning (such as student time, community resources, etc.) have market prices. Standard economic notions of internal efficiency must therefore be interpreted cautiously. Nevertheless, taxpayers will demand that a public education system is efficiently managed and that government officials and education professionals are held accountable for the allocations of funds.

Finally, social cohesion is needed from education systems. Such systems are publicly funded, so that they can meet society's rather than private individuals' needs. These public needs include education to promote and preserve social order, as well as to enhance civic engagement. This is the fourth criterion for evaluating a school system: does it promote social cohesion? So, publicly funded education should be directed to producing a healthy, tolerant, and law-abiding population, as well as an academically able one. Such social cohesion may be difficult to prescribe in detail (Manski, 2000), and may depend on many other factors such as well-functioning legal, government, and financial systems. But, this should not negate the important role of schools. A universal public school system may be the best method for producing social order: schooling is an activity that all individuals participate in; and an educational setting is the most appropriate way

² One exception is Roemer (1998), who argues that the equity principle should be to 'reward effort but neutralize circumstances'. By neutralizing circumstances, individuals face equal opportunities to succeed. By rewarding effort, individuals face incentives that encourage them to work hard. Unfortunately, Roemer's equity principle is not easily applied in practice – to what extent and how is family background a circumstance that should be neutralized? Moreover, calculations as to the resource re-allocation needed to satisfy such a principle would entail drastic changes. In the U.S., for example, Roemer estimates that resources for disadvantaged groups should actually be more than three times the amount spent on those with advantages.

to learn the cognitive behaviors needed to generate social cohesion (e.g. understanding what tolerance means, learning the historical patterns of civic unrest, etc.).

2.2 Trade-offs Across the Four Criteria

Each of the above criteria is important in evaluating how schools should be organized to reflect diversity (Gill et al., 2000). However, improving educational quality along one criterion may impair the attainment of another criterion: it is likely that there are trade-offs to be made when meeting each criterion. These trade-offs are particularly important when we consider how schools must cope with the diversity of the student population.

One way to cope with diversity is to allow families more freedom of choice in what schools they can enroll at. (Where there is no diversity in the population freedom of choice will be largely irrelevant: and if there is no difference between schools, parents will not be especially interested in which school they choose). Freedom of choice can either be modest or expansive. A mild multicultural model would support bilingualism and other methods of teaching that are culturally sensitive within the public sector and permit further alternatives in the private sector (as in Canada, Ungerleider, 2003). A strong multicultural (parallel) model would accommodate different school types according to cultures, religions, and ethnicities within the public sector (as in the Netherlands, Walford, 2001). Another alternative, the universalist model applied in France, essentially forecloses freedom of choice: to live in a nation is to accept the pre-existing national culture and common language. Yet, given the many forms of diversity, education systems must chart a difficult path between these models. It may be inappropriate to give families either no choices or completely unfettered choices: that is, the denial of basic choices on the one side or the expression of some choices on the other side may impact adversely in terms of efficiency, equity, or social cohesion.

Thus, unfettered choices will influence the efficiency of the school system. A more diverse system is likely to be more complicated to manage; it will require more resources to develop curricula and assessments that reflect the diverse needs of the students (see the requirements for multicultural education in Canada outlined by Ungerleider, 2003). The expectation for educational outcomes is less clear, and accountability frameworks cannot be easily implemented when schools have diverse missions (Kane and Staiger, 2002). More resources will be needed to adjudicate between schools and students as to what instruction is appropriate. More resources will be needed to provide information services to families as to what schooling options are open to them (Levin and Driver, 1997). Perhaps most obviously, more resources will be needed for programs that are a direct consequence of diversity, such as bilingual education. Yet, intolerance of diversity and denial of choice may also be inefficient. Matching of students to preferred (diverse) schools may enhance students' motivation and raise efficiency in learning or reduce drop-out from school.

Similarly, a more diverse system makes the identification of inequities more difficult. One well-established definition of an equitable system is where students who are alike are treated

in the same manner, and students who differ are treated differently (vertical and horizontal equity). In a diverse system, by definition, there will be more students who need to be treated differently, and this raises the issue of how differently they should be treated. Also, even where there are choices, only some students will be able to take advantage of the selection (e.g. if only some faiths are allowed to operated schools). Indeed, policymaking over bilingual education in the U.S. has been marked by issues of equity for immigrant communities (Schuck, 2003). Similarly, establishing equitable treatment across religious and ethnic groups has been highly politicized. Yet, the absence of any accommodation to reflect different educational needs may also be inequitable. For example, immigrant students may be at a disadvantage in learning the national language, and the denial of sufficient educational resources may be considered inequitable.

Finally, allowing a diverse school system to develop may impact on the social cohesion produced by an education system. It may be more difficult to generate social cohesion amongst diverse groups where these groups voluntarily separate themselves, as would occur under a strong multicultural model. As students and communities cluster together according to a particular characteristic (e.g. income or race), then social 'bridging' is reduced (raising crime, social friction, etc.). This may be the case even when these voluntary separations appear benign; it is the very act of separation – by failing to even consider accommodation of diversity – which undermines social cohesion (see Levinson and Levinson, 2003, 110). It may also be more difficult to produce public goods when there is diversity: Ostrom (2000) identifies collective action as depending on the amount of agreement within the population as to what is an appropriate action and as to who are the accepted leaders of the community. Where there is diversity, it may be more difficult to identify an appropriate action or to accept a particular community leader. Accommodating diversity, however desirable, may therefore impair the ability to act collectively. In contrast, by precluding expressions of diversity in schooling, societies may lose many opportunities for communities to 'bond' together for a common and locally -defined purpose. More adversely, factions may arise when a society undermines their educational and cultural freedoms, and social tensions may spill over (e.g. when indigenous peoples are not granted rights of self-determination over schooling).

Overall, and at a general level, the diversity of the education system can be understood in terms of each criterion. Of course, the optimal amount of accommodation to diversity may be difficult to establish, and each nation must wrestle with this decision in response to its own social and political pressures. Yet, one conclusion is clear: *the choices that families exercise in terms of school, school sector, district, or community will determine the type of diversity that exists within the education system.* And, it should not be assumed that government agencies will be able to control all aspects of the education system: choice will 'happen', even in a highly regimented system.

But another important conclusion can be drawn from this discussion of the impact of diversity. Specifically, dealing with diversity is not simply a matter of choosing the 'right' curriculum for teaching in schools (or of choosing the 'right' way to train teachers, on which see Hickling-Hudson, 2003). This is the conventional approach to thinking about multicultural education, i.e. to set the curriculum, texts, teacher training, and pedagogy that are instrumental in addressing the (newly diverse) goals. However, such an approach does not recognize that whom students go to school with might have as much or more influence on learning, aspirations, and values than the formal curriculum. Dealing with diversity is not simply an issue of what is the appropriate pedagogy, but it has much more profound implications for the organization of the education system and the social organization of schools. This depth of influence comes from the fact that, in a diverse education system, the formation of peer groups is critical.

3. Peer Groups and Diversity

3.1 How Peer Groups are Formed

We can think of educational diversity as being reflected specifically in the composition of the students of different characteristics within schools and within school districts. As a general term, these compositional aspects are called 'peer effects'. Student characteristics which may be relevant are: gender; socioeconomic status (SES) or family income; race; religion; learning needs/interests; language; culture; and political affiliation. Two approaches can be used to analyze peer effects. A descriptive approach would consider how peers are formed across the education system (e.g. the percentage of all-white schools, or Christian schools). An analytical approach would focus on how peers influence each other in generating educational outcomes.

It is increasingly clear that peers or fellow students have an important influence on student aspirations, values, and learning. Students learn from their peers and how much they learn will depend on who their peers are. Families will therefore seek to enroll their children in schools where the average ability level is high, so as to take advantage of learning spillovers for their own children. There is reasonably compelling evidence that high ability peers have a positive educational effect on an individual student's education, as measured in test scores (Toma and Zimmer, 1998; in McEwan's (2003) empirical study of Chile, average classroom ability enhances an individual student's own achievement). Peers may contribute to one's enjoyment of schooling (and to more general concerns, such as school safety). At a more basic level, learning for special needs and bilingual education is only possible under certain peer groupings. (And, in a system where there is uniform government funding across all students, then one's choice of peers is one of the few ways a family can gain an advantage).

Peer effects need not be restricted to the classroom, but may reflect residential and community characteristics also. High quality peers may generate more 'social capital' and community resource – such capital is enjoyed not only in terms of the education of students within schools, but also in terms of the public goods available to parents within local

neighborhoods. Parents may regard local communities as a valuable resource for other public goods (e.g., friendships with other parents, family services, and law and order). Indeed, residential peer group sorting may precede (and determine) within-school peer group sorting: families choose neighborhoods that mirror their values (or SES, ethnicity, or religion), and they see these values reflected back in the school system. Segregation may therefore be strongly linked with the homogeneity of the school.

Community values also influence how well students do in school; the expectations and aspirations of peers will have a strong influence on one's own approach to learning (for a critical description of community pressures on African-American students in Ohio, see Ogbu, 2003). For all these reasons, therefore, parents will try to reap strong 'peer effects' when they are given freedom of choice.

Accordingly, peer effects are an important dimension to consider in setting policy in a multicultural setting. Such peer effects can be described in terms of each of the four criteria.

Freedom of choice is linked to peer groups: when making choices about schooling, many families seek appropriate peer groups for their own children. In fact, specific peer groupings will be formed wherever the education system allows freedom of choice, so as to exploit 'peer effects'. Such freedom of choice may mean that parents can opt out of the public sector entirely and enrol their children in the private sector. Private sector schools are often subject to only light regulations, and so such choices may allow for peer groups to form across any of these characteristics of diversity. A more limited form of freedom of choice allows families to choose between schools or school districts; in most cases, this requires families to move residence. Residential choice will therefore lead to segregation of peer groups. Finally, freedom of choice may be restricted to choice over which school to attend within a district.

The extent to which the education system allows such freedom of choice will determine how peer groups are formed. In Western (particularly Anglo-Saxon) societies, the idea of choice – and the opportunity for choice – has been relatively strong. In the US, for example, peer sorting according to religious adherence can only be obtained by exiting the public sector. In England, some government schools have religious affiliation; families that exit the public sector are doing so because they seek peers of a higher socioeconomic status, not of a different religion. In Chile, families are free to choose any private or religious school as part of a universal voucher program: both religious and SES peer sorting takes place across publicly-funded schools (as well as sorting into the elite private schools that do not accept vouchers). Critically, peer formation is not restricted to choosing the 'best' curriculum, but it includes choices of community and social setting and, consequently, all the values developed within that community. Peer-related choice is an optimal behavior by families: peers are important in influencing the experiences students have in schools and their educational outcomes, and this is especially so in diverse societies. Therefore, the pressure for choice will increase as societies become more diverse, even in those nations where choice is less well-accepted.

Peer groups will influence how equitable the education system is. If students are allowed to form peer groups according to ability and or according to income, without any mediating intervention by government, then there are likely to be substantial inequities in both inputs and outcomes from schooling.

As a result of peer sorting, schools become more polarized in terms of average ability and in terms of average socioeconomic status, as measured at the school level. The consequence of this partitioning is that high-ability individual students will obtain the largest enhancements from their peers, and low-ability individual students will obtain the smallest enhancements from their peers. Thus, strong peer sorting will polarize students according to academic achievement, leading to inequalities in outcomes across student types. Similarly, peer effects may also be strong when there is sorting according to family income, as in the U.S. Families will congregate in schooling zones or territories, and these zones may be used as the tax base on which to fund local schools. Thus, a high-income zone will have a high tax base from which to fund its schools, and so these schools will obtain more funds than schools in low-income zones.³

Ability and income sorting appear from studies of voucher programs in the U.S. (Witte, 1999), and within programs such as bilingual education (Martinez et al., 1996). It is also apparent across various European countries, and international evidence on the effects of allowing greater school choice show reasonably consistent results in terms of partitioning into less diverse peer groups. For the UK, Bradley et al. (1998) find partitioning according to occupational status and income, although they describe it as small (but see Gorard and Fitz, 2000). In a study of Scottish schooling, Willms (1996) also found greater polarization across family education levels. For Belgium, Vanderberghe (1996) found more choices across schools led to more ability dissimilarities between schools and across grades. For the Netherlands, Karsten (1994) found two effects from increased freedom of choice: both existing schools became more polarized and new start-up schools were more likely to be ethnically homogeneous (typically with a religious orientation). Finally, in Chile, where a nation-wide voucher program is in place, Carnoy and McEwan (2001, 159) report the average monthly household incomes for students across six types of school: private non-voucher schools enrolled students where the household income was almost seven times higher than for students in municipal schools; for Catholic schools, household income was double that in municipal schools.⁴

³ This disparity may be substantial: the public school at the 95th percentile of funding in the US obtains at least 2.5 times the funding of the public school at the 5th percentile (Murray et al., 1998).

⁴ However, schools may enrol students across each characteristic (gender, SES, race, ability), and more generally to encourage diversity of the student body. Some peer characteristics may be traded off against each other, with schools enrolling some students according to willingness to pay (income) and some according to ability. Here the school is exploiting the peer effects of education – low income but high ability students are ‘teaching’ high-income but low-ability students and the former obtain a ‘tuition subsidy’ from the latter (Epple and Romano, 1998). This exchange improves the welfare of these two groups but it also widens the gap between the low-income and low-ability group and the rest. Such peer effects are only possible in an education system where students can be treated differently. In an integrationist public system, schools have less motivation to trade-off peer ability and willingness to pay.

Sorting according to peer group characteristics may also impact on the amount of social cohesion produced by the school system. The ability and income educational inequalities will produce lower social cohesion through widening disparities in economic status. However, a similar polarizing effect is likely to occur if students sort according to other peer characteristics. For example, where students sort according to a religious preference, that will allow the respective religious schools to offer education that has even more faith-related content.

The most striking effects of peers on social cohesion relate to the racial (and religious) composition of a school (Gill et al., 2001). There is reasonably strong evidence that parents – given more schooling options – prefer enrollment at racially homogeneous schools (either directly or because racial composition is a low cost proxy for other characteristics). A ‘diverse’ society may therefore be a segregated society, in terms of the education system. Wealthy families may cluster together in exclusive territories: they will choose different schools because they have: more resources to decide on their school; more household resources to contribute to their child’s education; access to transportation; and habituation to choice through supportive social networks. The result is likely to be families of one type in one school, and families of another type in another school.

This conclusion can be drawn both from direct investigations of family preferences (Schneider et al., 2000) and from actually enrollment patterns in response to changes in the demography and ethnicity of the local community (Weiher and Tedin, 2002; Fairlie and Resch, 2002). One example is based on the study of reforms in New Zealand, conducted by Fiske and Ladd (2000). After a period of school choice reform during the 1980s and 1990s, Fiske and Ladd (2000, 189) report the change in the share of minority students in schools ranked into deciles according to socioeconomic status. These change figures show some ethnic partitioning: the numbers of minority students increased in decile 1 (the bottom 10 percent) and decile 4 schools, fell in decile 7 schools, and rose in decile 10 schools. Thus, the spread of minority students across the education system broadened, with increasing numbers in both the highest and lowest decile schools. Such peer groupings are likely to have a strong impact on the social goods that are produced through the education system. Where peers are grouped according to race (or religion), as in highly segregated systems, social cohesion will be sharply reduced.

Finally, the formation of peer groups will influence how efficient the school system is. If there are strong peer effects, then school systems should try to harness these either to raise achievement levels or to offer appropriate instruction to students whose first language is not the national language, or to allow students with special learning needs to advance. (Indeed, raising achievement through more efficient peer group sorting is often held as an advantage of private schools, see Epple and Romano, 1998). Typically, this efficiency gain is thought of as a matter of planning the ‘right’ curricula. However, peers influence the productivity of many of the inputs into schooling.

Another efficiency gain may arise indirectly from allowing more freedom of choice: families will be able to exit more easily from low-performing schools. In their review of competition between schools in the U.S., Belfield and Levin (2002) find that where families have more choices, average outcomes are higher (for a similar directional effect for the U.K., see Bradley et al., 1998). In New Zealand, reforms to enhance school choice were intended to encourage families to leave the lowest performing schools, and thus provoke those schools into improving their quality (or closing down); and there is some evidence at least that enrollments at the lower quality schools fell. A third efficiency gain would occur as families sort themselves into territories expressing different preferences for education; families who want high-[low] quality education can live in territories which vote for high [low] taxes for public schools (or vote according to different preferences for schooling). This residential sorting allows for multiple preferences to be satisfied. Overall, therefore, a degree of choice – unavoidably leading to sorting – may be efficient for school systems.

In summary, peers appear as an important input into the education system, with implications for choice, efficiency, equity and social cohesion. Such influence is particularly important when students are diverse, and peer groups can be formed according to racial, social, tribal, or religious preferences. For education planning, therefore, it is necessary to identify ways to influence the formation of such peer groups.

3.2 Planning and Influencing Peer Groups

Given the importance of peer groups to the organization of the school system, and their strong relationship with issues of student diversity, it seems plausible that planners would seek to shape these peer groups. Based on a framework set out by Levin (1991), we consider how such peer groups may be shaped by the use of three policy instruments. To emphasize, our approach assumes that families ‘exploit’ the choices that they have within the current education system to obtain particular peer group characteristics. The planner therefore has several tasks: first, to understand what peer groupings are being formed under the current system; second, to identify a more desirable formation of peer groups taking account of the criteria considered above and aligned with the integrationist, mild or strong multicultural model of the state; and, finally, to use the three policy instruments to create these peer groups. Such decisions may be easier for education planners in education systems which are more decentralized, because there will be fewer types of diversity to manipulate. Under either centralized or decentralized systems, however, the accommodation of diversity will be challenging for educational planners, and will require use of all three policy instruments.

Student Eligibility Across Schools:

Planners can set the terms of who is eligible for government support and for access to particular schools. The decision over student eligibility will be important, because some students should be eligible for differential treatment. By setting these eligibility terms, students are being valued differently as peers. In the U.S. system, for example, there is considerable dispute over

what constitutes a disability that qualifies for special education resources in a separate setting (Parrish, 2000). Setting eligibility terms may be delicate, either across race (such as *de facto* segregation, or requirements for Native American students) or political divisions (such as means-testing of eligible students); and decisions about eligibility – of students and of school types – are not merely a technical or pedagogical matter. Schuck (2003, 109-114) describes the politics of, and legal reforms associated with, bilingual education programs in the US. Approximately 75 percent of foreign-language homes in the U.S. are Spanish-speaking, and so bilingual programs have on the whole served Hispanic communities. After several Federal initiatives during the 1960s and 1970s and further intervention by states, bilingual education programs became an issue of political strength and recognition for Hispanic populations. By 1974, discrimination on the basis of language was legally equivalent to discrimination on the basis of national origin. Efficacy claims – about the relative educational merits of bilingual education over English-language immersion – have largely been supplanted by arguments as to whether education in one's own language is a civil and cultural right. The U.S. experience may be contrasted with a more pragmatic approach with the mild multicultural models (e.g. in England, or in voluntary after-school "Heritage Language" programs, as in Canada); and with a categorical approach in integrationist models (e.g. in France) where bilingual education is not sanctioned.

Eligibility rules can be set at multiple levels to accommodate diversity. One eligibility rule would be to introduce programs that are targeted at students in the lowest-performing schools. This approach would mix peer groups, by rewarding schools that take these students; and it would reduce the gaps between students in high-quality and low-quality schools, by allowing students to exit the low-quality schools more easily. (US Federal 'No Child Left Behind' Legislation may be interpreted in this light). Another eligibility rule is to use lotteries to allocate places: random allocation of applicants would even out the influences of peers. An example of this approach is the large-scale voucher program introduced as part of the 1992 Decentralization Bill in Colombia (see Carnoy and McEwan, 2001): only students from low-income families who had previously been enrolled in public schools were eligible to participate. And, in municipalities where there is excess demand for vouchers, a lottery is used to allocate places. In the U.S. the Florida Opportunity Scholarship Program is restricted to students in failing schools.

Eligibility also refers to which students gain access to which schools. Public and private schools are typically charged not to discriminate on race, national origin or ethnicity. But, in most education systems schools have some flexibility to set their own eligibility rules. In the decentralization reforms in New Zealand the schools could devise their own 'Enrollment Schemes' for selecting students. A universal voucher program – such as the one in Chile – allows students to sort according to whichever peer characteristics they consider desirable. And, some schools may seek to 'counsel' particular types of students away from enrollment, such that it may be difficult to enforce full non-discrimination. Also, some communities will seek to enforce exclusive

territories, such that students from outside the territory are not eligible for their schools (for examples of such behaviors in the U.S., see Ryan and Heise, 2002).

School eligibility may be an important way to influence diversity. A generous program would allow for many types of school to receive government funding or government accreditation; and, it would not place any quotas on the mix of peers in a school. Types of school may include religious schools, schools with different pedagogical approaches, or independent private schools (as in Chile). In a society where there are multiple religions, and where a multicultural model is adopted, planners may consider that it is appropriate to permit schools of different religions, so as to accommodate diversity. In a society where there are multiple languages, or where there is a significant proportion of non-native speakers, then it may be appropriate to offer schooling in alternative languages. In an integrationist model, in contrast, fewer variations of school types will be eligible for support.

Alternative schools may be encouraged by changes in the organization of school systems. In the U.S. there are now over 2000 charter schools that are on contract to provide education to students; many of these schools differ from publicly-run schools in terms of their mission. (Other approaches which may integrate schools involve changes in pedagogy, such as magnet schools, career academies, or theme academies). In the U.K., however, a similar approach to encouraging independent schools that receive public funds ('grant-maintained schools') was curtailed after a new Labour government was elected (Walford, 2003). In Chile, the universal voucher system fully separated provision of schooling from the funding of school; this system significantly opened up the types of school (including those for-profit) which were eligible for government funds.

Funding:

Peer groups may also be influenced by the education funding system. The absolute amount of funding may influence peer groups: if public schools are generously funded, then this will reduce the desire of families to seek educational alternatives in the private sector, and so reduce sorting according to peer groups. Thus, the Chilean voucher program was augmented in the 1990s with a program targeted at the 10 percent of lowest-achieving primary schools (see Carnoy and McEwan, 2001). This P-900 program involved direct allocations of funds for basic infrastructure improvement and teaching materials to these primary schools. By more nearly equalizing students' capacities during primary school, the P-900 program reduces the incentives for parents to sort according to family income (or ethnicity).

More significantly, peer group formation may be influenced by how education is funded (on formula funding, see Ross and Levacic, 1999). In the U.S., funding for education is mainly obtained from local taxes, with lesser amounts being provided at the state and Federal level. Local funding encourages families to sort into territories – which serve as tax bases – according to their educational preferences. This in turn encourages peer sorting according to family income or other peer characteristics. Thus, one way to reduce the amount of sorting according to peer characteristics is to centralize the funding of education. One example in the U.S. is the funding of

charter schools, which – in the majority of cases – is determined at the state level. By obtaining state-mandated funds, resources for charter schools are equal across territories. Another example is special education, which is heavily funded at a federal level.

A second policy decision which will influence the formation of peer groups relates to the taxation of education expenses in the private sector. In many countries, private schools are tax-exempt, because they are non-profit agencies. However, in recent years a number of U.S. states have increased the amount of tax relief that families obtain when they enroll in private schools: 13 states have tax deduction schemes, and another six have tax credits (Belfield, 2002). These tax relief policies encourage families to seek private schooling, and so promote sorting according to particular student characteristics.

If peer effects are particularly important, however, it may be appropriate to condition funding allocations directly on the characteristics of peers. This conditioning may be done through the calibration of funding for low-income students, by setting the increment for free/reduced price lunch at a higher amount. This is an approach used in England, where students receive additional funds if they are from low-income families, and in the Netherlands also (Ritzen et al., 1997). If peer sorting generates inequities, then additional funds for low-performing schools may be introduced. Certainly, funding systems should not be calibrated such that high-performing schools receive higher funding amounts or that funding is simply apportioned per student, as these approaches exacerbate any sorting effects.

A funding mechanism which explicitly takes account of peer effects was implemented in New Zealand. Schools were separated into deciles, based on the average family income of the students who attended the school (Fiske and Ladd, 2000). The schools in the lowest deciles received additional amounts of funds, to compensate for peer effects. In theory, this compensation should not only offset the existing peer effects but it should persuade parents not to search for higher-quality peers: any gains from having higher-quality peers would be compensated for by lower relative amounts of funding. In practice, however, these adjustments are difficult to make: first, the amounts of resources needed to compensate for peer effects were underestimated; second, the resource compensation is received at a later date by the schools involved. (An equivalent example in the U.S. involves magnet schools). Thus, the peer effects were not completely offset.

Support Services:

There are three ways in which peer groupings can be influenced in terms of support services. The first is relatively simple and relates to transportation to schools. Where parents face high transportation costs, they are likely to enroll their children in the neighborhood school, and this will increase clustering of students according to locality. Differences in community characteristics will therefore be reinforced. Thus, a publicly-funded system of transportation may encourage families to use different schools and so dampen any peer effects. Bussing students across school districts to meet desegregation requirements has been utilized in the U.S. (on its

contentious history and politics, see Paterson, 2001). In New Zealand, however, school choice reforms did not include financing of transportation in urban areas (nor does England). Families with lower incomes therefore found it harder to choose a school other than in their local neighborhood (Fiske and Ladd, 2003, 57).

A second approach is for the education system to offer an information and adjudication service to parents. The information service would indicate which schools students are eligible to attend (and so would reduce the covert selection of students according to peer characteristics). Examples of countries where such systems have been recently upgraded are the UK and the Netherlands (Walford, 2003; Ritzen et al., 1997). An adjudication service would allow parents who feel that they have been discriminated against when seeking enrollment to contest such a decision. Such information and adjudication systems can be set up within the public school system, or they can be set up such that the information is provided directly to the parents.

A third approach for planning peer characteristics is to set school accountability systems. To increase accountability, the education system may include standardized testing for all students even if these students are in schools with diverse missions. These tests would allow parents to compare the quality of individual schools and so to make informed decisions about which school to choose. Where diversity and peer sorting produces schools of unacceptable standards, then this too will be detected. Two contrasting approaches to accountability are those in the U.K. and New Zealand. The United Kingdom has a set of nationally comparable tests applied across almost all schools; this system has the disadvantage that students' educational goals must be modified to conform with the national tests. New Zealand has no compulsory national tests, with the disadvantage that accountability rules are difficult to apply consistently and judgements about relative school quality are hard to make (Fiske and Ladd, 2003).

Creating Desirable Peer Groups:

There are various approaches to regulating school systems which allow diversity – and the peer formations that develop – to be controlled. The above policy tools suggest that planners have some influence over how peer groups can be formed. However, given the strong pressures that parents will exert to choose a school which has 'desirable' peers, it may be difficult for planners to clearly effect change in an obvious direction.

Even when it is possible to compensate for peer effects across a region or school district, there will be substantial differences between schools within regions, and further differences within class-rooms. (In the U.S., for example, there is greater within-state variation in funding than there is between-state variation, Murray et al., 1998). Also, some peer sorting may be benign, and have little impact across the four criteria. For example, sorting schools by gender may be relatively more benign than sorting schools by race. Also, sorting may be more apparent than real: many families attending private Catholic schools in U.S. inner-cities (e.g., as in Chicago) are not Catholic (Sander, 2001). Instead the Catholic school is performing a social mission by supporting educationally disadvantaged families. Finally, it may be difficult to

measure the extent of diversity across the schooling system, because many measurements will be sensitive to the level of aggregation, or to the particular populations included. On average, private nonsectarian schools in the US show reasonably high proportions of minority students; but this is largely because many of these schools are for special education students, not because minority students are spread through the independent sector (Levinson and Levinson, 2003). In other cases, peer sorting will occur across multiple characteristics at the same time: many religious schools, for example, draw students from congregations of only one ethnic group. That these complexities exist gives further weight to our claim that diversity cannot simply be resolved by modifying the curriculum or pedagogy. In many circumstances, however, educational planners may welcome diversity where it appears, rather than actively seek to create and affirm a diverse education system as a goal in itself.

4. Conclusion

The challenges to education planners facing diverse education systems are substantial: not only are school populations more diverse, but there is an increasing pressure to recognize these diversities throughout all dimensions of education provision: access, curriculum, pedagogy, teacher and material resources, governance, and assessment. It is therefore essential to establish a comprehensive framework for evaluating diverse education systems. To offer specific guidance on planning, however, it is necessary to focus on how diversity is manifest. The conventional approach is to assume that diversity can be addressed through an instrumental modification of the curriculum or pedagogy, according to students' needs. This approach conceives of diversity in a very narrow frame, and fails to account for the more fundamental ways in which diversity is manifest. Specifically, diverse schools reflect diverse communities, created through the preferences and choices of families, and diverse schools can be understood in terms of how peer groups are formed within these communities. The next step is to explain how such peer groups can be strategically managed through regulations on eligibility, funding, and support services. This will allow planners to work, in systems of great diversity, toward the goals of the education system as a whole.

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