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Student Background and Student Achievement: What Is the Right Question?

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For half a century there have been reports that children of the poor or of some ethnic minorities on average perform worse in school. Some have suggested that these findings demonstrate a failing of education to reduce gaps in adult income and differences in adult socioeconomic status. This article reviews the research internationally and concludes that the debate is outdated. School children in the United States make up only 2 percent of the world's school children. When considering this question globally, it is discovered that social status is a consistent determinant of school performance, but it is not necessarily true that children of the poor perform systematically worse in school than do children of the rich; results vary by subject, student age, gender, and other factors. Perhaps more important, academics seem to hold schools accountable for the wrong function. The more important purpose of public schooling is to help foster social cohesion. Schools and school systems should be held accountable for their true purpose, and the debate should shift from whether schools narrow the gap in adult incomes to whether schools are effective in fostering social cohesion.

Two words are electrifying the industrial world. Those words are "scientific management." They contain a message for every teacher. If teachers do not voluntarily take steps to increase their efficiency, the business world will force them to do so. (School Board, Allegheny, Pennsylvania, 1911 [Callahan 1962, 100])

Background

A half century after these remarks, the emergence of large-scale survey techniques provided James Coleman and colleagues (1966) and Christopher Jencks

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and colleagues (1972) with the means to make similar arguments. Schools were characterized as inefficient and ineffective, therefore requiring radical policy changes. In one case, it was argued that schools were so ineffective that the only way to close the gap in achievement between races was to bus minority children to schools where majority students attended. In the other case, it was argued that because schools lacked the capacity to close the achievement gap, the only solution was to rely on more effective social policies, including increasing the access of the poor to better housing, better health care, and a greater share of public resources.

Some concluded that the findings from the United States and other industrial democracies were applicable to all countries (Simmons and Alexander 1978). In their opinion, school systems were biased against the poor, and public investments in education reinforced, rather than challenged, established social classes (Carnoy 1974; Jencks et al. 1972).¹

But the Coleman generalization of weak school effect and strong social background effect was offset by the results from less industrialized nations (Heyneman 1976a, 1976b, 1979, 1980). This evidence was a reason for the World Bank to support additional cross-national research on academic achievement in hopes of countering the arguments of “neo-Marxists” whose doubts about the role of education in meeting the needs of the poor were popular among academics at that time.

In one commonly cited article supported by the World Bank, it was found that children from more-educated home backgrounds performed significantly better than children from less-educated home backgrounds in Australia, England, and France, but this tended to be less true in Thailand, Colombia, and India. When the explanatory power of school quality models was compared across 29 low-, medium-, and high-income nations with that of student home background, the conclusion was that school quality explained more of the variance than home background. In fact the studies demonstrated that school quality was a more important predictor of achievement in the poorer countries (Heyneman and Loxley 1983b). These results from the 1970s suggested that students could overcome the exigencies of their social status through the school system because in low-income countries the academic performance of students in poor households was not as different from the performance of

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children from wealthy and privileged households as it was in high-income countries. The findings from this work contributed to the sense of confidence with which many international development assistance agencies—UNESCO, UNICEF, the Japan International Cooperation Agency, the Department of Finance and International Development, and the U.S. Agency for International Development—justified assistance to elementary education access and quality in low-income countries.

This finding has frequently been reviewed (Kamens 1988), reanalyzed, and sometimes challenged (Riddell 1989). These challenges have been answered (Heyneman 1989). Because none of us has a single compelling answer as to why these socioeconomic effects should differ among societies, some scholars have generated quite interesting interpretations and theories. Buchmann and Hannum (2001) question the generalizability of deficit family structure patterns—such as female-headed households—from one part of the world to another. Harris (2005) suggests that the findings may result from diminishing marginal returns to educational investments.

Recently, an attempt was made to retest the “Heyneman-Loxley effect” by using the Third International Study of Mathematics and Science and to pose the same school effect questions across high-, medium-, and low-income countries (Baker et al. 2003). The authors concluded that the student background has a powerful effect even in developing countries. Now the question is why.

One hypothesis is that the earlier findings were correct but that the home background effect may have strengthened with the economic and social changes over the past two decades. Another is that there is a significant difference in the samples. The earlier sample of 29 countries included nine from Latin America and one from the socialist states of Europe and Central Asia (ECA); the more recent study of 35 countries included only one from Latin America (Chile) and eight from ECA (the Russian Federation, Hungary, Latvia, Romania, Lithuania, Slovakia, the Czech Republic, and Slovenia).

One important difference between school systems in Latin America and school systems in the former socialist countries is the equity by which school resources are distributed. The distribution of school resources in Latin America is arguably the least equitable in the world, and the distribution of school resources in ECA the most equitable. The question is whether the change in countries between the Baker and Heyneman studies tended to depress the variance in school quality and, hence, the power of school quality to explain the variance in academic achievement.

Another hypothesis concerns what Baker and LeTendre (2005) call the “educational revolution” since World War II, which has generated an international minimal level of quality of schooling. This increase in the base of educational quality may have increased the statistical power of even small differences in family background.

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Finally, it should also be mentioned that differences in resources among schools within the United States have always been high. Moreover, the inequality in the distribution of school quality has not been higher in low-income countries (Heyneman and Loxley 1983a). Since the base in school quality in low-income countries may have been rising, the equality in the distribution of school quality in low-income countries may have increased over time by comparison with the equality in the distribution of school quality within high-income countries. If this is the case, then the increase in the power of socioeconomic status in low-income countries may result from the increased equality of school resources in low-income countries by comparison with high-income countries.

In sum, from this 30-year tradition of modeling internal efficiency, we have learned that the explanatory power of student social background is not uniform across societies. We have learned that it differs by age, gender, and subject matter. In general, social background is more powerful in predicting student achievement in those subjects (such as reading ability) over which the school has less control, and school quality tends to be more powerful in predicting achievement on those subjects over which the school has more control (such as arithmetic and science).

Current Debate: Déjà Vu

In a book published this past year, schools are once again labeled as ineffective in reducing gaps in achievement and personal income across social groups. Once again, a call is made for radical changes in taxation and social welfare policy (Rothstein 2004). In essence, it appears that the terms of the debate have remained largely unchanged and repetitive. There seem to be consistent schools of thought over time—either that the schools are ineffective (Hanushek 1996, 1998; Heckman et al. 1996) or effective (Hedges and Nowell 1999; Kruger 1998; Summers and Wolfe 1977).

Inadequate Binary Models

In the discussion of the influence of home versus school, it is not clear why these two sets of characteristics are not better specified. The home background effect of today is largely a product of an educational investment in a past generation. That children are raised more creatively by better educated parents is not necessarily a sign that the impact of the school is weak, but the opposite. It is a sign that schools are powerful instruments of social change, and part of that change is the power of the children of more educated parents to perform better in school. Some scholars have paid attention to the intergenerational

effects of education (Haveman and Wolfe 1994; Hirschman and Wong 1986), but work on how to model this influence is just beginning.

Other Models Lack Consensus

Because there is little consensus about how to model educational investments across generations, the policy implications of the debate have been relegated into a binary model consisting of two simply undifferentiated camps, for or against school effects. And it has remained that way for almost 30 years. This back-and-forth discussion once precipitated Russ Davis to mention that it made him feel “like Rip Van Winkle, who woke up after a 40 year sleep and found everyone else still sleeping. Though most papers have a section which looks to the future and volumes end with an ‘agenda for the future,’ most events are out of date; theoretical material is vintage; and the topics, models and methods are not what administrators or managers talk about or [are] doing” (1985, 146).

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Perhaps the reason Davis felt that administrators and managers “don’t talk about these findings” has to do with two problems. One is that the findings—all of them—lack external credibility. In low-income countries the poor continue to make significant sacrifices to attend schools. They uniformly lobby for more schools rather than fewer. Socialist states (claiming to represent the interest of the working classes) traditionally make large investments in education. If education were against the interests of the poor as some used to argue, why would the poor want schooling so badly? Do academics claim to understand the poor better than the poor are able to understand themselves?

Consider, too, the lack of credibility in high-income countries. The implications fall into three general categories. First there are the “supply side” improvements, proposed usually by those who claim that school investments matter. These might include better curriculum, more focused teacher training, more specialized services for students with special needs, better teaching equipment, and the like. Then there are the “demand-side” improvements, often proposed by those who accept that school investments do not make a difference and that the only way in which schools will improve is to change the management of current resources. These would include higher standards of assessment, more choice on the part of students and families, and the opening up of school services to competitive suppliers. Last, there are those who claim that school investments are insufficient; hence, the solution lies outside of

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schools, generally by reallocating access to power and wealth in the wider society (Rothstein 2004).

None of these debates negate what is obvious to ministers of education in low-income countries and to mayors of industrial urban areas within the United States: that parents of the poor want more education for their children, not less; that improvements in teacher training and curriculum and small class sizes are useful and are highly appreciated regardless of the achievement evidence; and that the redistribution of power in the wider society is an issue that should be debated on its own merits, not on the basis of the school system's performance.

While academics may argue over the relative importance of school versus home, such arguments appear irrelevant in the world of education policy. The relevant questions concern how to raise the availability of school resources and how to distribute them more fairly and effectively. Policy-making officials never argue that investments in school quality should not be made because academic achievement is conditioned by home environment. In the end these arguments over production function results have not altered investment trends in education in the slightest. Perhaps the reason that they have not had any effect is because they are irrelevant to the real purposes of education and the real reason the public taxes itself for public schooling.

Authorizing legislation in the United States—Elementary and Secondary Education Act, Head Start, and the Carl Perkins Vocational and Technical Education Act—sometimes specifies equality of opportunity or helping the nation compete in world labor markets as the purpose. The No Child Left Behind legislation includes the objective of lowering the gap in academic achievement between social groups. But authorizing educational legislation for a program is not the same as the purpose of education more generally. The former is specific, additional, and often temporary. The latter is comprehensive and permanent. Nations do not specify narrowing a gap in achievement or income as a comprehensive purpose.

The most common reason for public education is to achieve community social cohesion (Barker and Gump 1964; Butts 1980; Chazan and Soltis 1974; Cremin 1976; Dreeben 1967, 1968; Gutmann 1987). In some instances this is specified carefully; in others it is simply understood. It is probably fair to say that there is no nation that does not finance school systems for this reason. Therefore, it is both important and universal.

It seems strange, and perhaps unfair, for scholars to hold schools accountable for an infrequently stated, and secondary, purpose. Jencks, Rothstein, and the many others may all be right: differences in personal income should be more narrow. But there are numerous ways to accomplish this without blaming schools or the education system. To suggest that schools have “failed” to narrow gaps in income helps perpetuate a sense of cynicism within the social

sciences about schooling and a sense of defeatism within the education profession. And it is all unnecessary.

Schools should be held accountable for their first purpose, that of social cohesion. The reason to have public schools concerns the need of the community to create a citizenry that understands its obligations and its responsibilities, its history and its purpose. We have come back to this issue only recently, after it being dormant for many decades (Bryk 1988; Byrk et al. 1993; Comer 1996; Feinberg 1998; Heyneman 2000, 2002–3, 2003; Heyneman and Todoric-Bebic 2000), but essentially reasserting the first purpose of public schooling provides a response to the question of the role of student background and school achievement.

Holding public schools accountable in order to advance a particular and personal vision of social justice is unfair. It misspecifies the model, and it distorts the policy discussion. Instead, scholars should hold schools accountable for their first purpose. The dependent variable should be changed from an income or achievement gap to the contribution of schooling to social cohesion. Scholars should be asking to what extent we have public school systems that raise the level of social cohesion. They should be asking which school systems perform better than others to that purpose. They should ask the public finance question: To what extent are public expenditures in education receiving the highest return in social cohesion in comparison with the public's expectations?

If schools are held accountable for what they are supposed to do instead of being accountable for one's personal vision of social justice, it would be possible to imagine that the answer to the questions of how good our schools are and how do we know it might be quite different. If the dependent variable were to focus on what schools are supposed to do, the research would engage educators as being truly important and would perform a benefit for the public good.

Note

1. On the basis of the argument that schools were biased in favor of the rich and privileged, in an internal memorandum from a senior researcher at the World Bank to its executive director for the United States in 1975, a case was made that the World Bank should cease lending for education altogether.

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