

Institutional Contexts for Socioeconomic Effects on Schooling Outcomes

HERMAN G. VAN DE WERFHORST

Abstract

In the field of stratification sociology, one of the most important developments of the past two decades has been an improved understanding of cross-national variations with regard to the role of education in society. The structure of educational systems differs in important respects between countries, affecting patterns of inequality. The central issue that will be addressed in this essay is to what extent educational institutional characteristics are related to the level of inequality of educational opportunity (IEO) in a country. *IEO* refers to the association between background variables, most notably social class origin and race/ethnicity, and schooling outcomes of children. These outcomes include the highest attained educational level, school continuation decisions during the educational career, and student test scores. Institutional characteristics that are discussed include early tracking, forms of standardization, the vocational orientation, and private schooling.

INTRODUCTION

In the field of stratification sociology, one of the most important developments of the past two decades has been an improved understanding of cross-national variations with regard to the role of education in society. The setup of educational systems differs in important respects between countries, and this setup affects patterns of inequality. Many characteristics of educational systems can be seen as institutions, as they relate to (mostly formal) rules and regulations that affect human social behavior. The “institutional turn” in the sociology of stratification has been made in two subfields, concerning the study of inequality of educational opportunity (IEO) and the study of the relationship between schooling and labor market outcomes. Although this essay deals primarily with IEO, the labor market studies have contributed significantly to the understanding of the variability of educational institutions across countries. Moreover, in judging the possible

effects of educational institutions in one domain (IEO), one should bear in mind that other outcome domains may be differently affected (such as the labor market).

The central issue that is addressed in this essay is to what extent educational institutional characteristics are related to the level of IEO in a country. *IEO* refers to the association between background variables, most notably social class origin and race/ethnicity, and schooling outcomes of children. These outcomes include the highest attained educational level, school continuation decisions during the educational career, and student test scores. Institutional characteristics that are discussed include early tracking, forms of standardization, the vocational orientation, and private schooling.

COMPARATIVE RESEARCH ON EDUCATIONAL INSTITUTIONS

EARLY CONTRIBUTIONS

Although most of the comparative work on educational institutions and inequality emerged from the 1990s onwards, Ralph H. Turner has laid an important foundation with his distinction between “sponsored” and “contest” mobility regimes in the 1960s (Turner, 1960). Comparing American and English education systems, Turner argued that the American system of the 1950s can be characterized as a contest mobility regime. Access to elite positions is the “prize” of a contest in which contestants are given opportunities as equally as possible (most notably in the high school system). Individual school performance determined the educational careers of American children, which has led to a meritocratic educational system in which the role of social origin had been minimized, and positive school attitudes were more equally distributed across social classes. The English system of the 1950s, by contrast, was typical of a sponsored mobility regime, where access to elite positions was governed by a strong alliance between the school structure and the class structure. By the implementation of early selection into grammar, secondary modern or technical schools, higher class families were, in this system, able to transmit their advantage to their children. The American literature has by now provided a lot of evidence of inegalitarian characteristics of the American high school system, in particular concerning tracking within schools. Yet, Turner’s distinction between, on the one hand, differentiated systems in which various school types are institutionalized with the aim of maintaining social advantage of children of the more advantaged families, and on the other hand comprehensive systems where equal opportunities are governing the education of children is still relevant in the literature of today.

Studies in the early 1970s have addressed that the variety of educational systems is a bit more complicated than the dichotomy Turner suggests.

It has been suggested that educational systems should also be classified on the basis of standardization of the selection process of children into school types or levels. Moreover, vertical (on learning ability) and horizontal (on types of skills acquired) forms of stratification have been stressed.

Together, these studies have paved the way for more recent scholarship on educational institutional variations, which has developed a classification of educational systems that is still used in contemporary research. The dimensions on which educational systems are mostly being classified are the stratification of the system (in particular, curricular tracking), the *standardization* of the system (e.g., in terms of central examinations, centralized curricula, or standardized allocation of resources across schools), and the *vocational orientation* of the system (in particular, the extent to which school-work linkages are set up for the production of work-relevant skills. It has also been suggested that systems differ in 'track mobility,' indicating the extent to which students (or families) can enter different routes of education at different stages in the educational career, independent of the position of a student in the system at that point. However, comparative research on track mobility is virtually nonexistent.

So what did early studies find with regard to the relationship between educational institutions and IEO? Using data from the 1960s on 13-year-old students in 12 countries, Husen (1973) analyzed whether the high achievers were held back in comprehensive systems, and concluded that this was not the case. Given that IEO was found to be higher in early-differentiated systems, Husen touched upon the absence of what has later been called a *trade-off* between equality and efficiency. This trade-off would be implied if greater equality can only be achieved if lower average performances are accepted, or higher performance can only be achieved if larger inequalities are accepted. However, most of the literature to date has falsified the existence of this trade-off.

THE WEALTH OF SCHOLARS: DATA IMPROVEMENTS

The past decades have seen a great improvement of comparative education data, particularly collected among youngsters in primary and secondary school (roughly between ages 9 and 15). The International Association for the Evaluation of Educational Achievement (IEA) is responsible for a number of different studies among youth, including the Progress in International Reading Literacy Survey (PIRLS), the Trends in International Mathematics and Science Study (TIMSS), and the International Civic and Citizenship Education Study (ICCS). These surveys used to have different names in earlier rounds, but altogether comparative data have been collected since 1960. Together with the Programme for International Student Assessment

(PISA) data, collected regularly since 2000 by the Organization for Economic Cooperation and Development (OECD), the IEA data are the most authoritative datasets available for comparative student assessments.

The wealth of data, and the improved statistical knowledge to analyze them, has led to a great number of studies on IEO in relation to characteristics of educational systems. Two different forms of inequality have been addressed: inequality as dispersion (i.e., within-country variance in student test scores), and IEO (i.e., the association between social or ethnic origin and student test scores in a given country). These are two distinct forms of inequality, as a limited dispersion could coincide with a rigorous placement on the achievement scales based on social origin; or a wide dispersion could coincide with limited effects of social origin on where in the distribution a student would be placed. Yet, in practice the two are related.

The evidence on the relationship between early differentiation/tracking and inequality as dispersion is mixed. Some have reported higher dispersions in countries with more intensified forms of between-school differentiation/tracking, whereas findings of other studies do not point in that direction.

With regard to inequality in terms of social origin effects, the topic of this essay, the evidence is more clear: early selection in the educational system is associated with higher levels of inequality in student test scores by social origin. Also, with regard to educational attainment, an indicator that reports the highest attained level of education of citizens, it has been confirmed that social inequality in educational attainment is larger in more strongly stratified educational systems. Studies that have explicitly analyzed the impact of curricular tracking and vocational orientation have reported that especially tracking, more than the vocational orientation of the system, is related to various sorts of inequalities. Relatedly, early tracking is known to be positively related to the dispersions in attitudes on economic redistribution, whereas the vocational orientation of educational systems is associated with a lower variability of opinions. More strongly differentiated systems are also associated with more realistic expectations of students concerning future educational attainment, which may explain the relatively early formation of political interests. All these findings together may lead to the conclusion that early tracking is harmful to equality and shapes antagonized interests, whereas a strong vocational sector in the education system functions inclusionary rather than diverging.

A more recent interest is in the institutional effects on ethnic educational inequalities. Inequalities between migrant children and majority populations are found to be larger in more strongly stratified education systems relative to comprehensive systems. Other institutions that are related to lower levels

of ethnic inequality are an earlier starting age of compulsory education, the existence of centralized examinations, and a small private schooling sector.

Many of these other institutional characteristics have also been associated with the level of social class inequality, but the evidence there is much more mixed. The size of the private schooling sector has been found to be uncorrelated to the level of inequality by social origin. School accountability is associated with lower inequalities in student achievement by parental education. More generally, it has been suggested that country characteristics related to resources have limited effects on student learning, whereas other institutional effects relating to the structure of schools have stronger impacts.

NEW DEVELOPMENTS

There are several more recent developments that deserve attention. First of all, in their comparative analysis on student achievement, a few studies have included a third, intermediating level in the statistical analysis: the school. Employing random intercept (or random slope) multilevel models (models that take account of the “nestedness” of students within schools), the individual-level variance component then refers to the within-school variance, rather than the within-country variance. The inclusion of the second level has large repercussions on the findings related to differentiation effects on inequality. Logically, in a three-level model, the (within-school) effects of social origin are *smaller* in more strongly tracked systems, given that there is much more homogeneity within schools in such systems.

A second development concerns the study of institutional effects on inequality in final educational attainment. While much of the literature to date has focused on mid-teenage test scores, it is arguably more important from a societal perspective whether inequalities in achievement translate in inequalities in final educational attainment in the long run. More precisely, a country’s educational institutional structure seems to be related to inequalities in educational choices conditional on achievement, suggesting that institutions do not only affect inequality in achievement but also in attainment over and above inequalities produced by unequal achievements.

A third development is that it is increasingly known that inequalities in education translate into inequalities in later life, for instance, concerning health and earnings. This new agenda illustrates that the study of educational inequalities are important to understand much wider inequalities during later life.

A fourth development is that many advanced statistical techniques have been employed to deal with the cross-sectional nature of most comparative education data, including difference-in-difference designs (where changes in inequality are compared across time between countries), instrumental

variables regression (where a policy reform has been used to understand the causal effect of institutions), and regression discontinuity approaches (where groups that are very similar, except being affected by a regulation/institution, are compared). Such techniques have been developed to improve on the causality claims that can be made on institutional effects. Most of these techniques have, however, been employed to study average student achievement, rather than inequality by social origin or race/ethnicity.

KEY ISSUES FOR FUTURE RESEARCH

Future research could expand on the number of outcomes in relation to educational systems. Much of the literature is about student test scores, final educational attainment, or labor market entry, leaving other skills that students may or may not learn out of the picture. Given the recent surge in studies on civic education, civic skills may be studied more explicitly in relation to the setup of educational systems. Analyzing a wider set of outcomes may furthermore lead us more evidently to potential trade-offs in how educational systems can be organized, for instance, between reducing inequality and preparing for work, or between preparing for work and preparing for civic engagement.

One of the institutional characteristics that has received little attention thus far in comparative research concerns the extent to which students can move between different tracks throughout the educational career. Track mobility has been shown to be relevant to reduce inequalities. Furthermore, there are indications that there are interaction effects between institutional characteristics predicting student learning. Studying interaction effects may help researchers avoid interpretations of results in terms of changing educational institutions within countries, as it may reveal that a particular *combination* of institutions explains the level of inequality in student learning, a combination that may be far less easily modified by means of education policy.

A perhaps more ambitious agenda for the future would be to develop a comparative data set on student learning that is longitudinal, that is, follow students throughout (part of) the educational career. Longitudinal data would provide us more rigorously with evidence of the “value-added” schooling systems. Moreover, longitudinal data would help us understand social background effects on student achievement and on student choices conditional on earlier achievement, and how such patterns differ between societies. Conclusions on the impact of educational systems have been necessarily driven too much by cross-sectional data.

On a theoretical level, research may be more strongly concerned with specifying precise mechanisms of how inequalities are produced in particular

institutional contexts. The literature on educational system effects has been oriented towards macro-level explanations, without clear explanations of how families' educational decision making is affected by institutions.

CONCLUDING REMARKS

Thanks to the vast progress in data availability and quality, there is ample evidence that the level of educational inequality by social and ethnic origin varies across countries. Inequalities are a function of educational institutional characteristics, of which especially early differentiation has been demonstrated to be important. A lot of issues remain unresolved, however, in particular with regard to the precise influence and choice processes in families in particular institutional contexts. More relevant knowledge on the impact of educational systems may be produced if comparative longitudinal education data were available.

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HERMAN G. VAN DE WERFHORST SHORT BIOGRAPHY

Herman G. van de Werfhorst is Professor of Sociology at the University of Amsterdam. His research is about cross-national variations in how education is related to social inequality, the labor market, and civic engagement.

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