



Schools Matter: Equality and Effectiveness

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Abstract

Based on the paradox between full enrollment in primary schools and poor attainment in schools with socially disadvantaged students, this text shows that teacher effectiveness, the involvement of parents in their students attainment and mediation of the school's institutional management are a counterbalance to the social disadvantages of students and a strong influence to help the socially disadvantaged students obtain good academic achievements.

Keywords: Inequality, Socioeconomic Backgrounds, Learning Schools, Teachers Involvement, School Management

Introduction

The educational system of Mexico is a patchwork of inequalities with dynamics that condition the most socioculturally disadvantaged children to attend schools with children of their same status, with almost no social permeability [1].

Based on ENLACE 2012, in Mexico, during the beginning of the 2012-2013 school year, 87.08% of the Grade 6 students (that represented 24.32% of the population that studied in primary public schools) came from families with disadvantaged households, whose monthly income was less than or only equal to 405 USD [2]. After analyzing the attainment in Spanish and mathematics of this school population, referencing it with the socioeconomic levels, it was verified that students with major disadvantages reach averages a lot less than the national average of 555 points, reaching an average of 491 points [3]. After comparing the results with those produced by the 2015 - 2016 PLANEA [4] [5] tests, it is confirmed that the trend continues.

Concurrently, during the last ten years the country has achieved universal coverage of services for the primary education population of the appropriate school ages (6 to 12 years) [6], which highlights the paradox of the inequality. On the one hand all children have had access to school, but on the other we have witnessed an unequal distribution of learning, in line with the persistence of social inequality and of poverty [7].

The analysis has found that there are some ways to advance towards the desired equality, however, very few work. The first and most important factor is that schools do matter and influence school performance, however to a lesser extent than desired. In the case of Mexico, "the contribution (of schools) constitutes between 27% and 34% of the students performance" [8] [9]. With this evidence, the focus has been on "schools of equality", also called "effective schools" by specialized literature [10].

This text presents the results of a long term investigation with an academic team; it consists of a brief recount of the analytical framework used, the exposition of the analysis scheme, the methodology and the chief findings², and a brief argument.

1. Analytic Framework

The study used three fundamental pillars of research. The first is the research about the "schools of equality", which shows some related variables about the institutional management of a school, which is the responsibility of the Principal, and that positively affects the school results, such as: promotion of collaborative work, achieving shared learning objectives, monitoring of teaching, amongst others [11] [12] [13].

The second body of research focuses on the teaching and learning in the classroom that occur in schools that achieve good academic results. These studies originated from "teacher effectiveness research" [14].

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² The research methodology and some findings were published in Acevedo et.al. reference [10]. In this article the focus is inequality and family barriers for the teachers and schools to extend their efforts



It focuses on those activities that the teacher develops within the classroom and that positively affect the students' school achievement [15]. (Among these are: planning of classes, generating a discipline environment, motivation to learn and constant feedback [16].

The third are the sources that associate good school results with the involvement of parents in the teaching-learning process. This involvement involves activities such as keeping track of grades and attending school meetings.

2. Objectives, Hypothesis and Methodology

The objectives of the research are to verify the extent to which the factors of institutional management, effective teaching and their relationship generate positive effects on the learning outcomes of Grade 4 & 6 students in Mexico³, in the areas of Spanish and mathematics. The same analysis resolves to investigate the influence of parental involvement and external incentives.

The analysis will be controlled by the socioeconomic factors of the families of the students, the conditions of the schools and the profile of the students and teachers. It analyzes not only the direct effects, but also the indirect effects of the aforementioned measurements, assuming that there are mediated effects. The analysis techniques used consist of exploratory and confirmatory factor analysis, multilevel linear regression analysis and structural equations.

The hypothesis is that between teacher involvement and school achievement there is a direct and positive relationship. The same can happen for the case of the involvement of parents and with the measurement of institutional management.

3. Variables Construction

Composite variables were constructed using the Confirmatory Factor Analysis (CFA). The index of teacher involvement was created, which includes variables such as help when the students do not understand, allowing the student to express him/herself, to respect the students and to take their opinion into account, amongst others.

Similarly, the variable institutional management includes the pedagogical evaluation index, which integrates variables that take into account the director in the evaluation and monitoring of teaching and learning activities, frequency with which pedagogical issues are addressed in the Board/Staff meetings and the incentives that teachers receive from the principal.

The variable of parental involvement is the frequency of parents' attendance at school meetings and their interest in the grades of their children or pupils. The variable of external incentives.

4. Results

The multidimensional analysis shows that the socioeconomic and cultural origin of the the students is one of the dimensions with the greatest explanatory weight, that is, as the socio-economic level rises by one unit, the attainment increases between 17 and 18 points (the highest value was 863 and the lowest was 350). A result that is only overcome when the student has a cognitive problem (-19); if the first language he learned is indigenous (-27); and if he has failed (-25).

In accordance with the literature, it is seen that, in general, the impact of the school on student achievement is around 30% (36% for Grade 4 and 32% for Grade 6). It is observed that the effect of the school is diminished by increasing the socioeconomic status of the student's family. That is, for students from more advantaged social sectors, the school they attend has a lesser influence on their academic results than their disadvantaged counterparts. Therefore, there are sufficient elements to affirm that school factors are vital especially to impact the results of disadvantaged students, although the school they attend can make a considerable difference.

On the other hand, the effect of teacher involvement (around 16) is very close to that of the socioeconomic and cultural factor, which indicates the importance of the teacher's work and dedication to

³ The technique of structural equations (SEM models) has the advantage of allowing to know the relationships between the different latent variables in the model, considering the covariance matrix of the observed variables, which makes it possible to identify possible correlations between the variables. This technique allows to measure the indirect effects already commented.

reduce socio-economic conditions. Finally, although it has less impact than the teacher's involvement, it is confirmed that the participation of parents in school boards and the attention they place towards their children's grades (variables that may be related to institutional management), have a positive and significant direct effect on school results (around 6), which positively highlights the continued support by parents, which results in better performances and higher educational expectations.

As can be seen from the analyses carried out, there is a positive and direct effect between the involvement of teachers and parents in the results of the students, with teacher involvement being one of the most important factors in the set of variables reviewed. Regarding the variables of institutional management, it is noted that none of these is significant in its direct effects. However, through the structural equations an indirect effect is observed and only those variables of institutional management that relate to individual benefits granted to teachers such as ability to select their group, special permits, recognition at school are significant.

The answers arising from the results obtained give the school components that explain to a greater extent the overcoming of sociocultural lags of students with good results in learning and the interaction between them. However it is necessary to know in depth how schools work: the activities carried out by the teachers with the students and their relationship with other colleagues, managers and parents, as well as the realisation of the commitments to their performance. This analysis is interested in how the decisions and practices that have been taken in order to promote school achievement have become engrained.

5. Brief Argument

Currently from the qualitative point of view of research visits to schools are being made, and although it is still preliminary, through interviews with teachers and managers, it has been learned that the most recurrent forms of interaction and collaboration between teachers and managers are mostly informal, the only space they have for joint meetings is monthly at the "*Consejo Técnico Escolar*" ("Professional Development Day"). At the same time we have met new problems related to parents, as a non-negligible proportion of these are disinterested on the learning of the students and it is the teachers who are concerned and guiding them to think about their future at school. At least one third of students in Mexico have very vulnerable living conditions associated with malnutrition, violence and excessive work hours for parents with little chance of supporting children. Concluding negative non scholar factors is high turnover of teachers and frequent changes of principals, which lowers the probability of a school being a strong "equality school".

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