

Explaining differences in the attainment of migrant students: a cross country study

by Marina Shapira

No. 53, April 2010

Education is a key factor contributing to the social integration of migrant students. Yet in almost every Western society migrant students perform less well in mathematic tests than their non-migrant peers. But their performance differs across countries suggesting that some systems are better than others in avoiding an 'attainment gap' between their migrant and non-migrant students. This Briefing considers the possible explanations for the variation in migrant students' performance across countries using data from the 2006 Programme for International Student Assessment (PISA).

- ▶ Although the difference in mathematics attainment between migrant and non-migrant students can be largely explained by factors relating to the individual, in addition other school-related characteristics also contribute to the gap in performance.
- ▶ While the attainment of all students is higher in larger, better resourced schools with more curricular autonomy, these factors are especially important to the performance of migrant students.
- ▶ School characteristics make a further difference by also influencing the impact of individual characteristics on attainment; for example, they alter the impact that parental background has on attainment, especially for first generation migrants.
- ▶ The education and welfare system, the economy, and migration policy of the host country create an institutional context which impacts on the attainment of migrant students. Their effects, however, differ for first and second generation migrants.
- ▶ First generation migrant students benefit, for example, from a more standardised education system and a more selective immigration policy while their second generation peers perform better in a less differentiated and more comprehensive education system.
- ▶ The institutional context of countries also influences the relationship between family background, school characteristics and migrant students' attainment.

Introduction

The integration of increasing numbers of migrants is a major policy issue for western countries but despite concerted efforts many continue to experience difficulties in the integration of their migrant populations. A key determinant of migrants' social integration is their educational level but there is a large and persistent gap between the attainment of both the first and subsequent generations of migrant students with that of their non migrants peers. It is notable, however, that the educational performance of migrant students from the same country of origin differs substantially across the various immigrant accepting or 'host' societies (Levels and Dronkers 2008). This suggests that the poor educational performance of migrants is not simply related to the migrant populations themselves but also to the societies and education systems that they encounter and which differ in terms of their social policies, education systems, and labour market characteristics.

This *Briefing* considers how individual, school and country level factors impact on the attainment of migrant students across 18 countries. It draws on an ESRC funded project on the comparative aspects of mathematics performance using data from the 2006 Programme for International Student Assessment (PISA). It considers the outcomes of both first generation migrants – those born in a different country from the one in which they took the PISA test – and second generation migrants – children born in the country of the PISA test to first generation migrant parents.

Multiple influences on the attainment of migrant students

The literature indicates three sources of educational disadvantage among migrant students:

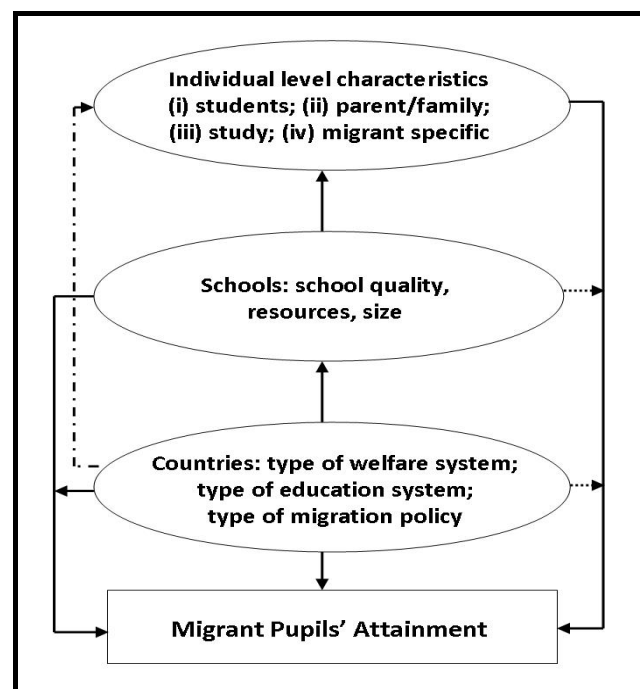
- their individual characteristics such as socio-economic status, language proficiency;
- school characteristics such as the quality of teachers and level of resources. These may be especially relevant since segregated living

patterns may concentrate migrant students in the same, often disadvantaged, schools;

- the institutional characteristics of the host country such as its education and welfare system and migration policy.

Figure 1 illustrates the way in which these sources of disadvantage inter-relate and impact on migrants' students' attainment.

Figure 1: Multiple influences on migrants' students' attainment



Developing the institutional dimension

There are on-going debates about the relationship among the various institutional characteristics of national systems and how they impact on the integration of migrants and their educational outcomes. This study furthers the debate by moving beyond the consideration of each institutional characteristic in isolation to consider the effect of a comprehensive set of institutional characteristics. We reduced a large number of indicators of national systems institutional characteristics into five dimensions (see Shapira 2010 for details):

- level of welfare (eg extent of state investment in education provision and the general level and distribution of state welfare);

- degree of comprehensiveness of educational system (eg extent of academic selection; the age of first selection; percentage in vocational track; amount of school available for 15 years old);
- degree of standardisation and competitiveness of educational system (eg ability grouping; existence of quality assurance mechanisms; number of schools competing for students);
- state involvement in educational provision (eg size of public sector in education; age of start of compulsory education);
- immigration policy (how selective).

These dimensions were used to explore how different combinations of institutional characteristics interact with each other and create different patterns of educational integration of migrant students as evidenced by the equality/inequality of their outcomes.

Explaining differences in attainment in mathematics

The research confirms that both first and second generation migrant students have lower attainment levels in mathematics than non-migrant students and that family background is a highly important factor in this, especially the attainment of first generation migrants. Most of the attainment gap is explained by 'migrant specific variables': for first generation migrants age of arrival in the host country and for both first and second generation, the language spoken at home.

But, individual level characteristics do not completely explain the attainment gap of migrant students. Critically, schools mediate the effect of family background on attainment. Thus students, and especially second generation migrant students, perform better in larger schools with a better student-teacher ratio (especially qualified teachers), better technical resources and a higher degree of autonomy over the curriculum and resources. In schools disadvantaged in these respects, family background has less impact on attainment, especially that of the first generation migrants, than in 'good' schools. It seems that even well educated migrant parents cannot fully

compensate for the negative effect of 'bad' schools on their attainment of their children.

Of the five institutional dimensions, 'Level of Welfare' contributes most significantly and positively to the average level of educational attainment in a country. In those positioned towards the positive end of the welfare dimension (eg with inclusive welfare provision and high government spending on education) average attainment in mathematics tends to be higher, and that includes the attainment of second generation migrant students.

The type of educational system that a country has contributes strongly to the attainment of second generation migrants. The gap between migrant and non-migrant in respect of mathematics attainment is smaller in countries with more comprehensive education systems and for all migrants the gap is smaller in countries where educational provision is highly standardised. The attainment gap between first generation migrant students and non-migrant students is also smaller in countries with more selective immigration policies.

Furthermore, the institutional features of the host country have an additional impact through the way they affect the relationship between school characteristics and attainment. So, for example, the positive contribution of larger schools to attainment that we reported above varies depending on the institutional features of a country. It is weaker in countries which have high levels of welfare and state support and provision of education as well as in countries with less differentiated education systems. School size has a stronger positive effect on the attainment of first generation migrant students in countries positioned towards the positive end of the welfare dimension.

A further example of how the institutional features of a society interact with other factors concerns the influence of family background on attainment. The positive impact of higher levels of parental education on the attainment of the first generation of migrants is reinforced in countries with more comprehensive education systems and more selective migration policies.

The study also found that the attainment of migrant students (especially first generation) does not depend on how successful the particular national system is in terms of average student attainment. Indeed, the attainment gap of migrant students, in particular of first generation migrants, is greater in countries with the highest average levels of attainment. At the same time, in countries with a lower average level of attainment, the migrant attainment gap is generally small.

Conclusions

The research findings demonstrate the importance of the interrelationship of individual, school and country level characteristics in the attainment of migrant students. School characteristics diminish or reinforce the impact of individual level characteristics on attainment of migrant students. The impact of schools is, however, different for different groups of migrants.

It is clear that the systems and policies of host countries create distinctive settings that influence the integration of migrant children and their educational attainment. The characteristics of national systems mediate the impact of families and schools on educational attainment. This is crucially important for migrant students who suffer from disadvantage related to their economic circumstances and the lack of 'cultural capital' in the new environment and also suffer by being over-concentrated in disadvantaged schools.

It is striking that the educational attainment of the first and the second generation of migrants is affected by *different* institutional processes. The educational attainment of the second generation migrants is shaped to a large extent by the same factors which shape the attainment level of non-

migrant students. Thus, the former perform much better in wealthy states with a large state investment in education, an inclusive or Scandinavian type of welfare and, most importantly, in less differentiated educational systems with comprehensive provision.

In contrast, first generation migrants do not perform well in such national systems but do better in those countries with a tradition of immigration, a more selective immigration policy, and a high level of standardisation of educational provision.

References

- Levels, M. and Dronkers. J. (2008) Educational performance of native and immigrant children from various countries of origin, *Ethnic and Racial Studies* (in press).
- Shapira, M. (2010) What counts? A comparative study of the differences in migrant students' attainment, *CES Working Paper*

About this study

The findings reported in this Briefing come from a wider ESRC funded project. The study uses data from the 2006 PISA collected by the Organization for Economic Co-operation and Development (OECD) through surveys of 15 year old school students in the main industrialised countries, and also various datasets of relevant international indicators obtained from such sources as OECD, UNESCO, etc. Principle component analysis and hierarchical multilevel modelling (HLM) at three levels - individuals, schools and countries - were used.

CES Briefings

CES Briefings are edited by Dr Cathy Howieson.

All Briefings can be downloaded from our website, free of charge. If hard copy or multiple copies are required please contact Carolyn Newton at the address below.