

# Migrants and educational achievement gaps

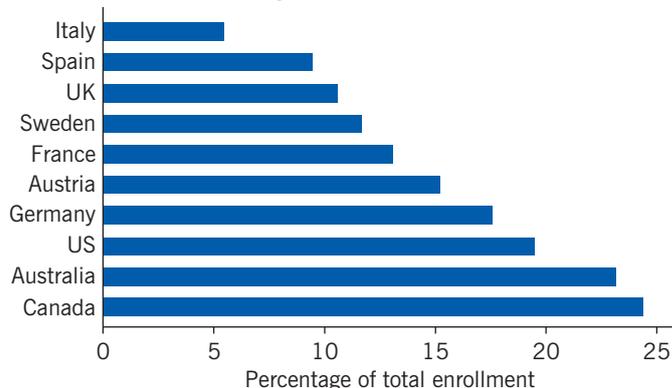
## Avoiding segregation and compensating for parental disadvantage can reduce migrants' educational achievement gaps

Keywords: education, immigration, socio-economic status, cultural capital, schooling systems, peer effects

### ELEVATOR PITCH

As global migration flows increase, so do the number of migrant students in host country schools. Yet migrants' achievement scores lag well behind those of their native-born schoolmates. Performance gaps are explained largely by differences in migrant parents' socio-economic background, cultural capital, and language skills. Education policy needs to focus on language teaching, parental involvement, diversity training, and beneficial social interaction between immigrant and native-born populations. With the wealth of many industrialized countries threatened by a lack of qualified labor, education of immigrants should be an important priority.

Migrant children make up a large share of students in many countries, 2009



Source: [1].

IZA  
World of Labor

### KEY FINDINGS

#### Pros

- + The academic performance of migrant children is higher in skill-based immigration systems.
- + The performance of migrant children benefits from preserving their cultural capital.
- + Improving language acquisition boosts migrant children's educational achievement.
- + Having high-ability peers improves the educational performance of migrants.
- + Increasing the number of teachers with an immigrant background and helping immigrant parents engage with their children's schools can narrow the educational achievement gap.

#### Cons

- The higher performance of migrant students in countries with point-based systems comes at the expense of admitting fewer disadvantaged children of less skilled migrants.
- The performance of migrants is impeded by the lower socio-economic status of their parents.
- The achievement gap of migrant children widens when they immigrate at an older age.
- Peer effects can widen the gap between migrant and native students in school systems with complete and early tracking based on performance.

### AUTHOR'S MAIN MESSAGE

To meet the labor market challenges of aging populations and ensure enough skilled labor to maintain economic growth, host countries need to fully integrate migrant students into schools. Yet in most countries, there is a performance gap between migrant and native-born students. Policymakers should prioritize measures that avoid segregating migrants and that reduce impediments arising from parental socio-economic disadvantage. Schooling systems that do not segregate young students into ability-based learning tracks seem to meet this goal, but potential trade-offs between greater equality of opportunity and social efficiency should be considered.

## MOTIVATION

The share of immigrant students is rising steadily and is as high as 10–20% or more of the student population in many OECD countries. International comparisons reveal large differences across countries in the academic performance of migrants. On average, first- and second-generation immigrant students have poorer education outcomes than native-born students (see **Who is a migrant?**).

### Who is a migrant?

In economics, “migration” often denotes the act of moving from one country to another. People who have left one country and settled permanently in another are “immigrants.”

These terms are often used synonymously in its exploration of the academic performance of young migrants in host country schools. According to the OECD’s Programme for International Student Assessment (PISA) convention: students are classified as immigrants (or migrants) if both of their parents were born in a country other than the country where the student took the PISA test. Non-immigrant (native-born) students are defined as having at least one parent who was born in the country in which they attend school.

Some comparisons also distinguish between first-generation students, who are foreign-born, like their parents, and second-generation students, who are born of immigrant parents in the country of assessment.

Source: OECD. *Untapped Skills: Realizing the Potential of Immigrant Students*. OECD Publishing, 2012. Online at: <http://www.oecd.org/edu/school/Untapped%20Skills.pdf>

Many factors seem to contribute to this achievement gap. Frequently mentioned are differences in socio-economic status, parental income, and cultural capital (“books in the home”), as well as not speaking the national language in the home, and age at arrival in the host country. Other observers blame the structure of national education systems, particularly systems that segregate students into performance-based tracks at an early age (for example, at age 10 in Austria and Germany, compared with 16 in Scandinavian countries). Research indicates that segregation of immigrant students, either by residential neighborhood or by skill level in school, widens the academic performance gap. This list of contributory factors is far from exhaustive. The wide variations among migrant sending and receiving countries and among immigrant students within these countries suggest that a one-size-fits-all policy cannot meet the needs of every situation. Still, identifying causal links between the sources and consequences of educational disadvantages is important for making effective policy recommendations.

## DISCUSSION OF PROS AND CONS

### Parental background and social capital

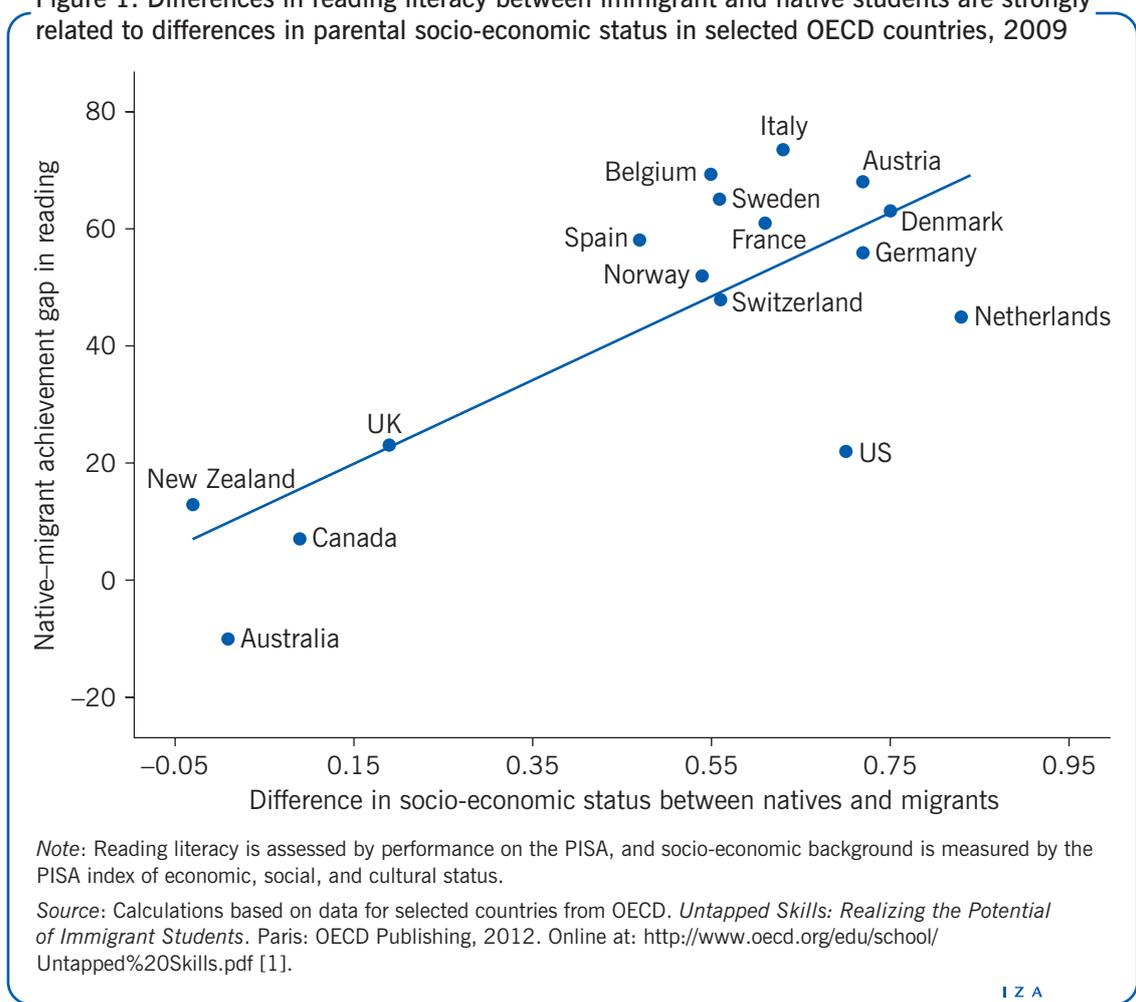
#### *The socio-economic disadvantage of migrant children*

Economists find a strong causal effect of parental education on child outcomes [2]. Students from socio-economically advantaged families perform better than students from disadvantaged backgrounds. As immigrants in most OECD countries have less education than their native-born counterparts, it is not surprising that performance gaps in immigrant youths’ reading, mathematics, and science achievement are explained largely by differences in parental socio-economic background and cultural status.

Ignoring all other relevant influences, Figure 1 depicts the high correlation between differences in parental socio-economic status and differences in reading literacy between immigrant and native students in selected OECD countries. In traditional immigrant-receiving countries that regulate immigration using a point- (skill-)based system (in particular Australia, Canada, and New Zealand), differences in the socio-economic background of parents between immigrants and native-born populations are small, or—in New Zealand’s case—even negative. Performance on the Programme for International Student Assessment (PISA) is similar for the two groups of students. By contrast, immigrant children do substantially worse than native-born children in European countries, where labor migrants account for most migration inflows and most migrants come from less advantaged socio-economic backgrounds. Considering that immigrant flows in the US are shaped by green-card regulation, the socio-economic profile of immigrants in the US looks surprisingly similar to that in Europe. It has to be noted, however, that US immigration is also influenced by illegal migration across the Mexican border and by waves of immigration amnesties.

Figure 1 suggests that immigrant students in the US perform better than predicted by the relatively high native–migrant gap in socio-economic background. This observation is in line with a study that focuses on second-generation immigrants using data from the 2003 and 2006 PISA [3]. The study suggests that traditional countries of immigration (Australia, Canada, New Zealand, and the US) might benefit from their long experience in absorbing new immigrants—for instance, by providing more transparent and less complex educational

Figure 1. Differences in reading literacy between immigrant and native students are strongly related to differences in parental socio-economic status in selected OECD countries, 2009



### Programme for International Student Assessment (PISA)

The Programme for International Student Assessment (PISA) is a joint effort among OECD countries to assess the achievement of 15 year olds in reading, mathematics, and science literacy through a common international test. PISA defines reading literacy as “the ability to understand, use, and reflect on written texts in order to participate effectively in life.” The PISA tests are repeated every three years.

Source: OECD. *Glossary of Statistical Terms: Reading Literacy*. OECD.stat database, 2003. Online at: <http://stats.oecd.org/glossary/detail.asp>

institutions than in European countries. Indeed, in European countries of labor migration (Austria, Belgium, Netherlands, and Switzerland), a large and highly significant performance gap of about 20–40 points on the PISA scale remained in both mathematics and reading tests after controlling for family background and language spoken in the home [3]. In general, the study concludes that the size of the persistent gap is highest in central and western Europe, followed by southern Europe. The Scandinavian countries of Denmark, Norway, and Sweden show only small gaps, and the traditional immigration countries show no mathematics or reading gap [3].

While these findings might suggest that traditional countries of immigration do better at absorbing new immigrants, it is also fair to say that the children of the high-skilled immigrants are a lighter burden on the education system than the children of migrants who are fleeing poverty, conflict, and political and religious persecution. The performance gap for this second group is large, and its causes—and thus solutions—are multidimensional.

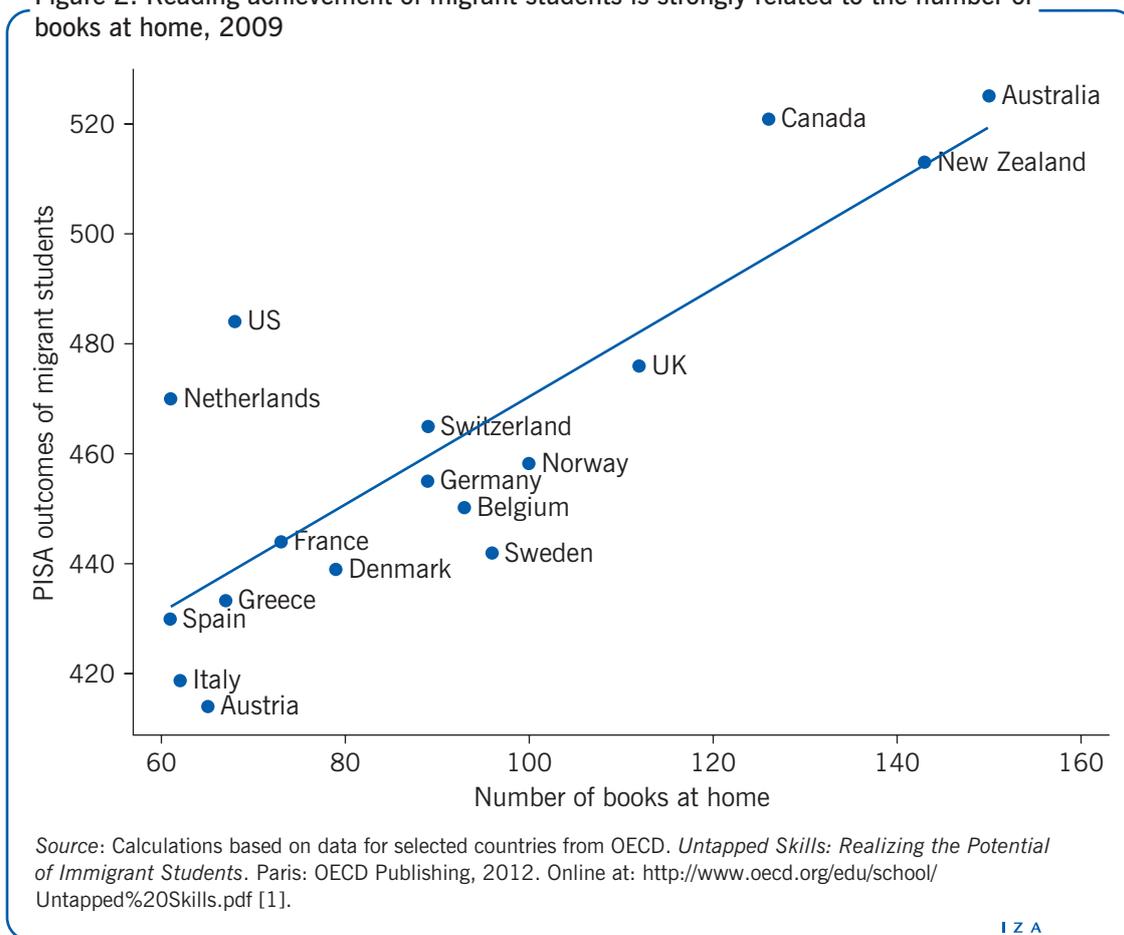
Second-generation immigrants should gain from better integration into the local culture and schools as a result of having grown up in the host country. They benefit from well-settled immigrant networks and attendance at local kindergartens and primary schools. Indeed, conditional on socio-economic status and language spoken at home, being born in the host country is associated with higher PISA scores in all nine countries examined (four traditional countries of immigration, four major European immigration countries, and Finland), although the difference is statistically insignificant for New Zealand, Sweden, and the UK [4].

#### ***Low and devaluated cultural capital, books at home, and acculturation***

The inequality between migrant and native-born students can also reflect a disadvantage originating in lower cultural capital among migrants, in the form of competencies, skills, knowledge, and values, and by objectified cultural capital, such as books. Inequality in cultural capital is related to differences in educational achievement not only between countries, but also within countries and schools [1], [3], [4]. A student’s cultural capital depends heavily on a child’s family. Moreover, because cultural capital is context-dependent and cannot be fully transferred between societies, valuable familial cultural capital will be devaluated after migration [5]. Language skills might be fully lost.

PISA evaluation surveys provide a unique opportunity to test the importance of cultural capital for educational achievement. There are large international differences in the objectified cultural capital of immigrant children across OECD countries, as measured by the number of books at home (Figure 2). There is also a strong positive correlation between books at home and academic performance: one additional book is associated with approximately

Figure 2. Reading achievement of migrant students is strongly related to the number of books at home, 2009



one additional PISA point. Among a group of 17 OECD countries, the children of migrants in Italy, the Netherlands, and Spain have the smallest number of books at home, while the children of migrants in Australia, Canada, and New Zealand have more books and higher PISA scores. Again, migrant students in the US perform better than predicted by their embodied cultural capital. Another indicator of cultural capital, language spoken at home, also shows a statistically significant relationship to educational achievement as measured by the PISA.

**Language gaps and related policies**

Students take the PISA test at 15, an age that is critically important to future school and career opportunities in most countries. Language acquisition and literacy skills are essential to children’s educational achievement, and poor reading and language proficiency at this age can have lasting consequences.

International comparisons of PISA scores show that national differences between migrant and native-born students are very similar for reading, mathematics, and science proficiency. A 65-point difference on the 2009 PISA reading proficiency test separates a group of students most likely to perform poorly—first-generation migrant students with foreign-born parents and who speak a foreign language at home—from native students who speak the local language at home [1]. Even after adjusting for socio-economic status, the study finds a persistent gap of 41 points. Education achievement gaps are narrower for migrant youths who arrive at a younger age [6], [7].

A comparison of average gaps in PISA 2009 reading achievement scores of first-generation migrant students who speak the local language at home and those who speak their native language substantiates the importance of language deficits [1]. The largest gaps in reading scores between the two groups are found in Switzerland (71 PISA points) and New Zealand (62 points); the OECD average gap is 35 points. Gaps are very small in the Netherlands (12), the UK (13), and Canada (19). Also remarkable is the close to average educational achievement of migrants in Germany, which still had very high language-related PISA score gaps in 2000 [4]. By 2009, the score of the average migrant student in Germany had improved by 32 points and was no longer substantially different from the average OECD value.

Interpreting PISA gaps requires careful analysis of the composition of immigration flows [4]. For instance, in the UK, most migrants come from English-speaking countries, and the rest mostly come from European countries. As English is the common foreign language taught in European schools, most foreign parents and their children living in the UK already speak English. The situation is similar in Canada, which selects for high-skilled migrants, who are more likely to be bilingual. The picture is more complex in the Netherlands, which has a long history of immigration, and where migration policy has shifted from very liberal to more restrictive. Until the mid-1990s, there was generous support for immigrants' integration, including providing instruction in the native language in primary schools. Immigration and integration policies became stricter after that, and language tests are now a condition of entry, although preservation of native cultures remains an important policy concern. The high proportion of immigrants from former Dutch colonies also affects immigrant integration in the Netherlands. Education systems in these former Dutch colonies are based on the Dutch system, which suggests less devaluation of immigrants' cultural capital in the Netherlands than elsewhere [6].

### **Educational environment, peers, and social interaction**

Migrant children can benefit from starting school at an early age, along with early-intervention strategies in preschool and kindergarten [7], [8]. These and other institutional characteristics of educational systems are frequently discussed in the education literature, including age when students are separated into performance-based education tracks, concentration of immigrants in particular schools, time in school, entry age of schooling, student-teacher ratio, centralized exams, targeted funding, and enrichment courses [3], [7], [8], [9].

#### ***Concentration***

A high concentration or social segregation of immigrants can result from intentional selectivity mechanisms of the education system, such as tracking. However, even comprehensive education systems cannot avoid concentration that results from residential segregation. Immigrants may profit from such concentration because of potential efficiency gains in targeting the needs of students in more homogeneous classes. However, more concentration means missed opportunities for immigrant children from disadvantaged family backgrounds to benefit from social interaction in school with high-ability students from advantaged socio-economic backgrounds.

Empirical evidence shows that concentration in itself need not have negative consequences, provided that all schools are of the same quality [8]. However, ethnic segregation as a consequence of residential sorting may have deleterious effects on schools, and thus on

students attending these disadvantaged schools. Such adverse neighborhood effects can result in larger differences in reading scores than those between students with high-educated mothers and those with low-educated mothers. Thus, not even having a highly educated mother can compensate migrant students for the penalty associated with attendance at a disadvantaged school. School disadvantage effects are more likely in countries such as France, Germany, and Italy than in Scandinavian countries [1].

### ***Early selection by ability***

The literature on the pros and cons of student tracking is rich and not restricted to concerns about migrant children. However, the trade-off between equal opportunities and efficiency associated with tracking is particularly important for children of disadvantaged migrant households. In most countries, education remains uniform and comprehensive through the lower secondary school level; selection does not generally occur until age 15 or 16. However, a few countries (such as Austria, Germany, Hungary, and Slovakia) track students based on ability as early as age 10.

Education researchers argue that early differentiation by skill level has a negative impact on the school performance of children who enter school with language and social deficits, a high proportion of whom come from immigrant families [10]. PISA results confirm that school systems that track students at an early age tend to show a stronger impact of socio-economic background on learning outcomes. This relationship implies increasing inequality between native-born and migrant students, whose socio-economic disadvantage is intensified by their language problems [1].

Empirical studies confirm this negative (though not always significant) effect of age at first selection by ability on average migrant outcomes. This effect persists even after carefully controlling for numerous variables that capture the effect of socio-economic background, including age at arrival, household structure, educational resources at home, and class composition, as well as national institutional factors such as school starting age [7].

### ***Beneficial or adverse peer effects?***

The combination of concentration of migrant students in schools and early tracking might lead to increasing inequality between disadvantaged groups of migrant students and more privileged native-born students. In testing the strength of peer relations within and between groups of migrant and native-born students, studies have shown that in countries of early selection in schools by ability, such as Austria and Germany, influential social interaction takes place mainly within groups, with interaction between groups being less pronounced [8]. This finding suggests that early tracking has the potential to magnify existing inequalities based on parents' socio-economic background and to transmit them to the next generation.

Only a few studies are able to analyze the effect of reducing residential concentration. The Moving to Opportunity for Fair Housing Demonstration program, sponsored by the US Department of Housing and Urban Development in the 1990s, is one of the most ambitious randomized controlled social experiments ever conducted. More than 4,600 low-income families living in high-poverty inner-city public housing were selected through a lottery to receive housing vouchers allowing them to move to private-market housing in less distressed communities. This program provides a rare opportunity to evaluate “clean” evidence on neighborhood effects by looking at the effects of changing families' neighborhood environment.

Families that received rental housing vouchers with no restrictions on area of residence (the treatment group) could be compared with families of similar socio-economic background that applied for the lottery but that did not win a voucher (the control group).

Many families who participated in the program are members of racial and ethnic minority groups, and thus are similar in some of their disadvantages and social isolation to immigrant families. While the program has had some positive effects on health outcomes, education and labor market performance were no better among families that moved than among families that did not [11]. A possible explanation is that the disadvantaged families that moved to more prosperous areas moved into neighborhoods that were also racially or ethnically segregated, so their exposure to high-quality schools might have been limited. The literature surveying the results of this program also reports that most families participating in the program were socially isolated in their new neighborhoods, thus restraining any influence of peer effects from contact with families from a higher socio-economic background.

## LIMITATIONS AND GAPS

Information on the situation of immigrants at school, at home, and in their interaction with each other is still very limited. Thus, it is not well understood how migrant students and their parents interact with each other and with their native-born counterparts in schools. Little is known about the trade-off (or complementarity) between reducing the native-migrant performance gap and the potentially negatively affected education achievement of top-performers, to whom teachers might pay less attention. So far, there is only limited insight into the costs and benefits, effectiveness, and efficiency of implementing migrant education policies or equity-enhancing policies such as delaying student tracking. More research is needed on the impact of programs dealing with migrant education (such as language support and gifted learning). Another unexplored issue is whether financial barriers are a disincentive to immigrant students fully participating in education.

## SUMMARY AND POLICY ADVICE

Educational achievement gaps between migrant and native-born students are explained largely by differences in the socio-economic status of parents, command of the local language, and degree of acculturation. Thus it is no surprise to find that the situation of migrants needs more attention from education policymakers in European countries, where many migrants are labor migrants, than in countries with a long tradition of point-based (skill-based) selection of immigrants. However, even after controlling for parental influence, studies find persistent differences in school performance. Interpreting achievement gaps is a complex process and requires careful analysis of the composition of immigration flows and of the concentration of migrant students. Empirical evidence has shown that concentration can be a problem when it is a consequence of residential sorting that leads to many migrants attending disadvantaged schools. Early tracking of students based on ability can reinforce and amplify the pre-existing socio-economic disadvantages of children with a migration background and language deficits even before they start school.

One way to improve the chances and opportunities of the immigrant students is to make the education system as comprehensive and inclusive as possible. Delaying tracking of students by ability until they are 15 or 16 may increase social mobility and reduce inequality between migrant and native-born students. To address cultural gaps between groups, disadvantaged

migrant parents can be encouraged to increase their involvement with their children's schools and school work. Parental involvement in children's education is consistently associated with improvements in school behavior, social competency, and school performance [12]. However, immigrant parents do not generally seek contact with schools, and so they may need to be mobilized to do so. It may be necessary to implement supporting policies to overcome barriers relating to work schedule and childcare.

Cultural integration or acculturation (to be distinguished from assimilation) to the majority culture has also been shown to reduce ethnic disadvantages. Again, schools can play a crucial role by creating an atmosphere of mutual respect, a place where native-born students become acquainted with the cultural practices in immigration countries and immigrant students learn local cultural practices. The cultural distance between migrant and native-born students can be reduced by integrating the cultural artifacts, values, and habits of students' home countries into school life and learning processes and by employing teachers with a migrant background [9].

To successfully implement targeted policies such as language support requires knowing which students need extra support. Strategies that treat everyone equally are ineffective. Thus, many OECD countries have targeted education strategies that address the many different starting positions of their diverse ethnic groups. Urging parents to use the language of the host country at home seems like a common-sense recommendation, but good mastery of a foreign language normally requires good command of one's native tongue, which may not always be the case for immigrants. However, the literature supports policies that improve the language skills of immigrants, although returns on investment may not be realized for several years. Migrants arriving in OECD countries from linguistically and culturally dissimilar non-Western countries are particularly vulnerable. They require rapid instruction in the local language, as well as personal orientation to the education system in order to catch up with their native-born peers.

When developing migration policy, it is important to understand that strictly pursuing the goal of ensuring that migrant children achieve academic excellence is likely to mean that migrant children from a more disadvantaged socio-economic background will be excluded. Canada's experience shows that point-based systems, which accept immigrants based mainly on education and language proficiency, do not prevent unemployment rates among immigrants that are much higher than among native-born populations. European politicians who view the Canadian selective system as a model should be aware that Canada's policy is becoming more "European" as it acknowledges a labor market need for less skilled as well as highly skilled workers by giving more weight to migrants with job offers from employers.

## Acknowledgments

The author thanks two anonymous referees and the IZA World of Labor editors for many helpful suggestions on earlier drafts.

## Competing interests

The IZA World of Labor project is committed to the *IZA Guiding Principles of Research Integrity*. The author declares to have observed these principles.

© Horst Entorf

## REFERENCES

### Further reading

Dustmann, C., and A. Glitz. "Migration and education." In: Hanushek, E. A., S. Machin, and L. Wößmann (eds). *Handbook of the Economics of Education: Volume 4*. Amsterdam, Netherlands: Elsevier/North Holland, 2011; pp. 327–439.

Hanushek, E., and L. Wößmann. "The economics of international differences in educational achievement." In: Hanushek, E. A., S. Machin, and L. Wößmann (eds). *Handbook of the Economics of Education: Volume 3*. Amsterdam, Netherlands: Elsevier/North Holland, 2011; pp. 89–200.

### Key references

- [1] OECD. *Untapped Skills: Realizing the Potential of Immigrant Students*. Paris: OECD Publishing, 2012.
- [2] Holmlund, H., M. Lindahl, and E. Plug. "The causal effect of parents' schooling on children's schooling: A comparison of estimation methods." *Journal of Economic Literature* 49:3 (2011): 614–650.
- [3] Dustmann, C., T. Frattini, and G. Lanzara. "Educational achievement of second-generation immigrants: An international comparison." *Economic Policy* 27:69 (2012): 143–185.
- [4] Entorf, H., and N. Minoiu. "What a difference immigration policy makes: A comparison of PISA results in Europe and traditional countries of immigration." *German Economic Review* 6:3 (2005): 355–376.
- [5] Gang, I. N., and K. F. Zimmermann. "Is child like parent? Educational attainment and ethnic origin." *Journal of Human Resources* 35:3 (2000): 550–569.
- [6] Van Ours, J., and J. Veenman. "Age at immigration and educational attainment of young immigrants." *Economics Letters* 90:3 (2006): 310–316.
- [7] Cobb-Clark, D., M. Sinning, and S. Stillman. "Migrant youths' educational achievement: The role of institutions." *The ANNALS of the American Academy of Political and Social Sciences* 643:1 (2011): 18–45.
- [8] Schneeweis, N. "Educational institutions and the integration of migrants." *Journal of Population Economics* 24:4 (2011): 1281–1308.
- [9] Heckmann, F. "Education and migration: Strategies for integrating migrant children in European schools and societies." *NESSE Analytical Report 1 for EU Commission DG Education and Culture*. Bamberg, Germany: European Forum for Migration Studies, 2008.
- [10] Entorf, H., and M. Lauk. "Peer effects, social multipliers and migrants at school: An international comparison." *Journal of Ethnic and Migration Studies* 34:4 (2008): 633–654.
- [11] Sanbonmatsu, L., J. R. Kling, G. J. Duncan, and J. Brooks-Gunn. "Neighborhoods and academic achievement: Results from the Moving to Opportunity experiment." *Journal of Human Resources* 41:4 (2006): 649–691.
- [12] Lee, J.-S., and N. K. Bowen. "Parent involvement, cultural capital, and the achievement gap among elementary school children." *American Educational Research Journal* 43:2 (2006): 193–218.

**The full reference list for this article is available from the IZA World of Labor website (<http://wol.iza.org/articles/migrants-and-educational-achievement-gaps>).**