PER07416

School Composition and Student Outcomes: A Review of Emerging Areas of Research

Laura B. Perry

School of Education

Murdoch University

Perth WA 6150

l.perry@murdoch.edu.au

telephone: 08 9360 6983

Refereed paper presented at the annual conference of the
Australian Association for Research in Education,
November 2007 in Fremantle, WA.

Abstract

Throughout the world, school choice is becoming increasingly prevalent. While most of the earlier works on school choice were polemical, empirical studies of the effects on student outcomes are becoming more common. The increase in school choice is also bringing renewed attention to school composition and segregation, and their effects on student outcomes. The effect of school composition on student outcomes has been recognized at least since the 1966 Coleman Report, which found that the social composition of schools had a larger effect on the educational achievement of disadvantaged African-American students than school resources. Policy attempts to manage school composition and minimize school segregation have largely been ineffective in many countries. A new line of research is examining the effects of school composition and school sector (non-government and government) on individual student outcomes, disaggregated by student socio-economic status. In particular, studies are examining whether the effects on student outcomes are the same for all students. A more nuanced view of the effects of school composition on student outcomes may help policy makers and analysts mediate the negative effects of school choice. The paper concludes with other potential lines of research on school composition and student outcomes.

Introduction

Questions about the effect of school composition, or the social mix of students at a school, first gained prominence in the 1960s in the US. Schools were segregated by race, and in some areas this segregation was legally mandated. With the rise of the Civil Rights Movement, legally mandated segregation was found to be unconstitutional and thus illegal since it deprived African-Americans an equal education.

Studies such as the Coleman Report examined the impact of a school's racial composition on the academic achievement of African-American students. The Coleman Report found that attending school with white students had a larger positive effect on the achievement of African-American students than school resources. Attempts to desegregate schools followed, although in many cases it resulted in white families leaving the school district. This so-called "white flight" was partly responsible for the mass exodus of many middle class white families from urban centres to the suburbs, which in the US typically have their own separate school district that is limited to students within the same suburb or district. Policy attempts to manage the racial composition of schools in the US have faced many challenges and have been difficult to implement. Indeed, segregation is on the rise in the US, fuelled in large part by residential segregation and increasing numbers of Hispanic students (Orfield & Yun, 1999). A similar phenomenon is now occurring in Europe as many countries are facing an increase in the number of non-European immigrants.

Questions about school composition are again being asked due to these demographic changes. An increase in school choice and privatization is also provoking a renewed interest in the effect of school composition on student outcomes, as these trends may lead to increased segregation of schools by race or social class. Finally, studies of the effects of school composition are being facilitated by large cross-national data sets that contain rich and detailed information about student and school characteristics.

This paper reviews the current research on school composition and its effects on student outcomes. The concluding section lays out some possible areas of future research.

School Composition and Student Performance

Student performance is partly explained by an individual student's family background or socio-economic status (SES). SES can be measured in a variety of ways, and is a composite of an individual's social class and economic and cultural capital. The most common way to measure SES is a composite of family income, parental occupation, and level of education of the parents, especially the mother. Some indexes also include measures of cultural capital, which are essentially about the degree to which the family environment incorporates elements of classical "high culture." Such elements include having original artwork, books and a piano at home, international travel, visits to art galleries, museums, symphonies and theatre houses, and listening to classical music. International studies have found that the separate effect of cultural capital is almost as strong as parental occupation (OECD, 2004).

Generally, higher income students have higher achievement than lower income students. In addition, students whose parents have higher levels of education generally perform better than students whose parents have lower levels of education. These two factors are inter-correlated, as income is positively associated with education. The more years of education that an individual has, the higher their income is likely to be.

School composition is defined as the social composition of the students who attend a school. It can be measured by the racial or ethnic composition of the students, or by the socio-economic status of the students. Of course the two tend to go hand-in-hand, especially when the ethnic group has lower social status within the larger society. When the composition of schools is measured solely by the SES of the students (as opposed to their race or ethnicity), we can also refer to the term "mean school SES".

One of the richest cross-national data sets on the effects of family background and school composition on student achievement comes from the Programme for International Student Assessment (PISA) studies conducted by the Organization for Economic Cooperation and Development (OECD). PISA tests 15 year old students' reading, scientific and mathematical literacy. The first round of PISA was conducted in 2000. Thirty-two countries participated, including Australia and 27 other OECD countries.[1] Subsequent rounds were conducted in 2003 and 2006; the data set from the last round has not yet been released. The OECD plans to conduct PISA every three years.

PISA confirmed that SES affects student achievement, but the degree to which it does so varies by country. PISA uses three measures to compile a SES index: parental occupational status, parental level of education, and family possessions relating to classical culture. Among the OECD countries that participated in PISA 2003, the average percentage of variance in student performance in mathematics

[1] Participant countries in PISA 2000 are Australia, Austria, Belgium, Brazil, Canada, the Czech Republic, Denmark, Finland, France, Germany, Greece, Hong Kong-China, Hungary, Iceland, Indonesia, Ireland, Italy, Japan, Korea, Latvia, Liechtenstein, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, the Russian Federation, Spain, Sweden, Switzerland, Thailand, the United Kingdom, and the United States. In PISA 2003, Slovak Republic, Turkey, Macao-China, Serbia, Tunisia and Uruguay also participated.

explained by student SES is 20% (OECD, 2004, p. 397). Belgium and Hungary had the highest effects, with SES explaining 24% and 27% of student achievement respectively. Iceland had the lowest percentage, at 6%, while Canada, Finland and Japan at 10-11% were the next lowest. Out of the 29 OECD countries included in PISA 2003, Australia had the 6th lowest strength of relationship between student SES and mathematics achievement, at slightly less than 14%.

Schools whose student body is comprised of high SES students, such as many of the elite private institutions or government schools in wealthy suburbs, do well on standardized tests of student achievement because of their student intake. In other words, schools do well because of the characteristics of their students, not necessarily because they are more effective schools. Yet this is not the whole story, for the social composition of students in a particular school has its own independent effect beyond individual students' SES.

PISA measures individual students' SES, and then averages all the students in a school to reach a mean school SES. This average is based on the actual SES of the students attending the school, not an average SES based on the postal code of the surrounding area. Using the local postal code to derive the average school SES is not as accurate because many families, especially those with higher incomes, may be attending out-of area schools.

PISA found that mean school SES, or school composition, has a strong and independent effect on student achievement. In particular, students perform better in schools that have a higher mean school SES, regardless of their individual SES. Moreover, in most countries the effect of mean school SES is stronger than an individual student's SES:

> In almost all countries, and for all students… [there is a] clear advantage in attending a school whose students are, on average, from more advantaged socio-economic backgrounds. Regardless of their own socio-economic background, students attending schools in which the average socio-economic background is high tend to perform better than when they are enrolled in a school with a below-average socio-economic intake. In the majority of OECD countries the effect of the average economic, social and cultural status of students in a school – in terms of performance variation across students – far outweighs the effects of the individual student's socio-economic background. (OECD, 2004, p. 189)

The mean school SES impacts student achievement beyond the students' individual SES. In other words, a middle SES student will have lower achievement in a lower SES school, but higher achievement in a higher SES school. This makes intuitive sense, and certainly many parents are aware of this correlation. This is why middle class parents in low income communities are more likely to choose a non-local school than are lower income parents. They are aware of the advantages that high SES schools have over low SES schools.

In Australia, the effect of mean school SES is larger than the effect of individual SES. According to PISA, the effect of the mean school SES is much greater (by up to a factor of 2) than the individual student's SES (OECD, 2004). Using a national data set, Rumberger & Palardy (2005) found that the effect of school composition was roughly equal to the effect of individual student SES in US secondary schools. They also found that the effect of mean school SES was similar for both high and low SES students.

High SES schools tend to be better resourced and have a school climate more supportive of achievement, more functional and supportive teacher-teacher and teacher-student relations, and fewer discipline problems (OECD, 2005; Willms, 1999). Teachers often have higher expectations of their students, and because discipline problems are not as pronounced, they can devote more time to lessons. Teacher morale may be higher, with the school experiencing fewer turnovers in the teaching staff. Higher SES schools may also be better able to recruit and retain the most effective and qualified teachers.

Likewise, the student culture in higher SES schools may be more supportive of academic achievement. Rather than having to worry that they may lose social status for being a high achiever, such students in a high SES school may experience a positive achievement press from their peers. Higher SES schools often have a culture of achievement because the students themselves bring high expectations for academic success. Students from middle and upper class families come to school more prepared, and in all countries, to varying degrees, the student's SES explains some of the variation among student achievement. When a school has a large number of students who are academically prepared and motivated, a culture of achievement is created in the school that lifts up the achievement of students from lower SES backgrounds (Hanushek, Kain, Markman, & Rivkin, 2001; Thrupp, 1999).

Lower SES schools, by contrast, tend to have less advantageous conditions (OECD, 2005; Orfield, 1996; Orfield & Yun, 1999; Rumberger & Palardy, 2005). Not only are students less prepared and often less motivated, the schools often have difficulty hiring and retaining qualified and enthusiastic staff. Rumberger & Palardy's (2005) study of student achievement in US secondary schools found that students in lower SES schools experience lowered teacher expectations, do less homework, are less likely to take rigorous subjects, and are less likely to feel safe.

Students learn from not only their teacher but also their peers. Student outcomes influenced by peers are called peer effects. Henry and Rickman (2007, p.100) found in their study of preschoolers that "The ability level of the peers in a child's classroom has direct and positive effects on the child's cognitive skills, pre-reading skills, and expressive language skills after controlling for preschool resources, family characteristics, and the child's skills at the beginning of preschool." They conclude that studies that did not measure peer effects probably overestimate the effect of school-level variables, such as class size, discipline policies, or teacher quality.

Questions remain about the role of teachers in mediating the effects of school composition. PISA suggested that favourable school composition can lead to favourable teaching characteristics that are more supportive of academic achievement. Rumberger & Palardy (2005) found that teachers' expectations of students are affected by the social composition of the school. Lamb and Fullarton (2002) found that variation in students' mathematics performance between classrooms in a given school was due primarily to differences in the social composition of the classroom, with differences in teacher behaviour or motivation playing a very small role. Their findings are not incompatible with Rumberger & Palardy's, however, that teacher expectations are affected by the social composition of their students. Henry & Rickman's (2007) study found that peer effects were much stronger than school or teacher effects, but it is plausible that the role of teachers is weaker in preschools than in secondary schools.

Other studies have also found that once peer and family effects are considered, the effect of school-level variables is small. Robertson & Symons' (2003) study of

secondary schools in the UK found that the effects of family and peers are stronger than school-level variables such as class size. As evidence of a peer effect, they found that lower scoring students in the highest academic streams within a school experienced the most gains in achievement. In other words, students of similar ability and family background perform at a higher level when they are in a classroom with higher ability peers than in a classroom with lower ability peers.

School composition can also affect parents. Sui-Chu & Willms (1996) found that parents in higher SES schools were more likely to participate than parents in lower SES schools, even after controlling for the SES of the parents. In other words, parents of any given SES background are more likely to participate in a higher SES school than they would in a lower SES school. Similar to that experienced by students in higher SES schools, a positive achievement press is likely encouraging parents to participate at higher levels.

PISA shows that there is variation in student achievement within schools and between schools. Educational systems are considered more equitable if they have lower levels of between-school differences in student outcomes. In Australia, 80% of the variation of student achievement is found within schools, while 20% of the variation is found between schools. The OECD average for between-school differences is 36% (OECD 2005). Thus, Australia's between-school difference is fairly low compared to other countries.

To explain between-school differences, PISA examined the relative effects of schools. The study found that on average, school-level factors explain only about 5% of the between-school variation in student achievement in all the countries included. School level factors fall into three categories: school resources, school climate, and school policies. School resources include teacher qualifications, class size, and educational resources, including computers. School climate include the disciplinary climate, school expectations for achievement, teacher-student relations, students' sense of belonging, and teacher morale. School policies include policies about homework, instructional time, teacher autonomy, school autonomy, tracking and streaming, and how student performance is communicated and to whom (e.g., to parents only, to the school, or to the district/regional level). In Australia, school resources, climate and policies explain approximately 1% of between-school differences between schools (OECD 2005).

Much more important than school-level factors are student background and peer effects. On average, 50% of the between-school differences is due to individual student SES, 20% is due to the mean SES of the school, 5% is due to school-level factors, and the remaining 30% is unexplained.

School composition affects student achievement differently by subject. Reading is the much more sensitive to both the student's individual SES as well as the mean school SES than is science or math. When examining the differences between schools in student achievement on PISA, the mean SES of the school explained 14% of between school variation in reading but only 4 and 6 percent respectively for math and science (Lokan, Greenwood, & Cresswell, 2001).

School Type and School Composition

The strength of the effect of school composition varies by country. The most important determining factor seems to be the institutional arrangements and policies made at the national level rather than factors related to particular schools. For example, most of the countries that have the largest effects for mean school SES have

a differentiated secondary school system, wherein students of different academic abilities and socio-economic backgrounds attend very different schools. Typically there are three types of schools in a differentiated system: academic, technical and vocational. Each school type offers a different sort of curricula, with the academic schools (*lycea*, *gymnasia*) catering to university preparation, the technical schools toward many professions (nursing, finance and business, etc.), and the vocational schools toward the trades. Countries with such a system include the Netherlands, the Czech Republic, Germany, Austria, Belgium, and Hungary. The effect of school composition on academic performance in these countries is anywhere from 4 to 6 times stronger than the effect of an individual's SES (OECD, 2004).

By contrast, most of the countries that have the lowest effects of school composition have comprehensive secondary school systems similar to that found in the US, Canada or Australia. In a comprehensive secondary school system there is just one school type that is available to students. Secondary schools may cater to their local area by offering more or less academic education or vocational education, but the curriculum offerings do not differ by institutional definition as they do in a differentiated system. The effect of school composition in a comprehensive system is generally weaker because there is less segregation by SES and ability between institutions. Schools in differentiated systems are much more homogenous in terms of student SES and ability, which leads to higher between-school differences in student achievement.

In addition to the institutional structure of a nation's education system, school type (i.e., public or private) is also related to school composition. In Australia, schools fall into three categories: government, Catholic and independent. While the latter two are considered non-governmental, they receive public funds, as do private schools in most other OECD countries. International studies further classify schools into three main types: public, government-dependent private and independent private. Public schools are managed by public authorities, while private schools are managed by private bodies such as churches or associations. Government-dependent private schools receive at least 50% of their funding from public sources, while independent private schools receive less than 50% of their funds from government sources. Most Catholic and some independent schools in Australia would be considered government-dependent.

In most countries student academic performance is greater in private schools. Once student SES is controlled for, however, private school advantage disappears or becomes minimal in most OECD countries, including the UK and US, as well as Chile (Gorard, 2006; Lubienski & Lubienski, 2005; Matear, 2006; OECD, 2005). In other words, private schools have a performance advantage because of their student characteristics, not school-based differences. The Lubienski and Matear studies (2005; , 2006) compared the average academic performance of students from similar SES backgrounds in public and private schools, and found that there are no significant differences in achievement. Middle SES students do just as well in public as they do in private schools, and the same is true for low and high SES students. The notion that private schools are not significantly adding value to their student intake corresponds with PISA findings that school composition has a larger effect on student performance than school type or location (OECD, 2005).

Dronkers & Robert's (2003) analysis of data from PISA 2000 found that after controlling for student SES, student achievement is higher in government-dependent private schools than in either government or independent schools. They hypothesize that government-dependent schools are more effective because they enjoy two

benefits: a steady stream of funds that permits forward planning and budgeting, and institutional autonomy. They are thus able to enjoy the advantages of both public and private institutional features. Other studies of Catholic schools, which would typically fall into the government-dependent private category in most countries, have found that they are more effective in raising student achievement and other outcomes such as completing the final year of secondary school (Hoffer, 1998; Vella, 1999).

Thus the answer to whether private schooling is more effective is inconclusive. Further studies that carefully consider the social composition of schools may provide more insight. In Lubienski and Marte's studies, it may well be the case that private schools are not more effective than public because for a particular SES group of students, the two school types have a similar school composition. In many cases, the school composition of a private school that a low income student would attend is not significantly different from a public school that they would attend. The same is true for high SES students. In the US, for example, public schools in wealthy suburbs have a high mean school SES since they enroll most students in the community.

School Choice and School Composition

School choice and school composition are mutually related. Many parents are well aware that the social composition of a school influences the academic achievement of their child. Middle class parents in particular are likely to choose a school based on its social composition, favouring schools with the same or higher average SES as their own family. Schools with favourable social compositions can increase property values in the local community as there is strong demand for housing by families with children. Conversely, in areas where the school has a lower mean SES, higher income families are likely to choose a school in a different area. In their study of school choice in New Zealand, Lauder and Hughes (1999) found that 65% of higher SES families in a lower SES community exited the local neighbourhood school. A recent study by Lamb (2007) has found similar results in Australia.

In the US, higher SES families in economically diverse inner-city urban areas are likely to send their child to one of the limited open enrolment schools, called charter and magnet schools, where the mean SES of the school is more congruent with their own family status. When these schools are over-enrolled or undesirable because of an insufficiently high social composition, urban middle class parents often choose a private school, or move to a middle-class suburb so their child can enrol in the local public school. The majority of private schools in the US serve working and middle class parents living in economically, ethnically and racially diverse urban neighbourhoods (Barrow, 2006). Students in wealthy suburbs are more likely to attend their local neighbourhood public school than a private school, largely because public schools in such communities have a high mean SES and are well regarded by parents.

Australia has one of the most developed systems of school choice in the world. Currently one-third of all students are studying in non-government schools, the majority of whom are from middle and upper class backgrounds (Ryan & Watson, 2004). The number of students in the non-government sector has been steadily increasing over the last 30 years and is the result of a variety of factors, including Commonwealth subsidies to non-government schools (Ryan & Watson, 2004). The increase in non-government school enrolment is exacerbating the school segregation of students by their socio-economic status, which is affecting educational provision

and which has the potential to further entrench social class differences in educational outcomes (Lamb, Long, & Baldwin, 2004).

Increasing choice and competition are also exacerbating between-school differences within the government sector (Edwards, 2006; Lamb, 2007). Public schools in higher SES areas are in a better position to compete for the most able and motivated students. Schools in lower SES areas lose their brightest students, and eventually the quality of the education they can provide the remaining students suffers, leading to a spiral of decline. Some schools become no longer viable and close, while others turn into "ghetto schools" that face severe challenges (Lamb, 2007). Van Zanten (2003) has noted a similar phenomenon in France.

Elsewhere in increasingly multicultural Europe, native families in countries such as Holland and Germany are choosing schools outside the neighbourhood as a way to avoid Muslim immigrant students. Because the children of these immigrants typically perform at a lower level in schools, parents of native children, especially those from the middle class, actively choose schools where Muslim immigrant students are not enrolled as a way to safeguard the academic achievement of their own children (Karsten & Teelken, 1996; Kristen, 2006; Noreisch, 2007). Here the desire for a socially advantageous school composition is leading to segregation between ethnic and religious groups. The main vehicle for this form of segregation is the system of developed and publicly funded Christian schools. These schools are privately managed but are public in the sense that they are completely funded by the state. For obvious reasons, Muslim families are less likely to send their child to a Christian school.

Overall, the social composition of schools can positively or negatively affect a family's choice of school. At the same time, school choice can positively but more often negatively affect a school's composition. As the number of middle class students exit out of a neighbourhood school, it becomes more segregated, with a higher number of lower SES students than is represented in the larger community. This overrepresentation of lower SES students leads to increased educational challenges for both the school and the students who remain behind.

Emerging Areas of Research

Questions remain about the exact effects of school composition on student achievement. We know that school composition has as strong or even stronger effect than individual SES, but by how much? How does it vary by country? And most importantly, how does it vary by student SES? PISA and other studies have shown that school composition affects all students. The question remains, however, if all students are affected equally.

Studies have found that low income students benefit more from educational interventions than higher income students. In their assessment of PISA 2000 data, Lokan and associates show that the performance of high SES students varies across countries much less than the performance of low SES students. They therefore conclude that this "indicates that the impact of educational experiences on student performance is probably greatest for students from lower socioeconomic backgrounds" (Lokan, Greenwood, & Cresswell, 2001, p. 165). Because they do not have the home advantage of higher SES students to complement experiences at school, the impact of school-level factors is greater for low SES students.

School composition could plausibly have a similar differential effect based on the SES of the particular student. It may be the case that high SES students are

affected to a lesser degree by the composition of the school than low SES students. It may be the case that high SES students who also have high ability and motivation would do similarly well in most schools, within certain limits. Or it may be the case that the increase in achievement from attending a higher mean SES school would be rather small.

We also do not know if there are upper and lower limits of the effect of school composition. How does the relationship look like when plotted on a graph? Is the line straight, suggesting that the effect of school composition is linear and consistent regardless of the SES of the school? Or, is the effect of mean school SES less strong at the top end of the graph? In other words, do increases to the mean school SES gradually lessen the effects on student achievement, with the line flattening out towards the top end of the graph?

We do not know whether the effects of school composition are similar at the primary and secondary levels of the education system. Most of the recent studies have measured the effect of school composition in secondary schools, including studies that use data from PISA. It is plausible that the effect of school composition is less strong in primary schools since curriculum at this level of the education system is not as differentiated between schools as it is at the secondary level.

In four countries – Korea, Denmark, Finland and Iceland – mean school SES has no statistically significant effect on student achievement in reading literacy (OECD, 2005, p. 35). A comparative study of these four countries could examine the features that make these education systems unique. What lessons can they offer other countries? Is their success in removing the effect of school composition unique to their national context, or are there policies that other countries can adapt? Are these policies within the realm of education, or are they broader government public policies that aim, for example, to reduce poverty and the underclass? For example, Blossfield and Shavit (1993) found that income redistribution policies more effectively widened the participation of working class students in higher education than did policies specific to education, such as increasing the number of tertiary institutions or lowering entrance requirements.

It could also be interesting to examine average student academic achievement in private and public schools that have a similar mean school SES, as well as those that have markedly different ones. This could shed further light on the debate about the effectiveness of private schools deriving primarily from increased autonomy or student intake. Such a study would be difficult to conduct in Australia since information about student performance in the non-government sector is not public, and Catholic and independent schools have not been keen to participate in inter-sectoral comparisons. PISA and other international studies collected data from non-government schools to ensure the sample would be representative of overall enrolment patterns, but education authorities decided to omit the code in the data set that indicated whether a school is private or public. A similar study could be performed, however, in other countries.

Even if the effect of school composition on academic achievement is strong in most cases, there may be other positive outcomes that could counterbalance it. As van Zanten (2006) noted in a recent keynote speech to an international conference in Europe, education researchers have not undertaken studies that could motivate middle and upper class families to stay in the local neighbourhood school or even, in some countries, in the public school system. She suggested that research from the field of social psychology could provide insight on the potentially positive affective outcomes

that middle class students might develop in racially, ethnically or economically diverse school settings.

For example, middle class students who attend a school with a lower mean SES school may have increased opportunity to develop tolerance and empathy for individuals from less fortunate backgrounds. Some parents, especially those who are politically sympathetic to the left, are highly educated, and/or work in the liberal, artistic or intellectual professions, may appreciate the chance for their child to develop cross-class relationships with other students, or even more generally learn how to relate with individuals who have backgrounds different than their own (Oría et al., 2007; Raveaud & Van Zanten, 2007).

Some recent studies from the US have started to document the positive effects of culturally diverse university settings for both minority and majority students. For example, interaction with culturally diverse students inside and outside the classroom is correlated with higher levels of complex thinking (Antonio et al., 2004), cultural awareness and political participation (Johnson & Lollar, 2002), and active thinking, tolerance and empathy (Gurin, Dey, Hurtado, & Gurin, 2002). All of these qualities are beneficial to individuals and the larger society in multi-cultural democracies, which is why most US universities actively cultivate diversity within the student body. As Gurin et al note (2002, p. 360), in higher education "a diverse student body is clearly a resource and a necessary condition for… [achieving] educational goals."

While there is a small but growing body of scholarship on the benefits of ethnic/racial diversity within university settings, benefits to primary or secondary students have not been studied (Vedder, Horenczyk, Liebkind, & Nickmans, 2006). As the findings from studies of university students have been overwhelmingly significant and positive, it is plausible that school composition in the form of cultural diversity could benefit younger students as well. Another question that remains is whether economic diversity within schools could provide similar benefits.

References

Antonio, A. L., Chang, M. J., Hakuta, K., Kenny, D. A., Levin, S., & Milem, J. F. (2004). Effects of racial diversity on complex thinking in college students *Psychological Science, 15*(8), 507-510.

Barrow, L. (2006). Private School Location and Neighborhood Characteristics. *Economics of Education Review, 25*(6), 633-645.

Blossfeld, H.-P., & Shavit, Y. (1993). Persisting Barriers: Changes in Educational Opportunities in Thirteen Countries. In Y. Shavit & H.-P. Blossfeld (Eds.), *Persistent Inequality* (pp. 1-24). Boulder, CO: Westview.

Dronkers, J., & Robert, P. (2003). *The Effectiveness of Public and Private Schools from a Comparative Perspective* (No. EUI Working Paper SPS No. 2003/13). San Domenico, Italy: European University Institute.

Edwards, D. (2006). *Competition, Specialisation and Stratification: Academic Outcomes of the Government School System in Melbourne, Australia*. Annual Conference of the Comparative Education Society in Europe. Granada, Spain. July 3-6, 2006.

Gorard, S. (2006). The true impact of school diversity? In M. Hewlett, R. Pring & M. Tulloch (Eds.), *Comprehensive education: evolution, achievement and new directions*. Northampton: University of Northampton Press.

Gurin, P., Dey, E. L., Hurtado, S., & Gurin, G. (2002). Diversity and higher education: Theory and impact on educational outcomes. *Harvard Educational Review, 72*(3), 330-336.

Hanushek, E. A., Kain, J. F., Markman, J. M., & Rivkin, S. G. (2001). Does Peer Ability Affect Student Achievement? *Journal of Applied Econometrics, 18*(5), 527-544.

Henry, G. T., & Rickman, D. K. (2007). Do peers influence children's skill development in preschool? *Economics of Education Review 26*(1), 100-112.

Hoffer, T. B. (1998). Social Background and Achievement in Public and Catholic High Schools. *Social Psychology of Education, 2*(1), 1381-2890.

Johnson, S. M., & Lollar, X. L. (2002). Diversity policy in higher education: the impact of college students' exposure to diversity on cultural awareness and political participation. *Journal of Education Policy, 17*(3), 305-320.

Karsten, S., & Teelken, C. (1996). School Choice in the Netherlands. In G. Walford (Ed.), *School Choice and the Quasi-Market* (pp. 17-32). Oxfordshire: Triangle.

Kristen, C. (2006). *School Choice and Ethnic School Segregation*. Frankfurt: Waxman.

Lamb, S. (2007). School Reform and Inequality in Urban Australia: A Case of Residualising the Poor. In R. Teese, S. Lamb & M. Duru-Belat (Eds.), *Education and Inequality* (Vol. 3, pp. 1-38). Dordrecht: Springer.

Lamb, S., & Fullarton, S. (2002). Classroom and School Factors Affecting Mathematics Achievement: A Comparative Study of Australia and the United States Using TIMSS. *Australian Journal of Education, 46*(2), 154-173.

Lamb, S., Long, M., & Baldwin, G. (2004). *Performance of the Australian Education and Training System*. Melbourne: Centre for Postcompulsory Education and Lifelong Learning, University of Melbourne.

Lauder, H., & Hughes, D. (1999). *Trading in Futures: Why Markets in Education Don't Work*: Open University Press.

Lokan, J., Greenwood, L., & Cresswell, J. (2001). *The PISA 2000 Survey of Students' Reading, Mathematical and Scientific Literacy Skills: How Literate are Australia's Students?* : Australian Council for Educational Research.

Lubienski, S. T., & Lubienski, C. (2005). A New Look at Public and Private Schools: Student Background and Mathematics Achievement. Retrieved January 24, from http://www.pdkintl.org/kappan/k_v86/k0505lub.htm

Matear, A. (2006). Equity in education in Chile: The tensions between policy and practice *International Journal of Educational Development, 27*(1), 101-113.

Noreisch, K. (2007). School Catchment Area Evasion: The Case of Berlin, Germany. *Journal of Education Policy, 22*(1), 69-90.

OECD. (2004). *Learning for Tomorrow's World: First Results from PISA 2003*. Paris: OECD.

OECD. (2005). *School Factors Related to Quality and Equity: Results from PISA 2000*.

Orfield, G. (1996). *Dismantling Desegregation: The Quiet Reversal of Brown v. Board of Education*. New York: New Press.

Orfield, G., & Yun, J. T. (1999). *Resegregation in American Schools*. Cambridge: Harvard University.

Oría, A., Cardini, A., Ball, S., Stamou, E., Kolokitha, M., Vertigan, S., et al. (2007). Urban education, the middle classes and their dilemmas of school choice. *Journal of Education Policy, 22*(1), 91-105.

Raveaud, M., & Van Zanten, A. (2007). Choosing the local school: middle class parents' values and social and ethnic mix in London and Paris. *Journal of Education Policy, 22*(1), 107-124.

Robertson, D., & Symons, J. (2003). Do Peer Groups Matter? Peer Group versus Schooling Effects on Academic Attainment. *Economica, 70*(277), 31-.

Rumberger, R. W., & Palardy, G. J. (2005). Does segregation still matter? The impact of student composition on academic achievement in high school. *Teachers College Record, 107*(9), 1999-2045.

Ryan, C., & Watson, L. (2004). *The Drift to Private Schools in Australia: Understanding its Features* (No. Discussion Paper No. 479): Centre for Economic Policy Research, Australian National University.

Sui-Chu, E. H., & Willms, J. D. (1996). Effects of Parental Involvement on Eighth-Grade Achievement. *Sociology of Education, 69*(2), 126-141.

Thrupp, M. (1999). *Schools Making a Difference: Let's Be Realistic*. Buckingham: Open University Press.

Van Zanten, A. (2003). Middle-class parents and social mix in French urban schools: reproduction and transformation of class relations in education. *International Studies in Sociology of Education, 13*(2), 107-124.

Van Zanten, A. (2006). *Keynote Lecture*. Annual Conference of the Comparative Education Society of Europe. Granada, Spain. July 2006.

Vedder, P., Horenczyk, G., Liebkind, K., & Nickmans, G. (2006). Ethno-culturally diverse education settings: Problems, challenges and solutions. *Educational Research Review, 1*(2), 157–168.

Vella, F. (1999). Do Catholic Schools Make a Difference? Evidence from Australia. *The Journal of Human Resources, 34*(1), 208-224.

Willms, J. D. (1999). Quality and inequality in children's literacy: The effects on families, schools, and communities. In D. P. Keating & C. Hertzman (Eds.), *Developmental Health and the Wealth of Nations: Social, Biological, and Educational Dynamics* (pp. 72-93). New York: Guildford Press.