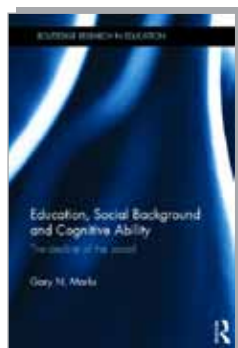


Education, Social Background and Cognitive Ability: The Decline of the Social

By Gary N. Marks
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There is a tendency in education research and theory to characterise the factors that affect educational outcomes as dichotomous variables. Veteran education analyst Chester E. Finn, Jr calls this ‘education’s endless, erroneous either-ors.’ For example, the debate over reading instruction is portrayed as a conflict over whether good teaching entails phonics or real books, when of course it requires both. Likewise, the level of funding for schools is supposed to make all the difference or alternatively make no difference—but neither statement is strictly true.

Socioeconomic inequality in achievement and attainment, one of the salient issues for education policy in Western countries, is often discussed in the same framework. Some argue that the socioeconomic status of students is the major influence on educational outcomes, while others claim it is almost irrelevant.

Gary Marks’ many excellent quantitative research papers on the factors associated with educational outcomes are frequently cited in support of the latter proposition—that socioeconomic status is not important. His latest book, *Education, Social Background and Cognitive Ability*, might also be used for that purpose. It is not a summary of Marks’ own work, but rather an extensive and detailed review of the evidence on the strength of the relationship between socioeconomic status and educational and labour market outcomes.

The book begins by describing the theoretical background for the study of socioeconomic inequalities in education and occupational status, and of how they persist over time. He sets out two opposing theories—reproductive theory, which assumes that socioeconomic inequality is enduring and is transmitted from one generation to the next, and modernisation theory, which posits that as societies become more open and

meritocratic, social attributes become less influential. Much of the rest of the book explores the evidence for each theory. Marks concludes that the statistical relationship between socioeconomic status and education is not ‘moderate, not strong,’ and that the strength of the relationship has declined over the last several decades. These findings support the modernisation theory.

The main objective of the book is not just to contest the importance of socioeconomic status in education. It is also to reaffirm the place of cognitive ability (that is, intelligence) as the single most important factor in student achievement, and through achievement, on attainment (years of education) and labour market and occupational status. According to Marks, since the 1970s, both the concept and the influence of cognitive ability have been disputed and even dismissed. As strange is the suggestion that intelligence is a social or cultural construct with no innate, physiological component, this is apparently a relative common view and needs to be challenged.

The evidence assembled in the book to show that cognitive ability and student achievement are highly correlated is utterly convincing. There can be little doubt that most of the variation in student achievement is due to differences in innate (largely genetic) cognitive ability among children. The correlation between cognitive ability and educational outcomes is two to three times higher than the correlation between socioeconomic status and educational outcomes.

What does this mean for education policy, though? Does it mean that socioeconomic differences in educational outcomes are illusory and, therefore, should not be a consideration in policy development?

Marks repeatedly warns against a simplistic interpretation of the findings:

The argument is not that ability ‘determines’ educational outcomes and that socioeconomic background and other ascribed characteristics are of no consequence. The argument is that the influence of cognitive ability is important enough to be incorporated into the theoretical explanations of educational outcomes and policy deliberations about education. (p. 68)

This book must be read carefully if it is to be understood correctly. We must, on the face of the evidence, accept that student achievement is mostly a product of cognitive ability. Cognitive ability varies throughout the population, it is stable, and it is beyond the reasonable reach of policy (eugenics aside). Some variation in educational outcomes is inevitable.

Yet there is still a sizable proportion of variation in student achievement unexplained by cognitive ability and which can be influenced by education, and hence by education policy. Socioeconomic status is a significant component of this. Research not covered in detail in Marks' book has found that the impact of children's home environment on student achievement (on literacy, in particular) is uneven—it either amplifies or suppresses genetic potential. The genetic potential of students from socioeconomically disadvantaged families is less likely to be realised than their socioeconomically advantaged peers for a variety of reasons.

Marks' emphasis on the statistical evidence is valuable and defensible, but it is also necessary to consider how the statistics translate in terms of real outcomes. Statistically, the influence of socioeconomic status looks relatively minor, but in educational terms it is substantial. For example, Marks describes the differences in test scores between low and high socioeconomic groups in the Programme for International Student Assessment (PISA) as 'not particularly large' (p. 114). The differences in scores between the students with fathers in the highest occupational group and the students with fathers in the lowest occupational group (the best single indicator of socioeconomic status) were around 60 to 90 score points in PISA 2009. These score differences are equivalent to one to one-and-a-half-school years; this difference in student knowledge is far from trivial in educational terms.

Observed variations in achievement associated with ability cannot be attributed completely to socioeconomic status. The reverse is also true—variations in achievement associated with socioeconomic status cannot be attributed completely to ability. There is an environmental component. That Marks devotes a chapter to exploring the possible explanations for

socioeconomic differences in achievement indicates that he acknowledges this.

But just how does socioeconomic status influence achievement? Marks, like many before him, does not answer this question definitively. One thing that can be concluded with confidence is that it is not about family income or economic resources. Therefore, policy strategies that simply aim to increase household income, without creating any other changes in family behaviour, will have little or no impact on educational outcomes. Education policies that revolve around increased funding are also likely to be unsuccessful, especially if they have a singular focus on socioeconomically disadvantaged schools. As Marks points out, struggling students can be found in all socioeconomic levels even though they may be concentrated more heavily among more disadvantaged groups and deserve attention. Even so, Marks is at pains to say that policy should still seek to minimise the barriers to educational achievement and attainment experienced by students from low socioeconomic backgrounds.

Perhaps the strongest message from this book is the one that Marks does not explicitly state: given the strong evidence for the role of cognitive ability, complete equality in educational outcomes is an unachievable goal. Nonetheless, the good news story in this book is that the influence of socioeconomic status on educational outcomes is declining, with ability and effort increasingly the main agents of educational and labour market success. Australia and other Western countries may not be perfect meritocracies yet, but they have 'strong meritocratic characteristics' (p. 236).

Marks' book makes a significant contribution to the scholarly literature on the factors that influence student achievement. It would be a great shame if its conclusions were misappropriated to promulgate yet another unhelpful false dichotomy in education research.



**Reviewed by
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