

Pupils' progress: how children's perceptions influence their efforts

Mar 12 2012

What is the impact of a pupil's perceptions of how their teachers will treat them on their motivation, efforts and educational achievements? To explore this question, [Amine Ouazad](#) and [Lionel Page](#) have conducted an experiment in which school children could use pocket money to place small bets on their performance in an exam.

The impact of discrimination against particular social groups has been widely analysed for its effects on people's access to jobs, housing and education. Yet perceptions of discrimination also matter. For example, given that job search takes time and effort, applicants who believe that potential employers are likely to discriminate against them may not apply for those jobs. Similarly, pupils who believe that their efforts will not be rewarded may disengage and thereby reduce their chances of making progress. How can we measure perceptions of discrimination? Asking individuals directly can provide some information, but it is difficult to infer strong conclusions from such questionnaires. Stated perceptions may differ from what actual behaviour reveals.

Our research brought experimental economics to 1,200 pupils in 29 schools across England. Pupils were given an endowment – equivalent to the average weekly pocket money in England – and could either keep this endowment or 'invest' it in an exam that would be marked by either their teacher or an anonymous external examiner. If the exam answers were right, pupils could double their weekly pocket money.

The crux of the experiment is that pupils invested their money in the exam only if they believed that their chances of doubling their investment were large. We asked pupils a number of questions about the school and their teachers that allowed us to single out money as the main driver of their decisions. For example, pupils who believed that a good relationship with the teacher matters were no more likely to invest more.

The results of the experiment show that male pupils tended to lower their investment when a female teacher marked their exams. Further analysis confirmed that female teachers in the experiment did tend to award lower marks to male pupils than external examiners. Therefore, male pupils' perceptions seem to be roughly in line with female teachers' marking practices. Our results suggest that male pupils believe that their chances of getting an answer right are three percentage points lower when marked by a female teacher than when marked by an external examiner.

Female pupils tended to increase their investment when a male teacher marked their exams. Further analysis, however, showed that male teachers tended to reward female pupils no better than external examiners. Our results suggest that female pupils believe that their chances of getting an answer right are six percentage points higher when marked by a male teacher than when marked by an external examiner. Overall, female pupils' perceptions were not in line with teachers' marking practices: in fact, male teachers tended to reward male pupils more than external examiners.

We also find that ethnicity and socio-economic status (as indicated by eligibility for free school meals) did not play a role in pupil or teacher behaviour. Gender was the most important driving force behind the results. This is somewhat surprising given the large body of research devoted to teacher biases along ethnic or socioeconomic lines.

We also wanted to confront our analytical method with the traditional method, which directly asks pupils about their perceptions. In our experiments, many pupils said they believed that 'ethnic minorities have equal opportunities at school' – and pupils who stated it strongly invested more.

What should we make of these striking results? Our exam mainly involved verbal skills, for which there is a substantial gender gap in favour of girls. Underachievement and dropping out of school are a specifically male problem, and this experiment sheds new light on the determinants of this gender gap. Boys often disengage in the educational process, and this is likely to be due in part to their perceptions of their teachers.

In this context, it is notable that, in our experiments, male teachers induced more investment by boys. There is an under-representation of male teachers in both primary and secondary education in England. In primary schools, only 15% of teachers are male.

More generally, the experiments reveal that there is no specific reason why individuals' perceptions should be in line with actual discriminatory practices. Individuals may hold the wrong beliefs about the nature of discrimination. And even if they get it roughly right, they may overestimate or underestimate the extent of biases.

Furthermore, it is not clear that the discriminatory behaviour of some individuals – here, male teachers favouring male pupils – has a direct consequence for the population discriminated against – here, female pupils exert more effort when assessed by a male teacher.

This could be true in other contexts. The experimental design can be applied to job applications, dating, property searches and many other situations. Just by providing monetary incentives, a researcher can observe perceptions of discrimination directly from individuals' behaviour rather than from their stated perceptions. When money is at stake, people start calculating the costs and benefits of their actions and reveal what they truly believe rather than what they say they believe.

This article first [appeared](#) in the Centre for Economic Performance's Winter 2011/12 magazine.

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