For The Independent, July 2004

Learning about Learning

by

Andrew Oswald, Professor of Economics, University of Warwick

Polished shoes thudding. New high heels wavering. Flashes of turquoise, and red, and purple. Flowing black hoods. Whoops. Applause. Grey hair in the audience and dark hair on the catwalk. Graduation day is a spectacle, and meant to be, and, for most people, particularly those parents with creased cheque books, it is a day of catharsis and reflection.

Across the United Kingdom, university students are graduating. As I sat through our ceremony last week, I was contemplating a research paper on education that had arrived on my screen just that morning. Written by a young economist at the University of Toronto, called Philip Oreopoulos, it is one of the most persuasive studies on education I have read. You can find it on the internet.

Using data on more than ten million people, from lots of nations, the paper is riveting. It studies how one extra year of education affects human beings. A lot, is the answer. Almost all of the effect is good.

Of course it is not a surprise to learn that education might be helpful to people. But what this study does is to use a clever idea to work out the answers properly.

To set the scene, here is the problem. Think of the amount spent on education in an advanced western nation. In an ideal world, we would like to calculate the rate of return to this investment. Yet how could that be done? You can certainly look at the correlation between the number of years of education a person has and how his or her life comes out. We know that link is a positive one. People who take many years of education tend to come out richer, for instance. But figuring out true causality here is tricky.

It would be great if we could run an enormous experiment.

In principle, we could send Gordon Brown, the Chancellor, on to the Today Programme on Radio 4 one morning. We are going to take all the babies born in a week in the UK, he would explain to John Humphreys, and randomly assign them different levels of education. Some will be sent to university; others will be made to leave school at 14; then we will examine them all for the rest of their lives; finally, we will be able to measure how useful compulsory education is to people. Actually, this would be great science. Yet it is hard to see Mr Brown being deluged with congratulatory telegrams. He cannot order folk around, no matter how interesting the scientific benefits would be.

So we need to figure out something akin to this experiment. There is such a thing.

Professor Oreopoulos from Toronto exploits the fact that many Western governments have, through the years, changed their compulsory school-leaving age.

In our country, for example, the 1944 Education Act led the school leaving age to rise in 1947 by one year. It went from 14 years old to 15 years old. Before that, the majority of Britons, amazingly from today's perspective, left education while still just fourteen. Quebec in Canada, by contrast, made the same change in the school leaving age at the start of the 1960s. Yet California had done the equivalent in the 1920s. And so on. This variation is enormously useful to the statistical investigator.

Because we can now, in 2004, trace out and observe the lives of millions of individual adults in random-sample surveys, we can work back, thanks to the careful research of Oreopoulos and others, to what compulsory education did to those human beings.

First, one extra year of compulsory education increases the average person's real income – and by an enormous amount. The best estimate is that the increase in earnings is roughly 10% during every year of that adult's life.

Second, a year of extra education also improves your body. It lowers the probability of poor health, on Oreopoulos's measure, by about four percentage points.

Third, and no doubt partly in consequence, extra compulsory education makes human beings live longer, by quite a few years.

Fourth, reported levels of happiness and life satisfaction are also raised by a further year of compulsory education. Here, once more, the effect is statistically strong, and large in practical terms. Moreover, the reason why happiness improves is not merely because of the cash in the bank that the education produces. The majority of the improvement in psychological wellbeing from an extra year of compulsory education is non-pecuniary. It probably stems from the way that education gives people confidence and flexibility of mind.

It's important research. I'm glad that Mr Oreopoulos stayed on.