

4. Discussion and conclusions

The analysis has shown persisting effects of higher education in a range of social domains. In this final section we review the findings and consider what further analysis is needed to take our conclusions further.

Overall, the findings point to distinctive social benefits of higher education experience over and above those based in the family and in earlier education experience. Graduates not only enter high status occupations with good security and prospects but are less likely to experience unemployment. They also develop a range of skills through entry into certain occupations that are likely to go on being enhanced. . For the “key” modern employment skills of writing, numeracy and computing the improvement is particularly marked among mature graduates. The critical point about higher education is that the foundations are laid on which such skills improvement can be built. In the case of such skills as computing, organising and teaching, the gain is quite marked. This suggests that without the higher education experience, job entrants would be distinctly disadvantaged in relation to the skills needed – one of the (rare) examples, perhaps, of education delivering exactly what the labour market wants! Graduates, particularly women, continue to gain skills and confidence in their social performance to a greater extent than women with A-levels and those with lower qualifications. This suggests that there may be something integral to the higher education experience driving these effects. A more detailed investigation of the attitude data held on NCDS may throw light on this.

With respect to physical and psychological health, evidence of HE benefits is not quite so robust because of the problem of selection effects. But chances are that even if further controls were applied, the returns to higher education would be sustained. Graduates generally present themselves as healthier than non-graduates and also suffer less than others from depression. The exceptions are those who drop out of higher education, where high levels of depression – many

years later - are evident. Graduates are also less vulnerable to accidents or assaults, an effect which may be partly attributable to their occupations.

More generally the results probably reflect the general sense of well-being that higher education appears to bestow on those that gain access to it. A sense of empowerment and enhanced self-efficacy is probably engendered, not least because of the attractive prospects that follow the higher education experience. Such qualities provide the underpinnings of good physical and psychological health.

It would be valuable to investigate these issues further, using the detailed data on childhood and maternal health held on NCDS. The health histories of mature graduates are particularly interesting here, since this gives some purchase on the effects of the higher education, particularly in relation to changes, if any, in lifestyles. Generally, it would be important to investigate the prior health states of different types of qualifier from the different cohort studies and useful to investigate changes in life-style among graduates of different ages and different birth cohorts. Life-style, length of working hours and presence or absence of work-related stress may be key factors in investigating the relation of good or ill health to education.

The children of graduates seem to be well placed educationally. The preliminary analyses reported here suggest that the higher education experience is sufficient to break the cycle of educational deprivation, an issue that could be investigated further. The next step would be to pursue these findings further using data on cognitive and behavioural development collected on the NCDS sample's children.

Finally in relation to civic participation, attitudes and values, the most direct benefits of higher education are revealed. Graduates are more likely to be involved in civic organisations and less likely to be politically cynical. Their attitudes are more tolerant. These are the outcomes that are most difficult to explain solely in terms of experience and attributes gained prior to entry into higher education. Political attitudes are formed only weakly during the teens, and civic participation is very limited for those of pre-university age. It is useful to interpret the results in terms of the traditional contribution higher education has made to the fostering of social capital among those who participate. Such social capital resides in the networks of social relations that

characterise the higher education experience. The anti-discriminatory attitudes and positive appraisal of the political system that go with them are not limited to a small minority of “activists” but extend more generally across the student body. The long-term consequences are high levels of civic participation and democratic values that lie at the heart of social cohesion.

To take these conclusions further it would be of interest to take into account the academic discipline studied; the study of social science subjects, for example, may be a factor in civic engagement. Tolerant attitudes might be less sensitive to subject studies, since they can more readily be related to the values of rationality and evidence-based arguments endorsed by all academic disciplines. Although public sector employment explained some variance in both civic engagement and attitudes, it did not remove the higher education effect. However, it would be of interest to examine in more detail the class and sector of occupations, as in the skills analysis, to see if civic engagement and tolerant attitudes were particularly prominent in some of them. Available time for civic engagement may be influenced by work hours and also by childcare responsibilities. The time resource raises another issue. There are also other forms of civic engagement than those examined here; for instance active membership of professional associations or trade unions. The effects on such outcomes could also usefully be assessed. Such factors as limited free time might not be expected to influence attitudes so greatly: nonetheless, this remains an empirical issue to be examined. For instance, membership of a voluntary association may change attitudes through endorsement of group attitudes, or simply through greater knowledge.

The problem of selection effects bedevils all attempts to model completely higher education effects in causal terms. This problem, especially in relation to health outcomes, points to the new analysis that needs to be done. As we have noted, further study of post higher education experience in relation to occupations entered would be worthwhile, as would be investigation of the type of higher education institution through which the degree was obtained, and the subjects studied for the degree. It is also possible that social change is impacting differentially on social outcomes in successive cohorts. Since the 1958 cohort was in a position to enter higher education in the late 1970s, entry to higher education has doubled, which might be expected to change the nature as well as some of the content of higher education experience. The

preliminary analysis comparing the 1958 with the 1970 cohort, who began their higher education at the end of the 1980s, suggests that much the same kinds of relationships prevail. But more detailed analysis of the 1970 cohort study data is required to see to what extent, and in what direction, higher education effects are maintained. New data collected in current surveys of both the NCDS sample at age 41 and of the BCS70 sample at age 29, will be available by early 2001 and will also be an invaluable resource for the further analysis that is needed.

Overall, we have identified some wider benefits of higher education than those traditionally identified with it, and have established the base for a fruitful programme of further investigation in this field – one of the more neglected in education research. This further work is unlikely to undermine any of the conclusions drawn here in broad terms about the wider benefits. But it will help to refine them, especially in pinning down more precisely in which sections of the graduate population particular benefits are most evident and in pointing to possible mechanisms for the higher education effect. Many of the benefits we have identified provisionally can of course translate directly into economic benefits to the nation. For example, raised skill levels and reduced health costs, in their different ways, both contribute to the economy. Effective parenting may also have an indirect economic payoff through enhancing the skills and prospects of future generations. In relation to civic activities and values, the justification would appear to lie elsewhere. In so far as the move towards a more cohesive and democratic society is considered desirable, higher education appears to have a significant part to play.

Bibliography

- Asplund, R. and Pereira, P.T (1999) Returns to Human Capital in Europe: a Literature Review. Helsinki: ETLA
- Blundell, R.; Dearden, .L; Goodman, L.; Reed, H.(1997) *Higher Education, Employment and Earnings in Britain*. Institute of Fiscal Studies.
- Brennan, John: (1999) *Graduate Employment: A review of the issues*, QSC, Centre for Higher Education Research and Information , the Open University.
- Bynner, J. (1994) *Skills and Occupations: Analysis of Cohort Members Self-reported skills in the fifth sweep of the NCDS*, NCDS Working paper no 45, SSRU, City University.
- Bynner, J.; Joshi, H. and Tsatsas, M. (1999) *Obstacles and Opportunities on the Route to Adulthood: Evidence from Rural and Urban Britain*, Working Paper, CLS, Institute of Education.
- Bynner, J.; Morphy, L. and Parsons, S. (1997) Women, Employment and Skills, in Metcalf, H. (ed.) *Women and Skill*. London: Policy Studies Institute.
- Bynner, J. and Parsons, S. (1997) *It Doesn't get Any Better*. London: Basic Skills Agency.
- Bynner, J. and Steedman, J. (1995) *Difficulties with Adult Basic Skills*. London: Basic Skills Agency.
- Carr-Hill, R. (2000) *Wider Benefits of Learning: A Review of Literature and Models*, Working Paper, Wider Benefits of Learning Centre, CLS, Institute of Education, London.
- Dale, A. and Egerton, M. (in association with H. Joshi, and H. Davies) (1997) *Highly Educated Women: Evidence from the National Child Development Study*, DfEE Research Series No 25, London: The Stationery Office.
- Davey-Smith, G.; Bartley, M. and Blane, D. (1990) "The Black Report on socioeconomic inequalities in health 10 years on", *British Medical Journal*, 301, pp18-25.
- Dex, S. (1987) *Women's Occupational Mobility*, Basingstoke: Macmillan.
- DfEE (1998) *The Learning Age*, London: The Stationery Office.
- Egerton, Muriel (2000) "Mature Graduates I: Occupational attainment and the effect of labour market duration" submitted to *Oxford Review of Education*.
- Ferri, E. (1993) *Life at 33*. London National Children' Bureau.

- Hammond, C. (2000) *Learning and Health: A review of the literature*, Working paper, Wider Benefits of Learning Centre, CLS, Institute of Education, London.
- Heath, A.F.; Mills, C. and Roberts, J. (1992) "Towards Meritocracy? Recent evidence on an Old Problem" in Colin Crouch, Anthony Heath (eds.) *Social Research and Social Reform*, Oxford: Clarendon Press, pp217-244.
- Parsons, S. and Bynner, J. (1997) *Influences on Adult Basic Skills*. London: Basic Skills Agency.
- Sargent, N. (1997) *The Learning Divide*, NIACE, (cited in the Times Higher Education Supplement, March, 1997).
- Purcell, K. and Hogarth, T. (with Jane Pitcher and Christine Jacobs) (1999): *Graduate Opportunities, Social Class and Age: Employers' recruitment strategies in the new graduate labour market*, (CIHR/IER, London).
- Raffe, D. (1999) "A Conceptual framework for analysing transitions to work" in *A comparative analysis of transitions from education to work in Europe* (ed) Hannan D. ESRI Working Paper no 188 Vol 1 pp1-39.
- Robbins Report (1963) *Higher Education: Report of the Committee appointed by the Prime Minister under the chairmanship of Lord Robbins 1961-63*, Cmnd. 2154.
- Whitehead, M. and Dahlgren, G. (1991) "What can be done about inequalities in health", *The Lancet*, 338, pp1059-1063.
- Williams, G. (2000) *Economic Benefits of Higher Education*. Life Long Learning Group, Institute of Education.