

BTEC

Dr Susan McGrath
Co-Director, UP2UNI

June 2026

Key features of the Business and Technician Education Council (BTEC)

BTEC was formed from the merger of the Technician Education Council (TEC) and the Business Education Council (BEC) in 1983. In December 1991, BTEC changed the T in its name to Technology. In a vocational qualifications landscape characterised by reviews and short-lived initiatives, the (level 3) BTEC National Diploma (underpinned by BTEC level 1 and 2 courses) has remained a stable presence in post-16 education for four decades.

Operation dates: for the BTEC National Diploma qualification, **1984 to present.**

Target population: 16-19-year-olds in full-time education (in England, Wales and Northern Ireland), with part-time, day release or evening class modes for taking an employment-based route to the qualification.

Purpose: BTEC's initial purpose was to improve the education and training of those in the middle levels of industry, business and public service. The curriculum was to be based on what employers wanted, and to appeal to students on the basis of its usefulness in real life. An integrated approach to delivery and a student-centred ethos were central themes. BTEC courses have supported the widening participation agenda by offering a strong progression route to university for young people from non-traditional backgrounds. Much of this survived for decades, though the introduction of examinations, external assessment and loss of work placements has contributed to BTEC being viewed as an academic qualification leading to university, rather than a route to employment.

When people talk about 'BTEC' they are usually referring to the BTEC National Diploma, a two-year full-time qualification parallel to A levels that has offered four decades of stability in an otherwise turbulent vocational sector. This paper will consider five iterations of the BTEC. It locates the origin of the qualification in the Haslegrave report (1969), though some would suggest that the Ordinary National Certificate or Diploma (ONC, OND), established in the 1920s, could also be regarded as a starting point. The day release/evening class approach of ONC offered a route to higher education for able students who had left school at 14 or 15 to enter employment (Dickerson, 1964).

BTEC and the Awarding Bodies

The Haslegrave Review: Technician Education Council (1973) Business Education Council (1974)

The remit of the Haslegrave Committee was to consider the future pattern and organisation of courses and examinations for technicians, an occupational category between the skilled craftsman and the technologist, and for corresponding grades in business and commerce (DES, 1969). The review proposed the establishment of a Technician Education Council (TEC) that would plan, co-ordinate and administer courses in the technical sector and a Business Education Council (BEC) that would do this for the business sector. The Councils were tasked with the simplification and unification of technical courses, dealing with both administration and the structure of courses. The ONC was replaced by a new award of Technician Certificate (TC), a two-year course aimed at school leavers, and a Technician Diploma (TD) requiring additional study (probably by day or block release). The TC was less specialised than the previous ONC, offering a broader base for later studies. Studies beyond TC and TD could lead to a Higher Technician Certificate or Diploma (HTC, HTD). To give an indication of scale, technical qualifications gained in 1973 numbered around 350,000 and ONC/OND accounted for 36,700 of that (Matthews, Feinstein and Odling-Smee, 1982). Registrations for ONC and OND in business were around 40,000, but candidates for professional body qualifications were in excess of 150,000 (Cantor, 1979, Ch 4). From the outset, TEC and BEC worked closely and their request to merge (Hansard, 1982) was not unexpected.

TEC/BEC merge to form the Business and Technician Education Council (1983)

The declared purpose of the TEC/BEC merger was threefold: to advance the quality and scope of BEC and TEC services to education and industry; to improve operational efficiency and economy; and to establish a single integrated body able to make a stronger contribution to educational developments. BTEC would potentially cater for up to 500,000 students in 500 colleges (Cantor, 1979). It began with 155,000 registered students, by 1994 it had over 300,000 (Smith, 1994). The organisation was launched with five major commitments: 1) its provision must be a partnership between education, business and industry; 2) the qualifications must be relevant to the demands of work; 3) courses should be constantly reviewed and updated in line with technological changes; 4) teachers should be able to justify what they teach and why; and 5) courses should offer intellectual challenge and a basis for development of the individual's future (Raine, 1984). From the outset, there was a perceived problem with the name: technician refers to an occupational category, whilst business is a concept or activity. This was resolved in December 1991, when BTEC changed Technician to Technology (Fisher, 1999).

BTEC and ULEAC merge to form the Edexcel Foundation (1996)

When BTEC merged with the University of London Examinations and Assessment Council in 1996 the number of students involved in study for vocational awards had shown considerable growth. A total of 326,658 students had registered with the BTEC awarding body during 1996

(Fisher, 1999). ULEAC was a major provider of A levels and the merger had a strategic advantage: bringing together vocational and academic courses gave the new body Edexcel a significant position in 16-19 education (Fisher, 2004). At the time, however, the BTEC National Diploma itself had undergone a sharp decline in many subjects due to the introduction of the AGNVQ in 1992.

Pearson/Edexcel merger 2003, Pearson sole owner 2005

In 2003, Edexcel merged with Pearson, a publishing business, retaining only a 25% stake. Edexcel was retained as a qualifications name, and rapidly became a major provider of A levels and GCSE as well as the National Diploma, which kept the established BTEC branding. In 2005, Pearson became the sole owner, and thus the only privately owned examining body. Pearson (in common with other awarding bodies) has attracted occasional high-profile controversy related to exam procedures, but the legitimacy of a huge profit-making company running a public service and exerting significant influence over education policy and school life continues to be questioned by the press (Mansell, 2012; Barker, 2025).

Five iterations of the BTEC qualification

The BTEC National Diploma received remarkably little attention from policy makers for much of its existence, although it was inevitably shaped by the education environment and policy changes did impact the qualification.

1973-1983: A Fresh Start (TEC/BEC)

In 1973 the educational environment was very different from the present day. The examination framework provided some commonality (A level, O levels and CSE were the main qualifications) but there was no National Curriculum, very little centralisation and most school-leavers entered employment. In the FE colleges, staff were not required to have a teaching qualification (although many did, and new entrants were encouraged to undertake one). Nonetheless, they brought with them professional expertise from their industry. Local Authority Education departments (LEAs) were responsible for planning the provision to be offered, maintaining and inspecting their schools and colleges and employing the teachers. Engagement with local employers helped to ensure that college leavers were prepared for jobs available in their locality.

The courses developed by TEC and BEC had a shared philosophy of integrated delivery, a student-centred ethos and a modular approach. TEC espoused the belief that education is more successful if the teacher has a sufficient measure of control over teaching and assessment (Gore, 1974), and a mixture of in-course assessment and end-of-course examinations was advised though not mandatory (Jackson, 1980). Pearce (1978) described how voluntary working parties of experienced teachers came together for 2-day sessions to draft course specifications.

The tradition of individual lecturers teaching their own subject did not, however, fit with an integrated approach that required cooperation, and Elliot (1979) acknowledged the additional workload of reviewing teaching methods and student learning objectives for BEC courses. The impact on FE was significant, and not always well received. Morris (1977) questioned the research on which BEC decisions were supposedly based, and noted that a change in the curriculum will not guarantee any change in classroom practice. Anderson (1984) observed that employer cooperation was also needed, both for work experience and for updating college staff. However, by 1983, TEC/BEC qualifications were well established and a successful merger took effect on 1 October 1983.

1983-1993: BTEC's 'Golden age'

Fisher (2003) described this period as the 'golden age of BTEC'. The student-centred ethos and integrated delivery of the TEC/BEC period were maintained, cross-course themes and integrated problem solving were encouraged and BTEC continued to provide colleges with support materials for staff and students. There was a move towards indicative rather than prescriptive content, and the replacement of 'examination' with 'final assessment' offered greater flexibility. Criterion-referencing and formative assessment underpinned BTEC's philosophy, though some expressed concerns that teacher-based, criterion-referenced assessment could foster an ethos of facilitating students to achieve a pass (Carter and Bathmaker, 2017).

A new development was the introduction of a group of common skills that should be acquired and assessed across the course. This move stemmed from an influential Further Education Unit paper (Pring, 1981) that specifically called for transferable skills, a move that was initially met with little enthusiasm in colleges. Skills 'sceptics' felt that skills development had always been a core part of the general education element of previous TEC/BEC qualifications without any need to be 'listed'. Warren (1989) described a model for assessing whether skill descriptors were being met by all students within an engineering cohort, and concluded that a continuing general education input was essential for the development of some skills (e.g. personal and career development). Warren also observed that his model for quantifying and analysing common skills might not be effective across a range of industries.

1994-2004: Decline and Demise?

The NCVQ (National Council for Vocational Qualifications, 1986) had begun a new era in which job-based learning would be outcome-based: can the person perform a task or not? In 1992 the Advanced General National Vocational Qualification (AGNVQ) applied the same approach to educational settings, resulting in significant changes to curriculum and delivery. The AGNVQ utilised frameworks defined by outcomes rather than a fixed syllabus, generating a flexible and active mode of learning with assessment by a portfolio of evidence and record of achievement. The intention was to replace other vocationally-related qualifications, including BTEC (Carter and Bathmaker, 2017), though BTEC was not withdrawn or defunded. Revised specifications for the BTEC aligned the course with some elements of the AGNVQ. For example, in BTEC Business and Finance entry, BTEC entry requirements were removed, programme length was no longer specified, and outcomes were accompanied by performance criteria and evidence indicators. The replacement of 'fail' with 'not yet competent' allowed for resubmissions, and portfolios could record achievements. Workplace learning, which had previously been emphasised, could be replaced with work simulations (Fisher, 1999).

The launch of GNVQ had a dramatic impact on BTEC: for example, between 1992 and 1996 national registrations for BTEC Business and Finance dropped from 23,590 to 581 (Fisher, 1999). However, an increasing number of schools began to offer GNVQs, generating considerable variability between centres and, as part of 'Curriculum 2000', the AGNVQ was replaced by the AVCE (Advanced Vocational Certificate of Education), which maintained continuous assessment by coursework but added final examinations. The AVCE was withdrawn in 2004. Both qualifications suffered from unfair comparisons with A levels and a perception that they were intended primarily for less-able students. BTEC, meanwhile, now had a 30-year history and the added credibility of being included in the UCAS tariff points scheme, a highly visible sign of acceptability in higher education. BTEC had been sidelined for a decade, but was ready to re-emerge.

2005-2015: Resurgence

The inclusion of vocational alternatives to GCSE in the secondary school performance tables had a significant impact on the number of 14-16-year-olds taking them, rising from 15,000 in 2004 to 575,000 in 2010 (DfE, 2011). BTEC level 2 courses were included, raising awareness of BTEC amongst teachers, students and parents, and providing a clear progression route to the BTEC National Diploma. The number of young people whose Level 3 attainment was obtained from just BTEC rose from 26,640 in summer 2006 to 66,565 in summer 2013 (HEFCE 2015). BTEC was becoming a progression route to university, and began to have media attention, often associated with 'failure' (Henry, 2014). Raising of the school leaving age (to 17 in 2013, 18 in 2015) increased the need for alternatives to A level, and concerns that BTEC had become subject to 'academic drift' were raised. This term has been used to describe both an increase in the proportion of the age-group taking academic qualifications (a parity of esteem issue) or changes within the vocational track itself (Raffe et al., 2001). The first of these was already apparent at the start of this period, with 30% of young people taking three A levels in 2004-05 (Bolton, 2012). By 2015, changes within the vocational track were also apparent, with stricter rules for external assessment and plans for the introduction of mandatory external exams.

2016-2021: Rise & Fall

By 2016, the majority of school leavers with Level 3 qualifications had taken at least one A level (73%) but BTEC courses (now classified as 'applied general' or 'technical') were increasing in numbers: 28% of leavers had applied generals and 16% technical (DfE, 2017). University entrants in 2016-17 included 19% who met the entry requirements entirely from BTEC, with a further 8% holding a mix of A level and BTEC, and media comments began to consider the reasons why BTEC and A level outcomes at university might differ (Finlayson, 2018). There was clear evidence that BTEC had fuelled the widening participation agenda: BTEC entrants to university tended to come from less advantaged socio-economic groups, neighbourhoods with low rates of HE participation, and were more likely to come from an ethnic minority background (Mitton and Hensby, 2024).

However, BTEC courses were now very different from those of the golden age. Desk-based activity often overshadowed any practical learning and work placements had been reduced to 'meaningful employer engagement' in many subjects. McGrath (2025) compared a life histories project with former BTEC students (beginning 1986) with a longitudinal study (2018-2022) of Professional Pathways, an enhanced BTEC programme that had successfully created parity of esteem for BTEC and A level learners in Ark sixth-forms. This had been achieved by recreating some features of early BTECs, including work experience and internships. The enhancements required considerable resource, both financial and in terms of human capital, but even they could not match the degree of integration between college and workplace found in the early BTEC specifications.

The Sainsbury Report (2016) was clear that BTEC was primarily a route to university, not employment, and the Post-16 Skills report (2016) stated that BTEC was offering an academic pathway, not a technical one. Kelly (2017) warned that the ongoing process of 'academicisation' would entrench the idea of BTEC as 'second best' for the academically less able, and therefore bring BTEC's purpose into question.

The perception of BTEC as 'second best' often draws on evidence from national datasets which consistently show that university entrants with just a BTEC are more likely to drop out, more likely to repeat a year, and are more likely to graduate with a degree below a 2.1 than those who took just A levels. However, this claim ignores the fact that the overwhelming maj-

-ority of BTEC entrants do complete their degree, and the majority of those gain at least a 2.1, whereas without BTEC, many of these students might not have gone to university at all (Dilnot, MacMillan and Wyness, 2022) or may have left education at 16 (McGrath and Madhvani, 2023).

In March 2019, the government announced a Review of Level 3 Qualifications, with the exception of A levels, which would form the core of a new academic pathway. The government response to the consultation consistently emphasised the need for a new, T level qualification to create 'a world class technical education offer' which was broadly welcomed. However, the T level would be exam-based, with entry requirements equivalent to A level, making it unsuitable for many of the learners taking BTEC. Despite this, the DfE stated that 'to allow T levels to flourish, Phase 2 will remove 16-19 funding from qualifications that overlap with T levels' (DfE, 2023, p3). The 'defunded' qualifications included many BTECs, removing the qualification routes taken by one in four of the 18-year-olds entering university (UCAS, 2022). The opposition to these proposals has ironically been one of the most unifying political actions ever taken in the education sector, bringing together universities, colleges, employers, and cross-party politicians. In 2022, over 46,000 18-year-olds entered university with BTEC as all, or part, of their qualifications: in 2023-24 just 7,380 learners completed a T level (DfE, 2024).

Why did BTEC become well-established when AGNVQ, AVCE and other vocational qualifications were short-lived?

An important factor in BTEC's establishment was that it was not seen as an alternative to A levels, so was not subjected to adverse comparisons with them. In many ways it was the right course for its time. In 1973, the proportion of young people with at least one A level was only 15.5% (Hansard, 1984) and the proportion who went to university was only 5.5% (Hansard, 1976). The vast majority of school leavers followed an employment-based route to a career, gaining qualifications by fulltime, day release or evening class study. Technical colleges provided much of this education, with schools of nursing, teacher training colleges, etc. offering more specialised provision. Many of these employment-based routes have since become graduate-entry professions, but in the 1970s vocational and technical qualifications were respected routes to a trade or profession. BTEC courses were designed for FE colleges, an adult environment where students would encounter industry standard facilities, teachers with workplace experience, and sufficient employer links to support work placements. Qualification specifications were drafted by experienced teachers. It is also significant that BTEC qualifications had 20 years to evolve, demonstrating the capacity to flex and modify to meet the needs of industries and cater for regional differences. The main criticism was that variation and internal assessment meant less accountability. In contrast, the AGNVQ was a funded, national scheme, politically motivated with very little involvement of educators or the LEAs, very much focused on accountability, and described by Yeomans (1998) as 'curriculum through coercion'.

Learning from the past

Reflecting on the past 50 years there are many lessons, but six things seem to stand out. For a vocational course to survive and thrive it should: be allowed to escape unfair comparisons with A levels; include genuine workplace experience; retain a strong pathway to employment; maintain an emphasis on practical activity; encourage a wide range of assessment modes; be given time to evolve.

There is a seventh learning that could be added: remove the politics from policy. TEC/BEC were the outcome of a government review but the course specifications were drafted by experienced teachers, not policy makers. BTEC was largely unaffected by policy decisions until 1992 when the qualification was remodelled to align with the AGNVQ, an academic version of NVQs. Grugulis (2003, p. 471) contrasted the NVQ 'designed by civil servants in consultation with employers' with vocational qualifications in Germany, where 'employers' associations, regional governments, trade unions and educationalists' all bring their expertise to the design process. Schneider (2008) described education in the UK as highly politicised, very visible in the media, under constant pressure to perform, and thus 'very much looks like a political battlefield' (p. 281).

Charles Clarke (Education Secretary 2002-2004) has described the failure of the Labour government to implement the Tomlinson Report (2004) as its biggest mistake (Clarke, 2023). The Tomlinson report proposed a new qualification that would replace GCSEs, A-levels and vocational qualifications with a single diploma over a 10-year period of reform. Although supported by teachers, universities, employers and many in government, the report was 'politically challenging' and the ill-fated 14-19 Diplomas did not reflect Tomlinson's proposal. Clarke (2023) called for a renewed version of the reforms to secondary education proposed by Tomlinson, but acknowledged the difficulties:

...only a process of incremental change over a 10-year period can succeed in making sustainable change. It is difficult to imagine maintaining political consensus over such a period of time.

(Clarke, 2023)

Educational reform requires political stability, something that has been absent in England for at least a decade, and continues to seem unlikely.

References

Anderson, K. (1984) Implications of BEC Philosophy. *Journal of Further and Higher Education*, 8:2, 14-22, DOI: 10.1080/0309877840080202

Barker, I. (2025) *TES takes an in-depth look at Pearson Edexcel, the UK's only profit-making qualification brand*. Times Education Supplement. 3rd August 2025.

Bolton, P. (2012) *Education: Historical Statistics Standard Note: SN/SG/4252* Last updated: 27 November 2012. House of Commons Library.

Cantor, L. (1979) *Further Education Today: A Critical Review* (1st ed.). Routledge.

Carter, A. and Bathmaker, A. (2017) Prioritising progression over proficiency: limitations of teacher-based assessment within technician-level vocational education. *Journal of Further and Higher Education*, 41:4, 460-474, DOI: 10.1080/0309877X.2015.1135881

Clarke, C. (2023) *The politics of reforming secondary education*. Blogpost, British Educational Research Association, 29 November 2023.

DES (1969) *Report of the Committee on Technician Courses and Examinations*. Department for Education and Science, National Advisory Council on Education for Industry and Commerce.1969.

DfE (2011) *Performance tables reform and transparency will raise standards and end perverse incentives*. Press release, 20 July 2011. Department for Education.

DfE and DBIS (2016) *Report of the Independent Panel on Technical Education (Sainsbury report)* Department for Education and Department for Business Innovation and Skills, April 2016.

DfE and DBIS (2016) *Post-16 Skills Plan*. Department for Education and Department for Business Innovation and Skills. July 2016.

- DfE (2017) *Revised A level and other 16-18 results in England, 2015-2016*. Department for Education. SFR 05/2017 19 January 2017.
- DfE (2023) *Guide to the post-16 qualifications landscape at level 3 and below for 2025 and beyond*. Department for Education. January 2023.
- DfE (2024) *Provisional T level results: academic year 2023 to 2024*. Department for Education. 15 August 2024.
- Dickinson, H. (1964) Students in a C.A.T: Qualifications and Success. *Higher Education Quarterly*, August 1964. DOI: 10.1111/j.1468-2273
- Dilnot, C., Macmillan, L. and Wyness, G. (2022) *Educational choices at 16-19 and university outcomes*. Oxford Brookes University and the Nuffield Foundation. 2022.
- Elliott, D. (1979) BEC is on course. *Education & Training*, September, 1979.
- Finlayson, R. (2018) *Richer data tells us more about students in higher education*. Office for Students. 6 April 2018.
- Fisher, R. (1999) *The Vocational Curriculum in England 1974-1994: A Socio-historical Study of the Business and Technology Education Council's National Diploma in Business and Finance*. PhD thesis. University of Huddersfield.
- Fisher, R. (2003) The golden age of BTEC: the business education curriculum in 1980s further education. *The Curriculum Journal*, Vol 14, no 2, Summer 2003, 253-277.
- Fisher, R. (2004) From Business Education Council to Edexcel Foundation 1969–96: the short but winding road from technician education to instrumentalist technicism, *Journal of Education and Work*, 17:2, 237-255, DOI: 10.1080/13639080410001677428
- Gore, T. (1974) Technician Education: A progress report. *Industrial and Commercial Training*, (1974) 6 (6): 266-269, DOI: 10.1108/eb003399
- Grugulis, I (2003) The contribution of National Vocational Qualifications to the Growth of Skills in the UK. *British Journal of Industrial Relations*, 41:3 September 2003. 0007-1080 pp. 457-475, DOI: 10.1111/1467-8543.00282
- Hansard (1976) *School leavers going to university 1959-1974*, Vol 908. Debated on 29 March 1976.
- Hansard (1982) *Business and Technician Councils*, Vol 34. Debated on Tuesday 21 December 1982.
- Hansard (1984) *School-leavers Examination Statistics 1965-84*, Vol 458. Debated on 20 December 1984.
- HEFE (2015) *Young participation in Higher Education: A level and similar qualifications*. Higher Education Funding Council for England. February 2015.
- Henry, J. (2014) 'BTECs "set students up for failure" at university.' *The Sunday Times*, 2 November, 2014.
- Jackson, E. (1980) TEC - a national system for the education of technicians. *Measurement and Control*, Vol 13, October 1980.
- Kelly, S. (2017) *Reforming BTECs: Applied General qualifications as a route to Higher Education*. Higher Education Policy Institute: HEPI Report 94.
- Mansell, W. (2012) *Should Pearson, a giant multinational, be influencing our education policy?* The Guardian. Monday 16 July 2012.
- McGrath, S. (2025) Academic mainstream, applied alternative? Arguing a case for 'second chances', real-world learning and rethinking assessment. *Research in Post-Compulsory Education*, 30(1), 249–271. DOI: 10.1080/13596748.2025.2469007
- McGrath, S. and Madhvani, M. (2003) *Opening Doors, building futures? A life histories approach to exploring the impact of BTEC*. UP2NI March 2023.
http://www.up2uni.org/uploads/7/0/4/7/7047218/opening_doors_building_futures_march_2023_up2uni.pdf
- Mitton, L. and Hensby, A. (2024) Bringing Vocational Qualifications into the Inclusivity Agenda: The Case of the BTEC. In: Hensby, A., Adewumi, B. (eds) *Race, Capital, and Equity in Higher Education*. Palgrave Studies in Race, Inequality and Social Justice in Education. Palgrave Macmillan, Cham. DOI: 10.1007/978-3-031-51617-7 5
- Matthews, R. C. O., Feinstein, C. H. and Odling-Smee, J. (1982) *British Economic Growth 1856-1973: The Post-War Period in Historical Perspective*, *Studies of Economic Growth in Industrialized Countries*. Oxford Academic. DOI: 10.1093/0198284535.001.0001

Morris, P. (1977) The Proposals of the Business Education Council: A Critical Appraisal of BEC as an Exercise in Curriculum Development. *Journal of Further and Higher Education*, 1:3, 3-13, DOI: 10.1080/0309877770010301

Pearce, J. (1978) The Death of Essay – English Under BEC, *Journal of Further and Higher Education*, 2:1, 3-10. DOI: 10.1080/0309877780020101

Pring, R. (1981) A Basis for Choice. *Journal of Curriculum Studies*, 13:4, 361-363. DOI: 10.1080/0022027810130408

Raffe, D., Brannen, K., Fairgrieve, J. and Martin, C. (2001) Participation, Inclusiveness, Academic Drift and Parity of Esteem: A comparison of post compulsory education and training in England, Wales, Scotland and Northern Ireland, *Oxford Review of Education*, 27:2, 173-203. DOI: 10.1080/03054980123186

Raine, N. (1984) BTEC is launched. *Education and Training*, Vol 26 Issue 3 p74.

Schneider, S. L. (2008) The application of the ISCED-97 to the UK 's educational qualifications. In *The International Standard Classification of Education: An Evaluation of Content and Criterion Validity for 15 European Countries*, ed. Silke L Schneider. Mannheim: MZES.

Smith, G. (1994) Ten years of BTEC. *Journal of Studies in Dynamics and Change*, Vol 110, March 94.

Tomlinson, M. (2004) *14-19 Curriculum and Qualifications Reform*. Final report of the Working Group on 14-19 Reform. DfES Publications.

UCAS (2022) *End of cycle report 2022*. Universities and Colleges Admissions Service. Cheltenham.

Warren, P. (1989) Profiling Common Skills for BTEC National Using the FEU Package RP196, *Journal of Further and Higher Education*, 13:1, 71-75. DOI: 10.1080/0309877890130109

Yeomans, D. (1998) Constructing Vocational Education: from TVEI to GNVQ. *Journal of Education and Work*, 11:2, 127-149, DOI: 10.1080/1363908980110202