DOCUMENT RESUME

ED 454 420 CE 081 934

AUTHOR Gorard, Stephen; Selwyn, Neil; Rees, Gareth
TITLE The "Conveyor Belt Effect": A Re-Assessment of the Impact of National Targets for Lifelong Learning.
PUB DATE 2000-00-00
NOTE 21p.
PUB TYPE Information Analyses (070) -- Opinion Papers (120)
EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Academic Achievement; Access to Education; *Adult Education; Adults; Certification; Cohort Analysis; Developed Nations; *Education Work Relationship; *Educational Certificates; Educational Philosophy; Employment Qualifications; Foreign Countries; *Lifelong Learning; *Program Effectiveness; Program Evaluation; Socioeconomic Status
IDENTIFIERS *England; *Wales

ABSTRACT

Although the National Targets for Education and Training in England and Wales include indicators for lifelong learning, and the progress towards the targets set for these indicators has been lauded by politicians and other observers, much of this apparent progress is actually accounted for by changes in these same indicators. However, once the "conveyor belt effect" of passing increasingly qualified 16-18 year-olds into the working-age population instead of less-qualified 60 and 65 year-olds is taken into account, then progress in qualifying those of working-age is much less. In fact, there is then very limited evidence that lifelong learning targets have had any impact at all. Certainly work-based training has not increased and may even have declined over the last decade. Some socioeconomic inequalities in adult participation in education and training have worsened. The study concluded that a more carefully designed "average" target could allow all residents to be included in progress toward meeting the target and be more useful in measuring the actual progression of the population toward more educational qualifications. (Contains 52 references.) (Author/KC)

The 'conveyor belt effect': A re-assessment of the impact of National Targets for Lifelong Learning

Stephen Gorard, Neil Selwyn and Gareth Rees
School of Social Sciences
Glamorgan Building
King Edward VII Avenue
Cardiff University
01222-875113
email: gorard@cardiff.ac.uk

Abstract

Although the National Targets for Education and Training in England and Wales include indicators for lifelong learning, and the progress towards the targets set for these indicators has been lauded by politicians and other observers, much of this apparent progress is actually accounted for by changes in these same indicators at Foundation level. However, once the 'conveyor belt effect', of passing increasingly qualified 16-18 year-olds into the working-age population instead of less qualified 60 and 65 year-olds, is taken into account then progress in qualifying those of working-age is much less. In fact, there is then very limited evidence that Lifelong Learning targets have had any impact at all. Certainly work-based training has not increased, and may even have declined over the last decade, while some socio-economic inequalities in adult participation in education and training have worsened. The paper examines this apparent weakness for the current approach and its implications for the measurement of progress, in the light of a research review carried out for the National Assembly of Wales.

Introduction

The use of attainment targets in education is by no means a new phenomenon, dating back at least to the nineteenth century school-based practice of 'payment by results' (Marsden 1991). More recently, the burgeoning use of target setting in education has been a key feature of what Neave (1988) referred to as the 'rise of the Evaluative State', with performance indicators and 'accountability' a key feature in most public and private sector policy-making. The present concern with measuring educational 'quality' can clearly be located within broader concerns for global economic and structural changes over the last three decades (Bagnall 1994, Smyth and Dow 1998). Thus, it is of little surprise that countries are now beginning to devise targets specifically

for lifelong learning, with education's renewed role as what the Prime Minister has described as 'the best economic policy we have'. The prominence of accountability-based target setting has been rising steadily in post-compulsory education since the 1980s; most notably with the established trend in higher education systems towards performance-related budgeting (Cave et al. 1997, Layzell 1998). More recently, the use of attainment targets has spread into the broader area of lifelong learning, with a number of countries recognising the need for introducing targets for participation and achievement in vocational and non-vocational learning across adult populations. A coherent and strategic drive towards a comprehensive nation-wide system of educational targets began to emerge in the UK from the end of the 1980s and the setting of the National Targets for Education and Training (NETTs). The NETTs were first suggested in the 1989 CBI document Towards a Skills Revolution, which focused on reversing the perceived characteristics of the British workforce as 'under-educated, under-trained and under qualified' (CBI 1989). The policy of target-setting is now defined as 'taking action by setting specific goals and targets designed to raise educational standards' (DfEE 1997, p.5).

Two years after the 1991 launch of the National Targets, an independent employer-led body - the National Advisory Council for Education and Training Targets (NACETT) - was founded to oversee the NETTs, charged with monitoring progress towards achieving the targets, advising the government and 'providing business leadership'. The Targets were subsequently revised in 1995, introducing an additional target for the attainment of higher education qualifications, as well as increasing the proportions expected to attain at least a level 3 qualification (NACETT 1995). In 1997, NACETT proposed a second review, resulting in England, Wales, Scotland and Northern Ireland being given responsibility for setting their own targets alongside overarching targets for the UK as a whole (DfEE 1997, NACETT 1998). In Wales, this task was given to the Education and Training Action Group for Wales (ETAG). ETAG's resulting Education and Training Plan for Wales (1999) proposed a range of outcome targets for both pre- and post-16 education and training in Wales, building on previous sets of targets suggested in A Bright Future: the way forward (Welsh Office 1995a), A Bright Future: Beating the Previous Best (Welsh Office 1997) and Learning is for Everyone (Welsh Office 1998). In particular, the following qualification-based Lifelong Learning targets were recommended in the 1999 ETAG Plan:

- The proportion of adults of working age without qualifications to reduce from some 1 in 4 in 1996 to 1 in 7 by 2002 and to fewer than 1 in 8 by 2004
- The proportion of adults of working age with an NVQ level 2 or equivalent to increase from over 5 in 10 in 1996 to 7 in 10 by 2002 and over 7 in 10 by 2004

- The proportion of adults of working age with an NVQ level 3 or equivalent to increase from some 3 in 10 in 1996 to approaching 5 in 10 by 2002 and over 5 in 10 by 2004
- The proportion of adults of working age with an NVQ level 4 or equivalent to increase from some 1 in 5 in 1996 to over 1 in 4 by 2002 and approaching 3 in 10 by 2004

It should be stressed that the clear intent expressed in all these recent policy documents relating to lifelong learning is to produce an amelioration both of the skills and the life chances of those individuals already in the workforce or of working-age - of 'transforming learning in the workplace... because productivity depends on the whole workforce we must invest in everyone' (DfEE 1998a, p.11, see also DfEE 1998b, Welsh Office 1998, ETAG 1999). The importance of stressing that this is the purpose of the policy will become clear later in the paper.

Target setting in education and training is by no means an exact science. Nevertheless, from our review of academic and professional literature (Gorard et al. 1999a), the following recurring areas have been highlighted as principal areas for consideration in setting 'high quality' targets (see Williamson et al. 1992, Nuttall 1994, Tymms 1995, Donald and Denison 1996, Loveman 1997):

- Usefulness to Policy-Makers
- Relevance and Endurance
- Positioning Targets as Part of Wider Educational Reform
- Practitioner Acceptance
- Evaluation of the processes which deliver targets

Although these diverse criteria highlight the complexity of educational target setting, it is nevertheless possible to draw together a framework for high-quality education targets. At a simple level, the DfEE's (1997) model of SMART targets (Specific, Measurable, Achievable, Realistic and Time-related) provides a broad guideline. The logic of target-setting is that policy-makers can specify what is important, that 'this' can be achieved, that this can be measured, and therefore that this can be shown to have been achieved (Gann 1999). We have written elsewhere about issues of importance and relevance, so this paper concentrates on issues of measurement and the accuracy of the information required for a successful target-setting process.

Methodological issues

Sources

Progress towards each target for lifelong learning is assessed for this paper via secondary analysis. The data come chiefly from the national results of statutory assessment in Wales provided on spreadsheet by the Welsh Joint Education Committee (WJEC), the Labour Force Survey as supplied on spreadsheet from the Office of the National Assembly of Wales, and via the National On-line Manpower Information System. At first sight, many other sources are available which give an estimate of the frequency of lifelong target indicators in the population, but, on consideration, most sources suffer from defects and none is clearly preferable overall to National Statistics combined with the quarterly Labour Force Survey. For example, one-off surveys such as Future Skills Wales, Basic Skills, and the National Adult Learning Survey can be used to calibrate other sources, but are of little use in either predicting or measuring trends over time. Some sources, such as records of MAS, NVQs or even FE participation, provide only a small part of the required picture, and cumulating from these involves the obvious dangers of bias through omission and double-counting. In some cases, the keeping of quality records on recent initiatives, such as NVQ or CSI, is so new that they are also only useful as 'snapshots' at present and cannot be used to detect trends. According to Schagen et al. (1997), the Youth Cohort Study has only one or two useful cohorts; the GNVQ database holds registrations but not outcomes; and the NISVQ and NCVQ databases hold records of qualifications awarded but not individuals. In several cases, survey responses need to be treated carefully for technical reasons. For example, the Future Skills Wales (1998) study reported a response rate for employers of 45%. The study drew a sample of 29,951 employers, but only 5,790 (or 19%) of these were interviewed, with the remainder being unobtainable, refusing to participate or excluded because of quota restrictions. In producing the response rate of 45 per cent, the study was nevertheless unable to collect data from an additional 1,866 employers whose telephone number was unobtainable, engaged or not recognised; and the 1,222 who did not keep appointments, for example. All of these omissions may introduce bias into the sample, allowing the survey to over-represent larger, more successful employers (who are less likely to move, or be cut off by BT, or who employ several telephonists), and these are more likely to report training.

Despite its own shortcomings as a measure of targets, the LFS therefore remains the major source of data. It is preferred since it involves households rather than institutions or employers, and is face-to-face rather than postal (Welsh Office 1993). It uses a rolling sample (80% repeated) for the UK of around 150,000 in 60,000 homes every quarter. A repeated survey of this size gives a reasonably reliable estimate of changes in the qualifications rates of the population. It has been

helpful also to have access to the intermittent boosted LFSs, organised by the Welsh Office in conjunction with the TECs (Welsh Office 1994, 1995b, Education and Training Statistics 1997).

Indicators

All indicators used in the measurable targets are 'filtered' through a range of processes which affect their reliability, from inconsistency in definition, variations of concept in time and space, divergence in data collection procedures, and errors in transcription and processing (Johnstone 1981). Doubts have always existed over the reliability of examinations leading to qualifications with the same title, and whether these are comparable over time and place (Kitchen 1999, Cassidy 1999a, Cassidy 2000). Britain is probably unique among OECD countries in using different regional authorities (local examination boards) to examine what are meant to be national assessments at 16+ and 18+ (Noah and Eckstein 1992). This raises an issue of whether the same qualification is equivalent between the boards in terms of difficulty (and considering that the UK currently has around 17,500 publicly funded qualifications from 250 awarding bodies). The large-scale use of vocational qualifications is relatively recent, and before 1997 many published figures do not include them at all. Thus, vocational qualifications were either ignored as too few to be included or else assumptions were made on the basis of very scanty evidence (NACETT 1995). It is already clear that qualifications with the same title are not even equivalent in terms of subject content, as each board sets its own syllabus. Nor are they equivalent in the form of assessment, or the weighting between components such as coursework and multiple-choice. Similarly, there is no evidence that the different subjects added together to form aggregate benchmarks are equivalent in difficulty to each other; yet the standard GCSE benchmark (passes at A*-C grades) gives the same value to an A* in Music, a B in Physics, and a C grade in Sociology. Nor is there evidence that qualifications with the same name are equally difficult from year to year. In fact, comparability can be considered between boards in any subject, the years in a subject/board combination, the subjects in one board, and the alternative syllabuses in any board and subject. All of these are very difficult to determine, especially as exams are neither accurate nor particularly reliable in what they measure (Nuttall 1979). Pencil-and-paper tests have little generalisable validity (i.e., in predicting the performance of other tasks), and their link to other measures, such as those of occupational competence, is also very small (Nuttall 1987). There are often reports of errors in marking and grading assessments (e.g. Cassidy 1999b, Cassidy 1999c). The fact is that even the narrow version of propositional knowledge tested by examinations is very difficult to assess.

The equivalence between different qualifications, such as is used to define the 'levels' of equivalence to NVQs for targets, requires judgement and some guesswork. Robinson (1995)

described some of the ensuing decisions as 'arbitrary' and having little meaning in many cases, being based on a supposed level of desirability or prestige, rather than utility or labour market returns. As in any survey, some respondents reply 'don't know' or 'no answer' when faced with a question about their highest qualification. If these responses are assumed to come equally from all possible responses, and are divided proportionately between the remaining categories, the likely outcome is a bias towards higher qualifications. This is because a contrary assumption would be that those with PhDs, or postgraduate certificates, are more likely to respond and more likely to know what their qualifications are than those with level 1 or no recognised qualifications. For the same reason, if these responses are simply ignored, then the same effect results, since if they had answered the 'don't knows' might have been more common among the lower-level qualifications. If, on the other hand, the assumption is made that 'no response' is equivalent to 'no qualification', the overall population estimates will be biased towards the lower level of qualification, since at least some of the 'no responses' will actually have qualifications. There is no clear basis on which to partition the null responses between these three alternatives. Perhaps the safest assumption is that null responses all represent qualifications below level 2, and should be partitioned between none and level 1 in proportion to the existing frequency of those categories. Official sources currently allocate them proportionately to all other categories (so that at least some of those who do not know are 'awarded' a PhD).

Similar comments can be made about the much larger group (7% of base) classified in the LFS as 'other qualifications' (i.e., not one of the other named 46 qualification categories). The Department for Education and Employment (DfEE) and Welsh Office assumption has been that 10% of these qualifications are at level 3, 35% are at level 2, and the remainder at level 1. Since this group is so large, this decision makes a significant difference to higher-level Targets compared to assuming that most 'other qualifications' are at level 1. In fact, it is hard to imagine many qualifications, other than those from overseas (which are anyway at least partly covered by 'A level or equivalent', etc.), which would be of 2 A-level standard. Scottish CSYS and Scottish Highers or equivalent are both explicitly covered, and an assumption is generally made that two-thirds of these are at level 3, and the other third at level 2. Trade apprenticeships (8% of base) are generally divided into half level 2 and half level 3. As can be imagined, there is very little direct empirical justification for any of these assumptions, and yet their importance cannot be overestimated, since they affect two of the most common responses. Therefore perhaps as many as 20-25% of cases in the LFS are somewhat arbitrarily allocated to an NVQ equivalent. The potential impact can be seen in Table 1 which shows the proportion of the working-age population with level 2 and 3 qualifications according to the LFS. In each case, the first row uses all operational governmental assumptions about non-response, other qualifications, trade

apprenticeships, and Scottish qualifications. The second row treats other qualifications as level 1, and non-response as level 1 at best. As can be seen, the differences are significant (although perhaps declining over time).

Table 1 - Testing the impact of assumptions

	1996	1997	1998	1999
Level 2a (WO)	54.1	55.9	58.9	59.9
Level 2b	48.2	52.0	55.4	56.1
Level 3a (WO)	32.0	33.1	36.7	36.4
Level 3b	29.8	32.1	35.8	35.5

Other issues of measurement

A clear issue relating to the assessment of trends is the consequence of changes in the definition of data or in the completeness of collection, and the problems that result for reliability (Johnstone 1981, FEFCW 1998). Even apparently minor inconsistencies, such as varying the day of an annual census, can have profound impacts. Some targets, while ostensibly similar, have in fact changed over time. In 1993 the Foundation Target 1 for Level 2 qualifications was changed from a requirement of 4 GCSEs grade A-C (NACETT 1993) to 5 GCSEs grade A*-C (National Targets Brief 1994). From Spring 1993, the LFS used an expanded version of the variable covering an individual's highest qualification. More vocational options were added, the level 2 criterion was changed from four GCSEs A-C to five GCSEs A*-C, and those with A levels were asked whether they had two or more, as a criterion for level 3 (National Targets Brief 1994). As a consequence, previous figures are no longer directly comparable with more recent ones, restricting the length of time for which trends can be assessed. A similar but smaller change had taken place in 1992. In 1995 there was a slight adjustment (up) of figures following reweighting from OPCS (NACETT 1995). Changes in Spring 1996 mean that the figures for level 2 are now a little lower than they would have been (NACETT 1998). These changes have all made comparisons over time more difficult.

There are large seasonal variations in some indicators of education or training, so the time in the year when a sample is taken could make a big difference to the population estimate (National Targets Brief 1994). From 1993, the LFS became seasonal rather than annual (NACETT 1995), and according to NACETT (1994), until 1994, the Spring figures from the LFS were used to assess progress, but from 1994 the Autumn figures were used (at the same time as the questions on qualifications were changed).

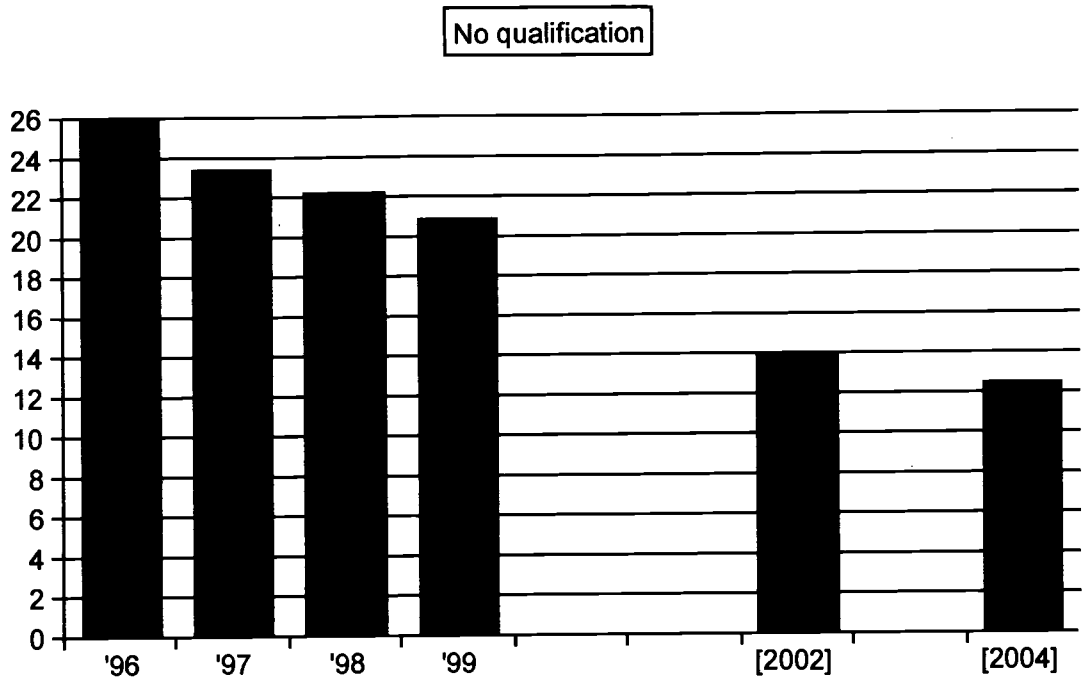
The Welsh Office (1993) specified that calculation of the achievement of any population was based on an individual's place of work or study, rather than their home location. A majority of students at Cardiff University, for example, have their 'permanent residence' in England or further afield and return there on completion of their course, yet they are included in the measurement of indicators for Wales. If Cardiff University were to expand or to take an even larger proportion of undergraduates from England, then progress towards the target for Level 3 qualifications would be boosted without necessarily adding a single qualification to the actual residents of Wales. However their population is defined, local targets, by their nature, take no account of the increasing geographic mobility of labour which is most marked among those with the highest qualifications (for example, Gorard et al. 1999b). Perhaps one indication of this consideration is that 'local' targets are themselves problematic by their very nature in an era of mobility and perceived globalisation.

Progress towards the targets

- The proportion of adults of working age without qualifications to reduce from some 1 in 4 in 1996 to 1 in 7 by 2002 and to fewer than 1 in 8 by 2004.

This Target is an extension to 2004 of the Targets for 2002 set out in Learning is for Everyone (April 1998), but with the alteration of the definition of adults from those aged 19 years or over to those of working-age. This change has the effect of bringing the Target for adults closer to attainment, since the revised version excludes those adults past working-age, who are generally less well-qualified than average; and includes those aged 16-18 who are generally better qualified than average. There must be considerable doubt whether, despite the reduction, the Target can be attained by 2002. Hence, although Figure 1 also suggests a significantly decreasing trend (based on the 'optimistic' official assumptions described above), it is not one that will meet the Target of 14% by 2002.

Figure 1 - Percentage of working age population with no qualification



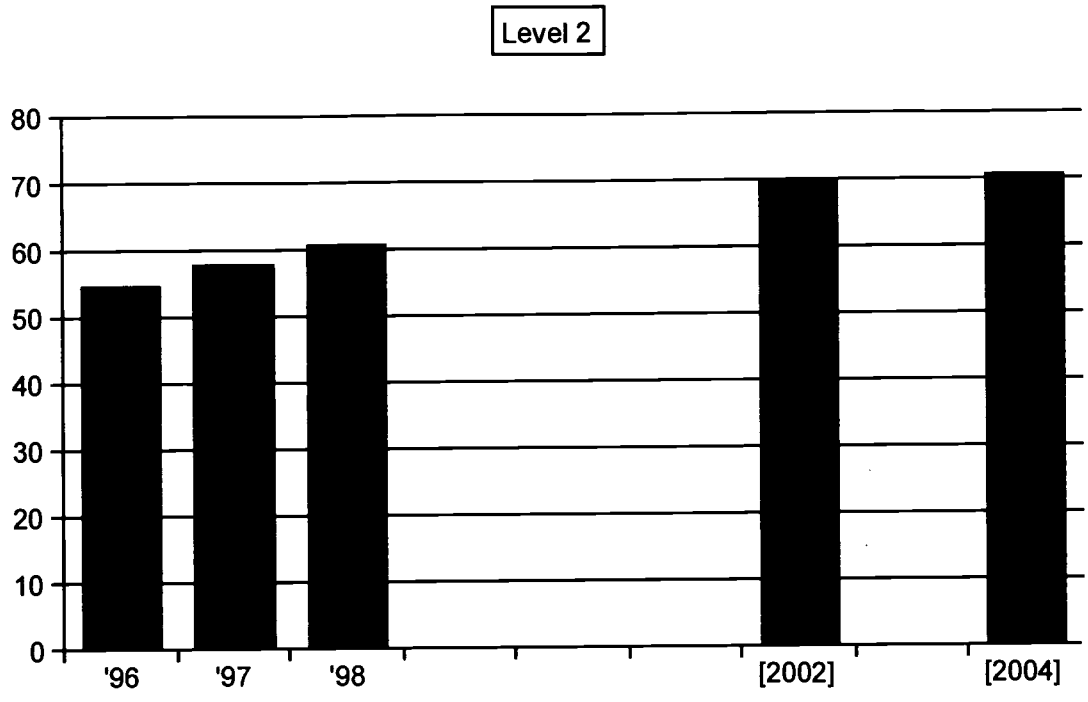
[Spring season, from LFS data supplied by the Office of the National Assembly]

Lack of qualifications generally increases in frequency with age, especially for women. This is, in fact, contrary to what might be expected for a lifelong indicator, since the longer an individual has been in the workforce, the greater the number of opportunities they should have had for further education or training. The implication is that very few additional qualifications have traditionally been gained after initial education.

- The proportion of adults of working age with an NVQ level 2 or equivalent to increase from over 5 in 10 in 1996 to 7 in 10 by 2002 and over 7 in 10 by 2004.

The Level 2 Target appears attainable by 2002 using the official assumptions for calculation (Figure 2)

Figure 2 - Percentage of working age population with level 2 qualifications

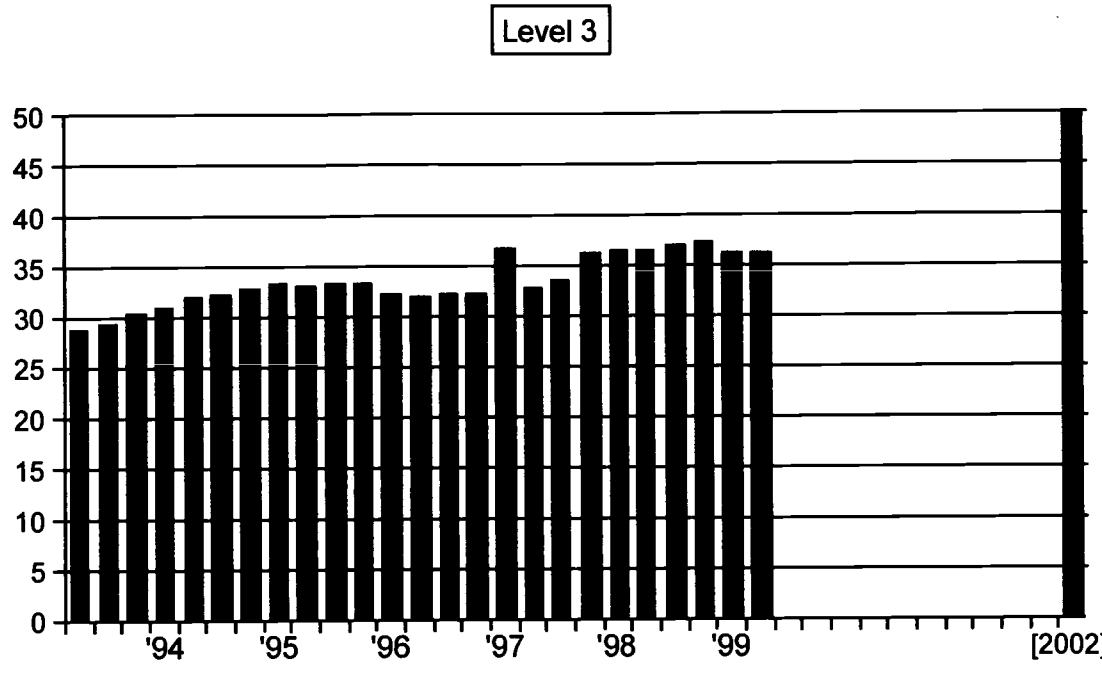


[Spring season, from LFS data supplied by the Office of the National Assembly]

- The proportion of adults of working age with an NVQ level 3 or equivalent to increase from some 3 in 10 in 1996 to approaching 5 in 10 by 2002 and over 5 in 10 by 2004.

There has been significant growth towards the Level 3 Target, but despite previous downwards adjustment, the figure for attainment is still a long way short of the proportions envisaged even for 2004 (Figure 3).

Figure 3 - Percentage of working age population with level 3 qualifications

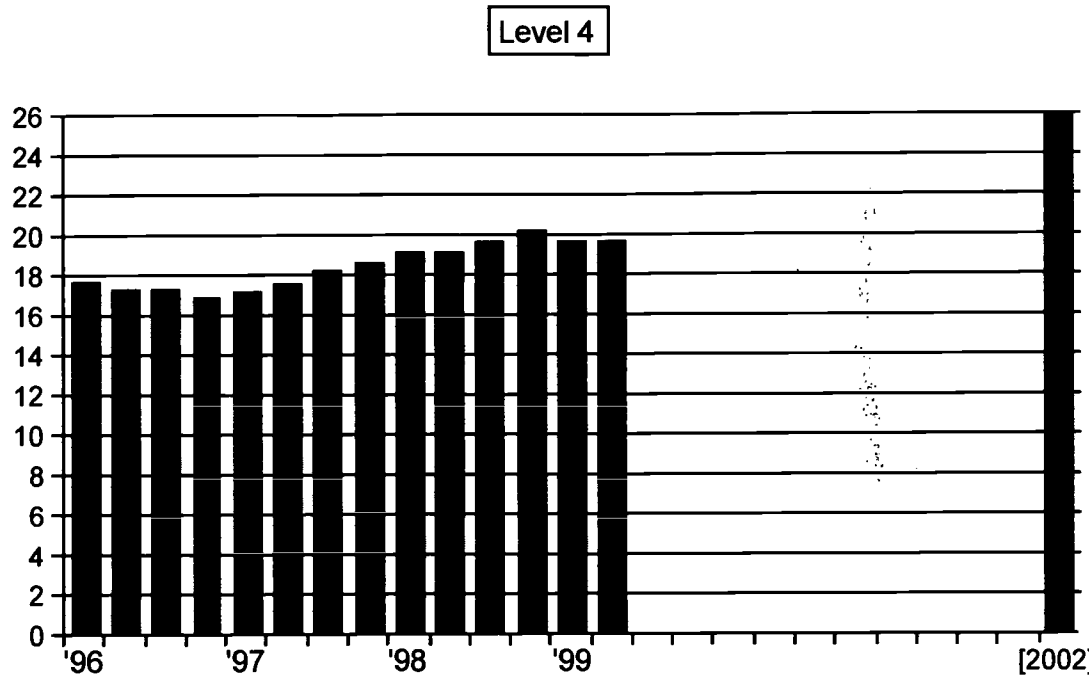


[calculated from LFS data supplied via NOMIS]

- The proportion of adults of working age with an NVQ level 4 or equivalent to increase from some 1 in 5 in 1996 to over 1 in 4 by 2002 and approaching 3 in 10 by 2004.

From the figures available, progress towards the Level 4 Target seems erratic. Although on one interpretation the 2002 target is attainable (Figure 4), the indicator remains at around 1 in 5 (20 per cent), and whilst there has been some growth, it has recently been much slower than would be required to meet this Target.

Figure 4 - Percentage of working age population with level 4 qualifications



[calculated from LFS data supplied via NOMIS]

Conveyor belt

In summary, progress towards the targets is uneven using out best estimates, and generally less than that necessary to reach the targets. More disturbingly, the progress that is evident is largely dependent on progress towards the Foundation Targets.

Jagger et al. (1996) estimated from the qualification rate of new entrants to higher education (HE) that there will be a 15-20% growth of graduates from 1996 to 2000. There would, therefore, be an annual flow of 210,000 graduates into the workforce. On the basis of this, they conclude that the growth of qualifications among those already in the workforce is so negligible that it can be ignored in their model as being less than the error component in their estimate of the number of graduates. An extension of this idea is what we have termed here the 'conveyor belt' effect distorting progress towards the National Targets. The Foundation (school) and Lifelong Targets are not symmetrically related. Changes in the qualification indicators for schools will, in time, produce changes in the equivalent qualification indicators for the adult population; but clearly the reverse is not true. Thus, at least some of the changes in the lifelong indicators can always be

traced back to foundation indicators, and it is important both for setting targets and assessing progress towards them that an estimate of this 'conveyor belt' effect is produced.

In order to estimate the size of this effect and partition any progress towards Lifelong Targets into that produced by initial education and that caused by increasing levels of learning among adults, it is important to have figures for the size and qualification rates of every age-group. The proportion of school-leavers with any level of qualification up to level 3 is higher than in the population as a whole and is rising every year (Table 2). Moreover, the proportion with any level of qualification is lowest amongst the older age groups (Table 3). Among the employed, attainment of Level 4 qualifications for example increases with age cohort from 16 to 29, peaking before age 49 and dropping to around 19% for those of retirement age. Therefore, significant progress towards the Lifelong Targets would be achieved without a single extra adult participating in education or training and gaining qualifications, simply as a consequence of adding qualified school-leavers to the adult population.

Table 2 - The results of school-leavers in Wales

	1993	1994	1995	1996	1997	1998
#15-year-olds	32051	32323	35842	37040	35868	35518
No GCSEs	12%	10%	10%	10%	9.9%	9.3%
5 GCSEs A*-C	37%	39%	41%	42%	44%	46%
#17-year-olds	34900	34300	33500	34700	38000	37600
2+ A-levels	18.7%	19.5%	18.9%	19.3%	23.4%	20.6%
Advanced GNVQ	-	-	-	-	3.6%	6.1%

[calculated from WJEC data]

Table 3 - Percentage employed with L4 qualifications by age/gender: UK 1995

Age	Male	Female
16-19	0.9	0.9
20-24	17.6	18.6
25-29	25.5	28.1
30-39	27.9	27.6
40-49	27.9	24.3
50-59	21.5	19.1
60+	18.9	-

[Jagger et al. 1996]

The LFS suggests that some 44% of females aged 59 and 34% of males aged 64 have no qualifications; while 16% of females aged 16 and 20% of males aged 16 have no qualifications. If it is assumed that the approximate cohort size of any year group is 40,000, the gender split is approximately 50:50, and that men work for 48 years and women 43 years on average, then the working-age population of Wales is 48*20,000 + 43*20,000 (or 1,820,000). Every year, 44% of 20,000 and 34% of 20,000 (or 7,800) unqualified people leave the work-force on retirement, and 16% of 20,000 plus 20% of 20,000 (or 3,500) unqualified people join it. If in 1998, 20% (or 364,000) of the workforce had no qualifications, then in 1999 the figure would be 19.7% (364,000 - 4,300).

Similarly, if it is assumed that every year from 1993, 40% of the 15-year-old cohort gain 5+ GCSEs, then by 1999 six cohorts totalling 240,000 join the working-age population, of whom at least 96,000 have NVQ Level 2 or equivalent qualifications. If it is further assumed that 15% of the 59/64-year-old cohort have Level 2 qualifications, then the effects of their retirement between 1993 and 1999 will be to remove six cohorts, again totalling 240,00, from the working-age population. However, of these only 36,000 have level 2 qualifications. Therefore, on the assumption that in 1993, 50% of the working-age population of 1,820,000 had qualifications to NVQ Level 2 or equivalent (910,000), by 1999, 910,000 plus 60,000 (96,000 - 36,000) would have NVQ Level 2 equivalent. This growth to 53% of the working-age population would be achieved without any improvement in terms of qualifying adults at all, but simply as a result of adding qualified school-leavers to the working-age population. Hence, progress in terms of increasing qualifications amongst the adult population (i.e., non-school-leavers) is confined to the residual that remains once the 'conveyor belt' effect is taken into account.

Again, if every year from 1993, 20% of the 17-year-old cohort gain 2+ A-levels, then by 1999 six cohorts, totalling 240,000, join the working-age population. Of these, at least 48,000 have NVQ Level 3 qualifications. On the basis of a total working-age population in Wales of 1,820,000, and assuming that 10% of the 59/64-year-old cohort are qualified to NVQ Level 3 or equivalent, as these 18,200 individuals go into retirement over the six-year period, the impacts are as follows. In 1993, 29% of 1,820,000 had NVQ Level 3 or equivalent (527,800). Thus, by 1999, 527,800 plus 29,800 (48,000 - 29,800) will have attained this level of qualifications, a growth to 31% of the working-age population, again without any improvement in terms of qualifying adults at all. To some extent, therefore, the Lifelong Targets are not actually 'lifelong', but are partly an extension of the long-term impact of targets for initial education.

To sum up - this kind of progress, requiring no actual amelioration of the position of those already of working-age is almost of the order of magnitude demanded by the targets, and certainly of the order of magnitude of the actual progress.

The impact of targets

It is therefore possible to question the actual impact of Targets on the growth of related indicators (for the benefit of those who believe that Targets are stimulating rather than simply measuring that growth), and to estimate this impact by comparing progress before and after the creation of the NETTs in 1991. Although it is clear that other factors than the Targets also differ pre- and post-1991, it is certainly not clear that these policies and interventions since 1991 have been any less, or any more effective (Gann 1999). Therefore, it is fair, in the first instance, to assume that if the policy of setting Targets has been a useful one, then this will be reflected in improved progress in terms of levels of qualifications since the Targets were introduced. For example, NACETT (1994) have claimed that 'We have made real progress since the National Targets were launched in 1991', but without making clear against what criterion this progress was measured. Since they present no analysis of the status ante, the claim - like most subsequent commentaries - suffers from what Huff (1991) calls the 'missing comparator'. NACETT were formed in 1993, and it was only then that Targets began to become known to employers and educators (a process which is still not complete), and policy changes are anyway generally slow to register any impact and are incremental in effect. In this context it may be noteworthy that the lowest annual growth in the indicator for the original Lifelong Target 3 is in 1996 (actually negative), and the growth in 1998 is otherwise the lowest since 1991 (Table 4). The year of peak growth is 1991/1992, when the targets were first devised (although this is almost certainly a coincidence). The average growth since 1992 has been 7.5% per year, and the average growth until 1992 was 8.7%. Overall then, it is likely that not much has changed as a result of target-setting.

Table 4 - Percentage of 21-year-olds with level 3 qualifications: Britain

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
L3	27.5	28.6	30.5	30.7	34.7	37.6	40.9	45.0	44.3	48.8	50.3
change	-	4	7	1	13	8	9	10	-2	10	3

[NACETT 1998]

Although the only available figures over a long period of time are from Britain, it is clear that there has been a marked trend towards improved qualifications since 1988 (i.e. before the setting of targets). There is no particular pattern to the proportionate annual increases in any indicator, but there is some evidence that the strength of the growth trend is declining over time (Table 5). It is perhaps no surprise, given the evidence of the conveyor belt effect, that Lifelong Learning Targets do not appear to have led to any improvement at all on preceding progress. To some extent they may actually have led to an increased concentration on what we have termed elsewhere 'front-loaded' provision (Gorard et al. 1999b).

Table 5 - Percentage of 19-year-olds with level 2 qualifications: Britain

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
L2	48.4	50.6	52.0	54.5	59.1	62.3	66.0	66.9	68.4	71.3	72.4
change	-	5	3	5	8	5	6	1	2	4	2

[NACETT 1998]

Conclusions

In many respects the conclusions of this paper make depressing reading. Progress towards several of the National Targets for Lifelong Learning is slow in Wales (and in other home countries where accurate figures have been made available, Gorard et al. 1999a). Much of this progress actually stems from growth in school-based qualifications, and there is little suggestion the qualification of adults while they are adults has improved much since 1991. The progress that has taken place appears to be unaffected by the setting or monitoring of targets. This is all in direct contradiction to the proclaimed purposes of the policy of target-setting for lifelong learning, despite reports of policy success. Our chief finding here, based on secondary analysis of figures for all Wales, confirms our previous suggestions, based on a large-scale survey in South Wales (e.g. Gorard et al. 1999b), that work-based training is not rising to meet the challenge of lifelong learning, and that employers are supporting an ever decreasing proportion of training. If it true that 'in the learning age individuals and their employers will *share* a responsibility for increasing the quality and quantity of learning at work' (DfEE 1998a), then that 'learning age' is certainly no closer to realisation as a result of the National Targets.

On the other hand, the ETAG Targets miss out a great deal of the learning which actually occurs amongst the adult population, in consequence of their focus upon certificated education and

training (Gorard et al. 1999c). In part, of course, this reflects the paucity of data (only the National Adult Learning Survey 1997, Beinart and Smith 1998, provides systematic data at the national level on wider patterns of educational participation amongst adults and this provides only a snap-shot), but is also a consequence of the Targets themselves which by their current nature privilege the apparently measurable.

Despite this privileging there are serious difficulties in actually estimating progress towards the 'measurable' targets. The calculations on which the recommendations in other sections are based use the standard Welsh Office/DfEE assumptions about problematic qualifications. It has been shown in this paper that these assumptions are important but perhaps now rather dated. Over 50 qualifications are now listed in the LFS analysis (many of which have very few cases), but there are still large numbers of 'other qualifications'. It would be interesting to conduct further research into the nature of these.

If we retain but reconsider the idea of targets for lifelong learning there are some additional issues to consider. For example, there is no strong rationale for the continued exclusion of individuals past the conventional retirement age from the Targets, although again data are not readily available. It is clear that, in addition to being exclusionary, the over-emphasis on qualifications for those of working-age is leading to an over-education paradox whereby many people are employed in posts not requiring their actual level of qualification (Slater 2000), such that qualification and lack of qualification is a poor guide to competence (Fuller and Unwin 1999). There may also have to be revision of the analytical assumption that men retire at 65 and women at 60. Planning should be underway for this already, and the new set of assumptions underlying target revisions should be based on the new non-gendered definition of retirement age. In addition it would be useful to consider ways of rephrasing some Targets so that they are expressed as average qualification (or participation) per resident, rather than a proportion meeting a certain threshold (Tymms and Stout 1999). As currently designed, for example, if an educator and a student work hard together to obtain three GCSE passes rather than two, there is no impact on progress towards achieving Targets. If the Targets have an impact on qualifications and participation, the current set appear to encourage a focus on those who are on the 'cusp' (for example, between grades D and C at GCSE). Work in the USA suggests that the setting of thresholds serves progressively to exclude those furthest from it. A more carefully designed 'average' target could allow all residents of Wales to be included in progress towards meeting the Targets.

References

Bagnall, R. (1994) Performance indicators and outcomes as measures of educational quality: a cautionary critique, *International Journal of Lifelong Education*, 13, 1, 19-32.

Beinart, S. and Smith, P. (1998) *National Adult Learning Survey 1997*, Sudbury: DfEE Publications

Cassidy, S. (1999a) Pass mark 'fiddle' is strenuously denied, *Times Educational Supplement*, 28/5/99, p. 2

Cassidy, S. (1999b) Test scores did not add up, *Times Educational Supplement*, 16/7/99, p. 5

Cassidy, S. (1999c) English papers at 14 were 'too hard', *Times Educational Supplement*, 4/6/99, p. 6

Cassidy, S. (2000) Logos loom at end of qualification maze, *Times Educational Supplement*, 11/2/00, p. 11

Cave, M., Hanney, S., Henkel, M. and Kogan, M. (1997) *The Use of Performance Indicators in Higher Education*, Jessica Kingsley: London

CBI (1989) *Towards a Skills Revolution*, London: CBI

DfEE (1997) *Targets for our Future*, London: Stationery Office

DfEE (1998a) *The Learning Age: a renaissance for a new Britain*, London: Stationery Office

DfEE (1998b) *University for Industry: engaging people in learning for life*, London: Stationery Office

Donald, J. and Denison, D. (1996) Evaluating undergraduate education: the use of broad indicators, *Assessment and Evaluation in Higher Education*, 21, 1, 23-39

Education and Training Statistics (1997) *Welsh training and education survey 1995/96*, Cardiff: Welsh Office

ETAG (1999) *An education and training action plan for Wales*, Cardiff: Welsh Office

FEFCW (1998) *Consultation paper 98/02 - Institutional target-setting*

Fuller, A. and Unwin, L. (1999) Credentialism, national targets, and the learning society: perspectives on educational attainment in the UK steel industry, *Journal of Education Policy*, 14, 6, 605-617

Future Skills Wales (1998) *Technical Report*, London: MORI

Gann, N. (1999) *Targets for tomorrows' schools: a guide to whole school target-setting for governors and headteachers*, London: Falmer

Gorard, S., Rees, G. and Selwyn, N. (1999a) *Lifetime learning targets in Wales: a research summary*, Cardiff: National Assembly for Wales

Gorard, S., Rees, G. and Fevre, R. (1999b) Two dimensions of time: the changing social context of lifelong learning, *Studies in the Education of Adults*, 31, 1, 35-48

Gorard, S., Fevre, R. and Rees, G. (1999c) The apparent decline of informal learning, *Oxford Review of Education*, 25, 4, 437-454

Huff, D. (1991) *How to lie with statistics*, Harmondsworth: Penguin

Jagger, N., Morris, S. and Pearson, R. (1996) *The target for higher level skills in an international context*, Brighton: The Institute for Employment Studies

Johnstone, J.. (1981) *Indicators of Education Systems*, London: Kogan-Page

Kennedy, H. (1997) *Learning works: widening participation in further education*, Coventry: FEFC

Kitchen, A. (1999) The changing profile of entrants to mathematics at A level and to mathematical subjects in higher education, *British Educational Research Journal*, 25, 1, 57-74

Layzell, D. (1998) Linking performance to funding outcomes for public institutions of higher education: the US experience, *European Journal of Education*, 32, 1, 103-111.

Loveman, S. (1997) *The Setting Up of National, Regional and Sector Targets as a Tool for Reforming the System*, Report of the EU Subgroup A Meeting, 23-24, May, Turin. [ERIC Document No. ED423362]

Marsden, W. (1991) Attainment targets in context: some historical perspectives, *Studies in Educational Evaluation*, 17, 2-3, 199-214.

NACETT (1993) *First Annual Report on National Education and Training Targets*, London: NACETT

NACETT (1994) *Review of the National Targets for Education and Training: Proposals for Consultation*, London: NACETT

NACETT (1995) *Report on progress towards the national targets*, London: National Advisory Council for Education and Training

NACETT (1998) *Fast Forward for Skills: NACETT's Report on Future National Targets for Education and Training*, London: NACETT

National Targets Brief (1994) *The National Targets for Education and Training: a review of progress*, Sheffield: National Targets Brief Issue 1

Neave, G. (1988) On the Cultivation of Quality, Efficiency and Enterprise: an overview of recent trends in higher education in Western Europe, *European Journal of Education*, 23, 1/2, 7-23

Noah, H. and Eckstein, M. (1992) Comparing secondary school leaving examinations, in Eckstein, M. and Noah, H. (Eds.) *Examinations: comparative and international studies*, Oxford: Pergamon Press

Nuttall, D. (1979) The myth of comparability, *Journal of the National Association of Inspectors and Advisers*, 11, 16-18

Nuttall, D. (1987) The validity of assessments, *European Journal of the Psychology of Education*, II, 2, 109-118

Nuttall, D.L. (1994) Choosing Indicators, in Riley, K.A. and Nuttall, D.L. (Eds.) *Measuring Quality: Education Indicators - United Kingdom and International Perspectives*, London: Falmer

Robinson, P. (1995) Do the NET Targets make sense?, *Training Tomorrow*, 9, 6, 19-20

Schagen, I., Weston, P., Hewitt, D. and Sims, D. (1997) *Hitting the targets*, Slough: National Foundation for Educational Research

Slater, J. (2000) Over-qualified and underpaid, *Times Educational Supplement*, 18/2/00, p.24

Smyth, J. and Dow, A. (1998) What's wrong with outcomes? Spotter planes, action plans and steerage of the educational workplace, *British Journal of Sociology of Education*, 19, 3, 291-303

Tymms, P. (1995) Influencing educational practice through performance indicators, *School Effectiveness and School Improvement*, 6, 2, 123-145

Tymms, P. and Stout, J. (1999) Target-setting, *Education Journal*, 37, 28-29

Welsh Office (1993) *National Targets: The Way Forward 1994/95*, Cardiff, Welsh Office

Welsh Office (1994) *1992 Welsh social survey: report on education and training*, Cardiff: Welsh Office

Welsh Office (1995a) *A Bright Future: the way forward*, Cardiff: Welsh Office.

Welsh Office (1995b) *1994/95 Welsh Training and Education Survey*, Cardiff: Welsh Office

Welsh Office (1997) *A Bright Future: beating the previous best*, Cardiff: Welsh Office

Welsh Office (1998) *Learning Is For Everyone*, Cardiff: Welsh Office

Williamson, J., Tymms, P. and Haddow, M. (1992) ALIS through the looking glass: changing perceptions of performance indicators, *Educational Management and Administration*, 20, 3, 179-188

CE061934

U.S. Department of Education
Office of Educational Research and Improvement (OERI)
National Library of Education (NLE)
Educational Resources Information Center (ERIC)

REPRODUCTION RELEASE

(Specific Document)

I. DOCUMENT IDENTIFICATION:

Title: Conveyor belt effect	
Author(s): S Gorard, N Selwyn, G Rees	
Corporate Source: Cardiff University	Publication Date: 2000

II. REPRODUCTION RELEASE:

In order to disseminate as widely as possible timely and significant materials of interest to the educational community, documents announced in the monthly abstract journal of the ERIC system, *Resources in Education* (RIE), are usually made available to users in microfiche, reproduced paper copy, and electronic media, and sold through the ERIC Document Reproduction Service (EDRS). Credit is given to the source of each document, and, if reproduction release is granted, one of the following notices is affixed to the document.

If permission is granted to reproduce and disseminate the identified document, please CHECK ONE of the following three options and sign at the bottom of the page.

The sample sticker shown below will be affixed to all Level 1 documents	The sample sticker shown below will be affixed to all Level 2A documents	The sample sticker shown below will be affixed to all Level 2B documents
PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY Sample TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) 1	PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL IN MICROFICHE, AND IN ELECTRONIC MEDIA FOR ERIC COLLECTION SUBSCRIBERS ONLY, HAS BEEN GRANTED BY Sample TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) 2A	PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL IN MICROFICHE ONLY HAS BEEN GRANTED BY Sample TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) 2B
Level 1 ↑ ☑	Level 2A ↑ ☐	Level 2B ↑ ☐
Check here for Level 1 release, permitting reproduction and dissemination in microfiche or other ERIC archival media (e.g., electronic) *and* paper copy.	Check here for Level 2A release, permitting reproduction and dissemination in microfiche and in electronic media for ERIC archival collection subscribers only	Check here for Level 2B release, permitting reproduction and dissemination in microfiche only

Documents will be processed as indicated provided reproduction quality permits.
If permission to reproduce is granted, but no box is checked, documents will be processed at Level 1.

I hereby grant to the Educational Resources Information Center (ERIC) nonexclusive permission to reproduce and disseminate this document as indicated above. Reproduction from the ERIC microfiche or electronic media by persons other than ERIC employees and its system contractors requires permission from the copyright holder. Exception is made for non-profit reproduction by libraries and other service agencies to satisfy information needs of educators in response to discrete inquiries.

Sign here, → please

Signature:	Printed Name/Position/Title: PROFESSOR GORARD
Organization/Address: CARDIFF UNIVERSITY	Telephone: FAX:
	E-Mail Address: GORARD@CF.AC.UK Date: 6/7/01

(over)

III. DOCUMENT AVAILABILITY INFORMATION (FROM NON-ERIC SOURCE):

If permission to reproduce is not granted to ERIC, *or*, if you wish ERIC to cite the availability of the document from another source, please provide the following information regarding the availability of the document. (ERIC will not announce a document unless it is publicly available, and a dependable source can be specified. Contributors should also be aware that ERIC selection criteria are significantly more stringent for documents that cannot be made available through EDRS.)

Publisher/Distributor:
Address:
Price:

IV. REFERRAL OF ERIC TO COPYRIGHT/REPRODUCTION RIGHTS HOLDER:

If the right to grant this reproduction release is held by someone other than the addressee, please provide the appropriate name and address:

Name:
Address:

V. WHERE TO SEND THIS FORM:

Send this form to the following ERIC Clearinghouse:

Acquisitions Coordinator
ERIC Clearinghouse on Adult, Career, and Vocational Education
Center on Education and Training for Employment
1900 Kenny Road
Columbus, OH 43210-1090

However, if solicited by the ERIC Facility, or if making an unsolicited contribution to ERIC, return this form (and the document being contributed) to: