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LIFELONG LEARNING TARGETS IN WALES: A RESEARCH REVIEW

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EXECUTIVE SUMMARY

Chapter 1: Aims of the Study

- This project is designed to fulfil the recommendation in the ETAG Action Plan (1999) to undertake further research to confirm the suitability or otherwise of the proposed indicators and targets for lifelong learning. It is thus intended to help inform the development of a clear and robust set of lifelong learning indicators and targets for Wales, which are capable of being monitored at a national and sub-regional level.

- The aim of the project is thus: to review proposed indicators of, and targets for, post-16 qualifications attainment in Wales; to advise on their clarity, measurability and appropriateness; and to make recommendations in order to inform the development of a realistic, but challenging, set of indicators to guide the National Assembly for Wales in its decisions on setting and monitoring targets on lifelong learning.

Chapter 2: An Overview of Target-setting in Education and Training

- Targets must be both policy-relevant and policy-friendly (timely, comprehensive and few in number).

- A complementary/concurrent system of independent evaluation of the *processes* through which the targets are being achieved is required (i.e., not just a focus on end data).

- The established framework of education targets and performance indicators developed from international models such as OECD and UNESCO covers the three stages of educational inputs, processes and outcomes.

- Despite a wide recognition of their value, the use of quantified lifelong learning targets outside the UK is not widespread. In expressing progress towards declared targets within a time-frame, the ETAG Targets are considerably more exact and demanding than those in other countries.

- Targets are both a powerful statement of policy and a means of monitoring education systems and fulfil different functions for different audiences, with clear economic, political, educational and social roles.

- It is acknowledged that 'high quality' targets must be (i) useful to policy-makers, (ii) have relevance and endurance, (iii) be positioned as part of wider educational reforms and (iv) be accepted and valued by practitioners. A capacity to consult is therefore essential if targets are to be acted upon by disparate actors who can feel a sense of common ownership

Chapter 3: Challenges for implementing targets in Wales

- The current emphasis on readily measurable targets means that there is a danger that their attainment becomes an end in itself for policy-makers, rather than a way of measuring and encouraging progress towards actual improvements in society.

- All indicators and the measures based on them are prone to possible error at every stage.

- Even where steps to calculate indicators are explicit, some steps involve subjective judgements and estimates of unknown quantities. This is partly why different sources produce different figures even when using the same data.

- There is no clear comparability between supposedly equivalent qualifications over time, place, or mode of assessment.

- The assumptions made in calculating progress towards targets should be explicit, and once selected and generally agreed, they should remain the same over time to enable easier comparisons between years.

- Many potential data sources have technical problems, most commonly low response rates and lack of comparable repetition.

- The best source appears to be the Labour Force Survey, supplemented *annually* by boosted samples for Wales. The boosted versions are necessary to enable realistic analyses at the regional level within Wales (such as the TEC areas or equivalent).

- Even with the LFS, changes over time in questions and timing make long-term trend analysis a complex and subjective process.

- There is no unproblematic link between qualifications and skills.

- Growth of indicators for Lifelong Targets has been so low (apart from where qualified school-leavers join the working-age population) that previous studies have generally assumed that *no* qualification takes place outside initial formal education.

- There is no evidence of regional or local factors affecting levels of attainment or progress towards targets, once the characteristics of individuals are taken into account.

Chapter 4: Analysis of Progress Towards Current Targets

- Most Targets have evolved over time since 1991, and have generally become less stringent in terms of time and proportion, but some have become more stringent in terms of the specified population.

- Of the schools Targets, only those for absenteeism and Levels 1 and 2 have figures for trends, and of these only the trend for Level 2 is clearly on target. The Targets for CSI, inclusiveness and 'looked-after' children cannot currently be measured.

- Both Targets to reduce the unqualified are attainable, particularly for 16- to 18-year-olds.

- Similarly both Targets for Level 2 are attainable, and to some extent depend on the assumptions made in calculations.

- The Target for Level 3 is unlikely to be achieved, and will be more like 40 per cent than 50 per cent by 2002. However, progress in Wales is as good as in England and Scotland (as it is for all comparable Targets).

- Attaining the Target for Level 4 is just about possible, but perhaps more like 24 per cent than 25 per cent by 2002. Again it depends on the assumptions made.

- There is no Level 5 Target, but the indicator will be around 12 per cent by 2002.

- The Basic Skills Target is vague in its terms, and hard to measure.

- Participation cannot be measured at present, and is anyway phrased in an inappropriate raw figure. Work-based training shows a slight decline, while retention of 16- to 18-year-olds in education shows a marked increase. Growth is concentrated in formal, public, initial education.

- Both Targets for Investors in People (IiP) are within reach.

- International comparisons of education show Britain to be well-placed both in terms of qualification rates, and inclusion. The relative weakness is in work-based training (especially its duration, rather than frequency).

- Much of the recent progress towards Lifelong Learning Targets is accounted for by better qualified school-leavers replacing less qualified 'retirees' in the working-age population. In fact, as much as a half of the growth in relevant indicators may be due to this continuous process of 'population change'. This has clear implications for the effects of actual increases in qualifying amongst those already in the potential workforce.

- Work-based training is largely unrelated to trends in qualifications and skilled occupations.

- There are no clear differences between the home countries, or between parts of Wales in progress towards the Targets. Nor are there differences between sections of society.

- Overall, the Targets have had little impact on the growth of indicators since 1989.

Chapter 5: Reactions to the Targets

- There is still a clash between the Targets' focus on formal credentials amongst adults of working age, and traditional conceptions of 'lifelong learning' among user groups. In particular, in spite of the changes in the phrasing of the Targets, concern

over the role of 'informal' and 'non-vocational' learning and with the 'learning poor'/socially excluded persists.

- Whereas some providers appear concerned with the over-ambitious nature of the Targets (especially those from less prosperous regions), those from the employment sector argue that the Targets are not challenging enough at the higher (i.e., NVQ5) level of qualification. These views both argue that the Targets as they stand should not be seen as definitive statement of 'ideal learning outcomes'; rather they are best viewed as a minimum set of goals within an ongoing process of development.

- Users remain sceptical over the viability of accurate *and* comprehensive means of gathering data to inform the Targets. Moreover, a weak sense of ownership amongst providers and other actors remains a significant barrier to the successful implementation of the Targets.

- Although the general intention to use Investor in People as a measure of employer participation is welcomed, there are concerns from employers over the widespread viability of the scheme, especially for SMEs, in light of the bureaucratic and cost implications.

- There remains concern over the lack of recognition that learning through the medium of Welsh is given within the Targets, especially in light of the current emphasis on supporting the Welsh language in other policy areas.

Chapter 6: Recommendations and Conclusions

- We recommend that a feasibility study is carried out that explores the costs and benefits of developing an indicator system which incorporates Input, Process and Output elements.

- We recommend that the purpose - economic development or social inclusion - to which each Target is addressed is made explicit.

- We recommend that an annual report on progress towards achieving Targets should be prepared, which includes 'softer' data, as well as quantifiable indicators.

- We recommend that the Targets set out in the ETAG Action Plan are maintained at their current levels.

- We recommend that separate accounting should be adopted for school-leavers entering the working-age population and for adults who are already members of it.

- We recommend that annual changes in qualifications and participation levels are monitored, with a view to revision of the Targets should it become clear that they will not be achieved.

- We recommend that regional variations are devised to the national framework of Targets, reflecting differences in socio-economic conditions.

- We recommend the introduction of a Target for Level 5 qualifications.

- We recommend that attainment levels in Welsh and participation in Welsh-medium education and training should be monitored and reported annually, but without the specification of targets.

- We recommend that commentary on wider patterns of adult learning should be included as part of the 'softer' data in the annual report on progress towards achieving the Targets proposed above.

- We recommend that the main source used to monitor the Targets should continue to be the LFS, and that this be boosted in Wales for the same season every year.

- We recommend that alternative sources continue to be used to monitor progress among those not in the labour force.

- We recommend the creation of a national data-base to collate information from a variety of sources on participation and qualifications.

- We recommend that, where appropriate, the Targets are expressed in terms of average qualification (or participation) per resident.

- We recommend that trade apprenticeships continue to be divided between Levels 2 and 3 as currently, but that other qualifications are treated as Level 1, and 'don't know' etc. are treated as unqualified.

- Further we recommend that once agreed on, these assumptions are published and used exclusively in setting and monitoring targets.

- We recommend that the growth over the two parts of each Target (to 2002 and 2004) should be proportionately equivalent; and that changes should be calculated in genuine proportions, not percentage points.

- We recommend that the regression models illustrated in this study be adopted to produce best estimates of future levels of qualifications and participation.

CHAPTER 1: INTRODUCTION

1.1 Background to the report: the rise of target setting for education and training

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). Outside the UK, the use of national educational 'plans' and associated targets has been well established in state-centred countries such as Singapore and Taiwan for the last fifty years. However, a coherent and strategic drive towards a comprehensive nation-wide system of educational targets did not emerge in the UK until 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).

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 Lifelong Learning targets were recommended in the 1999 ETAG Plan:

Lifelong Learning

- The numbers of 16-18 year olds without qualifications to reduce from some 1 in 5 in 1996 to 1 in 10 by 2002 and to 1 in 20 by 2004
- The numbers of 19 year olds without an NVQ level 2 or equivalent to reduce from over 1 in 3 in 1996 to some 1 in 5 by 2002 and to fewer than 1 in 5 by 2004
- 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
- The proportion of working age adults with functional basic skills in literacy to increase from some 8 in 10 in 1996 to at least 9 in 10 by 2002 and to above 9 in 10 by 2004
- The proportion of working age adults with functional basic skills in numeracy to increase from over 5 in 10 in 1996 to 6 in 10 by 2002 and to above 6 in 10 by 2004

Widening participation

- The number of participants in educational and training to increase by at least 10000 annually from 1999 to 2004

Employer participation

- The percentage of organizations with 50 or more employees with a commitment to the Investors in People standard to increase from 30 per cent in 1997 to 35 per cent by 2002 and to 38 per cent by 2004
- The percentage of organizations employing 200 or more people with a commitment to the Investors in People standard to increase from 52 per cent in 1997 to 75 per cent by 2002 and to 80 per cent by 2004

(ETAG 1999, p.32)

Alongside these targets, the ETAG action plan also recommended that the National Assembly for Wales commission research to assist in the refining and revision of the Lifelong Learning targets to ensure that they are presented on a consistent basis. It is this research, carried out by a team from the School of Social Sciences at Cardiff University, which forms the basis of this report.

1.2 Aims and Objectives

In evaluating the Lifelong Learning Targets, the research team, therefore, had the following aims and objectives, as set out in the Project Brief.

The ETAG *Action Plan* (1999) includes a recommendation to undertake further research to confirm the suitability or otherwise of the proposed indicators and targets. This project is designed to fulfil this recommendation and to help inform the development of a clear and robust set of lifelong learning indicators and targets for Wales, which are capable of being monitored at a national and sub-regional level. The aim of the project is thus: to review proposed indicators of, and targets for, post-16 qualifications attainment in Wales; to advise on their clarity, measurability and appropriateness; and to make recommendations in order to inform the development of a realistic, but challenging, set of indicators to guide the National Assembly for Wales in its decisions on setting and monitoring targets on lifelong learning.

More specifically, the objectives of the project are as follows. Each of the proposed indicators in LIFE and the ETAG *Action Plan* (1999) should be examined in terms of

their clarity, appropriateness, measurability, robustness, variability and availability. The research should also examine the feasibility of setting and monitoring additional indicators, notably Key Skills, and the feasibility of establishing alternative indicators.

Each target level proposed for the indicators in LIFE and the ETAG *Action Plan* (1999) should be reviewed, with the aid of time-series of historical data, and an assessment should be made of their realism and achievability. This should include review by reference to alternative data sources.

An assessment should be made of the existing sources of the data which underpin the proposed indicators, including the identification of any weaknesses in the data sources and proposals on how they may be overcome, together with points of detail that may affect their measurement over the next five years. Alternative data sources or methodologies should also be examined, especially those which would enable reliable monitoring of indicators at sub-regional (TEC area) levels in Wales.

Separate indicators and targets in England, Northern Ireland and Scotland have been developed. The research should take account of any relevant issues that have shaped their development. It should also draw out comparisons between the indicators and targets recommended for Wales and those for the rest of the UK.

Clear recommendations should be made on the appropriateness of the proposed lifelong learning indicators and associated targets contained in LIFE and the ETAG Action Plan, and on the appropriateness of setting and monitoring additional or alternative indicators and targets. Recommendations on the best methods for monitoring progress in lifelong learning at a national and sub-regional level should also be submitted.

1.3 Research design

In order to provide a comprehensive overview of the coherence and feasibility of the Lifelong Learning Targets, the research was designed to take place in three complementary stages:

(i) a review of previous research and evaluation of target setting in education and training, providing a national and international context for the Welsh targets;

(ii) a statistical analysis of progress towards the stated targets and a review of the technical challenges in collection and measurement of data;

(iii) an analysis of reaction to the Lifelong Learning Targets from users, practitioners, academics and policy-makers, based both on existing sources and an additional consultation with user groups.

On the basis of these three phases of research, recommendations and conclusions would then be drawn about the feasibility and robustness of the Targets as they presently stand and the need for further refinement and revision.

1.4 Structure of the report

The remainder of this report therefore takes the following form:

- An overview of target-setting in education and training in Chapter 2
- A review of the challenges faced in implementing the Targets in Wales in Chapter 3
- An analysis of progress towards achieving the current Lifelong Learning Targets in Chapter 4
- A summary of the reactions to the Targets in Chapter 5
- Conclusions and Recommendations in Chapter 6

CHAPTER 2: AN OVERVIEW OF TARGET-SETTING IN EDUCATION AND TRAINING

Summary of Chapter 2

- targets must be both policy-relevant and policy-friendly (timely, comprehensive and few in number)
- a complementary/concurrent system of independent evaluation of the *processes* through which the targets are being achieved is required (i.e., not just a focus on end data)
- the established framework of education targets and performance indicators developed from international models such as OECD and UNESCO covers the three stages of educational inputs, processes and outcomes
- despite a wide recognition of their value, the use of quantified lifelong learning targets outside the UK is not widespread. In expressing progress towards declared targets within a time-frame, the ETAG Targets are considerably more exact and demanding than those in other countries
- targets are both a powerful statement of policy and a means of monitoring education systems and fulfil different functions for different audiences, with clear economic, political, educational and social roles
- it is acknowledged that 'high quality' targets must be (i) useful to policy-makers, (ii) have relevance and endurance, (iii) be positioned as part of wider educational reforms and (iv) be accepted and valued by practitioners. A capacity to consult is therefore essential if targets are to be acted upon by disparate actors who can feel a sense of common ownership

2.1 Introduction

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 recognizing the need for introducing targets for participation and achievement in vocational and non-vocational learning across adult populations.

This present concern with measuring educational 'quality' can clearly be located within broader concerns with 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'. Indeed, 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. Against this background, lifelong education and training now finds itself under increasing scrutiny and measurement.

2.2 What are educational targets and performance indicators?

The setting of education targets is generally seen as an aspect of the use of performance indicators in education. Although specific definitions vary, it is generally accepted that performance indicators are designed to provide information about the state of education systems, usually in comparison with one or more reference points (Nuttall 1994). Therefore, in setting targets, countries can adopt either diagnostic 'indicator systems' or reward-led 'accountability reporting systems' of education target setting (Sheldon 1994). Targets can be criterion-referenced (i.e., against an ideal system or planned system objective), norm-referenced or synchronic comparisons (for example, comparison with other education systems at the same point in time) or self-referenced or diachronic comparisons (for example, comparison with the same system at a different point in time).

Whilst the early development of educational indicators in Europe and the USA tended to focus on costs and enrolments as the most readily available data, later models began to include outcome data (such as educational achievement and employment levels), as well as process indicators (such as educational organization and policies). For example, the OECD Indicator Model focuses on the causal progression from educational contexts to educational processes to education results (see Figure 2.1).

Figure 2.1 - OECD Indicator Model

Educational Contexts	Educational Processes	Results
National demographics, economics, Public opinion	*educational resources, participation, staffing*	*student achievement, graduation rates, youth employment, earnings*

(Walberg and Zhang 1998)

Indeed, the tripartite 'Input-Process-Output' model has since formed the basis for many suggested frameworks of educational indicators (see Figure 2.2). As an early CIPFA report on educational indicators summarized:

> Input and Process and Output all have qualitative aspects and some interdependence. For instance, indicators of 'input' alone are not appropriate as indicators of quality, but they contribute towards an overall view of [education], not least to a judgement about effectiveness and efficiency. 'Output', in what is learned and taken away, is the factor which matters most. Assessing it quantitatively and qualitatively, and its relation to the objectives and the qualities which people brought into the process, are the ultimate goals of work on performance indicators; we are only now at the very first stages of a long process. (CIPFA 1986, p.2)

2.3 International comparisons

Despite long-held recognition of their value, quantified education and training targets are not, in practice, in widespread *use* outside of the UK. Indeed, in expressing progress towards declared targets within a time-frame, the UK National Education Targets are considerably more demanding than the few other countries which have formally-stated aims and objectives for their education and training. Nevertheless, brief consideration of the most comparable international sets of lifelong learning targets provides a valuable context for the setting of Welsh targets (Jagger *et al.* 1996, Loveman 1997).

Australia: Australia probably boasts the most comprehensive set of national education and training targets outside of the UK, although they stop short of NVQ level 4 equivalent. By 1997, two national foundation targets had been adopted:

- By 2001, 95 per cent of 19-year-olds are participating in/or will have completed some formally recognized education and training beyond Years 10 or 11
- By 2001, 60 per cent of 22-year-olds are expected to have AVC level 3 or higher, or be proceeding to a higher qualification

Moreover, Loveman (1997) reports that work was also underway to develop a set of key national performance measures, including employer satisfaction with graduates from different training routes and the outcomes for learners who have achieved qualifications (i.e., gaining employment, going on to further study).

Figure 2.2 - CIPFA, DES and FEU early proposals for frameworks of educational targets

Inputs	Processes	Outputs / Outcomes
CIPFA (1986) - Performance Indicators in the Education Service		
staff finance schools equipment students	policy-making staff training administrative practices involvement of parents	Practical, social and intellectual skills attitudes to work readiness to be active as a citizen examination courses completed
DES (1990) - Performance Indicators in Higher Education		
applications (numbers or ratios per place) student entry profiles staff profiles	quality of teaching and learning value added student feedback	completion and pass rates destination statistics employer satisfaction
FEU (1990) - Performance Indicators in the Education and Training of Adults		
Student socio-economic circumstances student perceptions, roles and demands teaching resources competence levels of entry for students	length and content of course teaching methods and constraints student interaction on-course guidance	drop-outs examination pass-rates employment / educational progression competence and confidence levels staff and student satisfaction levels

France: After dropping a number of attainment targets in the late 1980s, a further series of targets has been introduced through legislation. These include:

- 74 per cent of 18-year-olds to reach baccalaureate level by 2000 (reduced from an original target of 80 per cent in 1987)
- 100 per cent of young people should achieve at least French Level V (equivalent to international level I - the first level of professional qualification)
- Double the number of apprentices by 2000 (from a base of 215,000 in 1993/94)

Singapore: There is a long history of development plans and goals in all areas of Singaporean society. For example, in 1991 a goal was announced to match the Swiss standard of living by 2020. As far as educational target setting is concerned, specific targets are set for universities, polytechnics and Institutes of Technical (Vocational) Education. Currently, these goals state that, by 2000, 25 per cent of the age cohort will be in university education, 40 per cent in polytechnics, 25 per cent in Institutes of Technical Education and 10 per cent pursuing other career destinations.

Romania, **Poland** and **Hungary:** These countries have also recently introduced targets for vocational education and training as part of on-going educational reforms, although without discernible target dates. These are a combination of broad goals (such as the Romanian 'organizing compensatory education intended for those adults who could not benefit from a proper basic education') and progress towards declared targets (such as the Polish 'increase the size of the student population to 33-35 per cent of people aged 20-24 compared to the current 20-22 per cent').

Other countries, such as **Korea**, **Taiwan**, **USA**, **Germany** and **Japan**, despite often detailed plans for educational development, follow the trend of avoiding explicit attainment targets. At best, goals are expressed in very generalized terms, as, for example, in the US National Education Goals (for instance, 'By the Year 2000, every American adult will be literate and will possess the knowledge and skills necessary to compete in a global economy and exercise the rights and responsibilities of citizenship').

2.4 Rationales for systems of educational targets and performance indicators

Targets can act powerfully both as a statement of policy and as a means of monitoring education systems. In this way, targets provide a clear focus for marshalling the efforts of a country's education and training system and enabling a shared understanding amongst all educational actors. In doing so, education targets clearly set out explicit priorities and are likely to emphasize some forms of education and training over others. As Loveman (1997, p.8) reasons, this setting of targets 'clearly indicates Priorities [and] focuses interest on and motivates people towards the selected Objectives'.

Unlike many other areas of education policy-making, there has been little sustained opposition to the general notion of national educational target setting in the UK. Indeed, the vast majority of the educational, business and political communities have consistently welcomed the clarification that national targets for education are perceived to bring to UK education. Nevertheless, the acknowledged rationales for setting educational targets vary across user groups.

Many commentators point towards the political stability that targets can bring to the provision of education, defining government's role in education and introducing an element of political accountability to educational outcomes. For example, as John Daniels of the Open University argues:

> Perhaps the greatest merit of declared targets is to bring some consistency, long-termism and even consensus to the government's role in education and training (Daniels 1994, p.23).

Conversely, governments around the world have been keen to emphasize the educational benefits of target setting, in terms of improving levels of both opportunity and outcome. For example, Dutch nation-wide attainment targets have the 'over-arching concern to safeguard and improve quality and to promote equal access to a common educational offering' (van der Brink 1993). Similarly, in the USA, the expressed purpose of establishing the Goals 2000 system has been twofold: 'first, to increase the achievement level of all students, and second, to provide equal opportunity education for all students' (Gronlund 1993).

Yet, it is the economic role of education target setting which underpins most countries' attempts to develop systems; as was indeed recognized early in the development of the NETTs:

> Britain's trading position in a rapidly evolving world economy depends crucially on competitive skills. It is vital that we close the skills gap with our major competitors. Up-to-date skills are also essential to personal success at work. A quantum leap in foundation learning by young people and lifetime learning is needed. That is why National Targets have been set to raise attainment (National Training Taskforce 1992)
>
> Achieving the National Targets will be an empty victory unless we can obtain the right occupational mix of skills to support the development of the Welsh economy (Welsh Office 1993a, p.27).

As Loveman (1997) argues, the UK government have been careful to avoid aligning themselves too closely to the NETTs, ensuring that they were seen as more credible employer-led targets. Thus, for many in business and industry, national targets for lifelong learning are seen as being 'essential to our national prosperity and competitiveness' (for example, Ball 1995), reflecting the economic imperative for educational target setting.

Nevertheless, outside of the educational, economic and political functions of educational targets, there is also an obvious social dimension to target setting. As NACETT (1998) outline, the NETTs are primarily aimed at achieving international competitiveness, but coupled with the promotion of social cohesion: 'We judge it essential that the action plans for hitting the new national targets should promote equal opportunities and that progress in securing equal opportunities in education and training should be monitored closely' (NACETT 1998, p.13). One of the crucial issues which arises in the operationalisation of targets is the extent to which this sort of social objective can be combined with the economic ones (see Chapter 5 below).

2.5 Criteria for high quality targets

As the international examples and varied rationales illustrate, target setting in education and training is by no means an exact science. Nevertheless, from our review of academic and professional literature, the following recurring areas have been highlighted as principal areas for consideration in setting 'high quality' targets.

Usefulness to Policy-Makers: Targets must be of direct use to education policy and policy-makers. The principal quality of an indicator is its utility in a policy context. Indeed, in providing information to policy makers about educational systems, indicators and targets play a crucial role in framing the terms of policy discourse. It is therefore essential that educational targets retain a relevance to the policy context in which they operate.

Relevance and Endurance: Targets must be relevant to the present educational context, whilst retaining a relevance in years to come. In reviewing the rise and fall in popularity of US social indicators, Nuttall (1994) highlights the dual importance of constructing educational targets which are 'enduring' (and thereby not merely derived

from political 'faddishness' or topics of the moment) as well as theoretically specific and justified. In developing targets which are both relevant and enduring, commentators such as Donald and Denison (1996) also argue for the use of broad indicators of educational performance, rather than narrowly specific measures.

Positioning Targets as Part of Wider Educational Reform: Setting targets on their own cannot be expected to be effective. As Loveman (1997) suggests, setting education targets is only one initial element of raising educational and economic performance, since targets can only effectively function within a wider framework of delegating responsibility to accountable actors and agencies, producing work and time plans and monitoring and reporting on progress. All of these need to be set in place and managed and run alongside the targets themselves.

Practitioner Acceptance: Targets must be accepted and valued by those expected to achieve them if they are to succeed. Research into the use of performance indicators in A-level provision has highlighted the need for such measures to be seen by practitioners as 'tools for the professional', to inform future provision rather than external, punitive means of public accountability, if they are to be accepted (Tymms 1995). As Williamson *et al.* (1992, p.186) conclude, 'empowerment rather than prescription must be the way forward.'

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. However, more specifically, the following areas are suggested in previous literature (Nuttall 1994, Loveman 1997):

- targets must be both policy-relevant and policy-friendly (timely, comprehensive and few in number)
- a capacity to consult is essential if targets are to be recognized and acted upon by disparate elements of the education system which can feel a sense of common ownership
- a complementary/concurrent system of independent evaluation of the *processes* through which the targets are being achieved is required (i.e., not just focus on end data)

It remains to be seen, of course, how far these general criteria can be translated into the specific context of target setting in Wales. It is to this issue that we turn in the next chapter.

CHAPTER 3: CHALLENGES FOR IMPLEMENTING TARGETS IN WALES

Summary of Chapter 3

- The current emphasis on readily measurable targets means that there is a danger that their attainment becomes an end in itself for policy-makers, rather than a way of measuring and encouraging progress towards actual improvements in society.
- All indicators and the measures based on them are prone to possible error at every stage.
- Even where steps to calculate indicators are explicit, some steps involve subjective judgements and estimates of unknown quantities. This is partly why different sources produce different figures even when using the same data.
- There is no clear comparability between supposedly equivalent qualifications over time, place, or mode of assessment.
- The assumptions made in calculating progress towards targets should be explicit, and once selected and generally agreed, they should remain the same over time to enable easier comparisons between years.
- Many potential data sources have technical problems, most commonly low response rates and lack of comparable repetition.
- The best source appears to be the Labour Force Survey, supplemented *annually* by boosted samples for Wales. The boosted versions are necessary to enable realistic analyses at the regional level within Wales (such as the TEC areas or equivalent).
- Even with the LFS, changes over time in questions and timing make long-term trend analysis a complex and subjective process.
- There is no unproblematic link between qualifications and skills.
- Growth of indicators for Lifelong Targets has been so low (apart from where qualified school-leavers join the working-age population) that previous studies have generally assumed that *no* qualification takes place outside initial formal education.
- There is no evidence of regional or local factors affecting levels of attainment or progress towards targets, once the characteristics of individuals are taken into account.

3.1 Introduction

Chapter 2 has highlighted broad-level, theoretical considerations. However, the practical process of target setting is also a huge *technical* undertaking. This chapter, therefore, reviews some of these general technical considerations in setting education targets. It also examines the available Welsh data-sets in relation to the Lifelong Learning Targets specified in ETAG (1999). It should be noted that where variations are described between the results of different sources using apparently the same data, the intention here is to emphasize the complexity of the analytical undertaking, and stress the need for a shared and transparent set of assumptions. There is no intention to criticize any organization or individual, and no attempt to suggest that any one set of assumptions is clearly superior to any other.

Although previous targets and those suggested in other countries have been radically different, the types of target used by ETAG take much the same form. For the most part, each Target consists of a relationship between four main elements: an indicator; a population; a year; and a proportion or percentage. Thus, a typical target requires w per cent of x people to have y characteristic by z year. Each of these elements raises issues related to measurement and assessment; and these are considered in turn in what follows.

3.2 Indicators

Some of the early targets in Wales, as well as targets elsewhere and those suggested in consultation exercises, are not directly measurable. For example, Foundation Target 4 and Lifetime Target 1 from 1993 were intended to provide a 'qualitative' dimension, but their indicators are not defined by NACETT (Welsh Office 1993b). The original Foundation Target 4 required 'Education and training provision to develop self-reliance, flexibility and breadth'. This type of unmeasurable target has been progressively removed, and none are listed in ETAG (1999). This omission has practical advantages for measurement, but has the potential disadvantage of privileging the visible and easily counted indicators, at the expense of more complex and perhaps more subtle evidence. Through encouraging concentration on measurable items, there is a very real danger that the targets become an end in themselves (Johnstone 1981). Moreover, all indicators 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).

Indicators with the same title

Doubts have always existed over the reliability of examinations leading to qualifications with the same title, and whether these are comparable over time. For example, evidence has been presented that the mathematical skills of candidates achieving the same grade at A level has declined (Kitchen 1999). It has also been claimed that the level of attainment required to gain Level 4 at KS2 has fallen. Whereas students needed 52 per cent to gain Level 4 English in 1997, the corresponding figures for 1998 and 1999 were 51 per cent and 47 per cent respectively (Cassidy 1999a). The response from the Qualifications and Curriculum Authority (QCA) has been that such percentages are bound to change over time, as the difficulty of the tests vary year-on-year, but that these differences are not educationally significant. Since in 1998 only 65 per cent of

candidates gained Level 4, it is also claimed that the target has been retained, but that the pass-mark has been dropped. An independent enquiry was ordered into these matters, the results of which have mainly supported the QCA position. More generally, in some comparisons of standards of attainment over time, there has been no firm evidence of change, and in others there have been improvements. For example, an analysis of successive GCSE cohorts from 1994 to 1996 found a significant improvement in performance over time (Schagen and Morrison 1998), although it is possible to question the reality of this improvement in strict criterion-referenced terms. This debate, therefore, encapsulates the problems of discussing changes in assessments over time.

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. It is already clear that even qualifications with the same title are not 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).

Some school headteachers have condemned the marking system for national tests after it was claimed that scripts had been lost and test scores added up incorrectly. It is reported that one school checked the results after return to them and found nine errors in adding up the marks in 60 KS3 mathematics scripts (Cassidy 1999b). According to some English teachers, students taking this year's tests in English for 13/14-year-olds would have needed a reading age of 16 (Cassidy 1999c). Of course, claims such as these have not been substantiated by rigorous data analysis, but the fact that they are even possibilities does help to question the reliability in national assessments. The fact is that even the narrow version of propositional knowledge tested by examinations is very difficult to assess. There is general confusion between the use of examinations for formative, summative, and target purposes (Holt 1981, Daugherty 1995). In a letter to *The Times* in 1976, Nuttall says 'The message is clear: examination standards do not necessarily tell us anything about educational standards.'

Some targets, while retained and ostensibly similar, have in fact changed over time (see Chapter 4 for a full analysis). 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). This made the target harder to attain but also made comparisons over time more difficult.

Comparability of indicators with different titles

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). Despite this, there has always been a very large range of such qualifications. This range makes comparison and aggregation difficult. Moreover, where vocational qualifications are being recorded by different bodies to academic qualifications, there is also a danger of 'double-counting'.

The equivalence between different qualifications, such as is used to define the 'levels' for targets, requires judgement and some guesswork. Robinson (1997) 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. Examples of the equivalence decisions facing an analyst using the Labour Force Survey (LFS) (and many other sources as well) are given below.

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 it may be assumed 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 recognized 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' would 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 have previously allocated 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 classified in the LFS as 'other qualifications' (i.e., not one of the other named 46 qualifications). The Department for Education and Employment (DfEE) and Welsh Office assumption has been that 10 per cent of these qualifications are at level 3, 35 per cent are at level 2, and the remainder at level 1. Since this group is so large (8 per cent of the base in 1998), 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 1. Trade apprenticeships 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. If the individuals with A levels are divided into those with

2 or more and the others, and those with O levels are divided into those with 5 or more and others, then the impact of these assumptions can be tested.

For example, Table 3.1 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, but declining over time. If this were based on a decline in the proportion of 'other qualifications', the superior growth in the second row in each case could be interpreted as lending support to the official interpretation, but the picture is not at all clear yet.

Table 3.1 - 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

Multiple indicators

The concept of a core subject indicator (CSI), measuring whether an individual obtains qualifications in a range of subjects, is relatively recent and records have until recently only shown the number of qualifications. It is therefore very difficult to assess progress towards targets involving CSIs.

The size of indicator and target sets has been a contentious issue. Indicators themselves are usually composite entities or variables, and when used as a set it is recommended that these do not overlap (Johnstone 1981). However, variable selection for indicators is notoriously bad, not being based on theory or on empirical derivation, but often simply on convenience. It is for these reasons that a technique such as factor analysis has been advocated to reduce the number of indicators and associated variables, and to ensure that those used do not overlap (Walberg and Zhang 1998). The results are usually also simpler and more parsimonious. The external validity of indicators is assumed to rely on no underlying variable being used in more than one indicator (no duplication), and on completeness (no missing variables, or bias through omission).

Some commentators have gone as far as to suggest a single composite 'mega-indicator' of success, along the lines of a 'Gross National Educational Product' (Gutherie 1993). On the other hand, while understanding the desire of busy policy-makers and managers for a limited and simple set of indicators, and the researchers' desire for a parsimonious one, there are dangers that arise from keeping the set small (Nuttall 1994, p.23). At the other extreme, is the OECD indicators model developed during the 1980s, based on 25 previous models, and originally consisting of 635 educational indicators. However, there is severe doubt over the utility of this approach. Walberg and Zhang's (1998) later factor analysis of the original OECD 635 educational indicators revealed that most of the variation in these indicators could be captured by as few as 50 key composite factors.

3.3 Population

Some of the targets for individuals specify a precise age, such as 19-years-old, while others specify an age range, such as working age (16-59 or 64). Previous targets have used vaguer terms such as 'adults' or 'young people', which are not always comparable. Some have used those in employment, or those available for work, and more recently those of working-age. Adults have been variously defined as being over 16, over 19, or over 21. Clearly, the nature of the target and progress towards it is dependent upon the precise nature of the population specified.

The Welsh Office (1993b) 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 and take a 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.* 1998). Perhaps one indication of this consideration is that 'local' targets are themselves problematic by their very nature in an era of mobility and perceived globalization.

Although the population characteristics for the Lifetime Targets can only be assessed by survey (except where they are covered by the Census of Population), there is evidence that a sample can be as accurate as a census and perhaps even preferred (Johnstone 1981). For any indicator collected by survey, an estimate of the population characteristic can be formed from the sample characteristic (for example, proportion of level 2 qualifications), and the standard error (dependent chiefly on the sample size). The relevant population characteristic is 95 per cent likely to lie within the range:

$$\pm 1.96 * \sqrt{(\text{sample proportion} * (1 - \text{sample proportion}) / \text{size of sample})}$$

This calculation is based on a true random sample design. For the more common form of stratified, or even rolling, sample design, the standard error will be larger (Education and Training Statistics 1997).

3.4 Year

The clearest single issue relating to time is the consequence of changes in the definition of data, and the problems that result for reliability (Johnstone 1981). Even apparently minor inconsistencies, such as varying the day of an annual census, can have profound impacts. As can be seen in Chapter 4, there are large seasonal variations in indicators such as participation in 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 the consequent changes over each quarterly season have large sampling errors, and should be treated with caution. 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). Changes in the completeness of data can lead to apparent changes in performance (FEFCW 1998).

Over time, a number of initiatives and policy changes have altered participation rates and qualifications for adults and young people. Since policies are generally slow to produce quantifiable results, it is difficult to predict what, if any, impact these will have on progress towards the targets in Wales. They include the introduction and growth of GNVQs, NVQs, IiP, and MAS. Post-16 education has been increasing, but may have peaked (Schagen *et al.* 1997). Examination scores have been polarizing, with the high achievers improving faster according to some accounts but not others (Gorard 1999). Girls have been improving their qualifications relative to boys at all levels according to some accounts, but not others (Gorard *et al.* 1999d). There is a blurring of the boundaries between educational routes, and a disputed proportion of 'hard to reach' 16- and 17-year-olds (Rees *et al.* 1996). Until some of these issues are resolved it might be considered foolhardy to make firm predictions based on anything other than past patterns.

3.5 Proportion

Setting an appropriate target in terms of the proportion of the population with an indicator is a complex task. Using level 4 qualifications as an example, there are several factors affecting the future attainment rate for L4. The overall levels are likely to be increased by a continued growth in professional and managerial posts filled by higher qualified people, as predicted by most employment forecasts (Jagger *et al.* 1996). The overall levels are liable to be reduced, however, by the growth of part-time and less skilled occupations. In order to calculate the desired proportion for any indicator, it is necessary to profile the new entrants to the workforce, those in the workforce, re-entrants (mostly women), and those leaving the workforce (mortality, retirement or redundancy). Jagger *et al.* (1996) estimated from the qualification rate of new entrants to higher education (HE) that there will be a 15-20 per cent 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. This is one reason why the margin of error should be quoted with the findings (Welsh Office 1993b), as it assists in the distinction between change in the achieved sample, and change in the underlying population.

The steps involved in calculating the current value of an indicator are given in Welsh Office (1993b). For example, Foundation Target 1 specifies 19-year-olds, whereas the LFS combines 19- to 21-year-olds, so the value for this age group is used as a proxy. Similarly, Foundation Target 3 specifies 21-year-olds, whereas the LFS combines 21- to 23-year-olds, so the value for this age group is used as a proxy. For each indicator, measurement involves adding six figures together. The steps for the calculation in 1994/95 are given as:

Step 1: Count the number of 16-year-olds gaining 5 or more GCSEs at grades A-C in schools. Add the number of people achieving the standard at 17, 18 and 19.

Step 2: Add in non GCSE NVQ 2 equivalents from schools by 16-19 year olds.
Step 3: Add NVQ2 equivalents gained in colleges.
Step 4: Add NVQ2 qualifications gained at YT from TEC records (subtract those qualifications received at college to avoid double counting).
Step 5: Add any other employer training which does not use FE or YT.
Step 6: Add any other sources for NVQs, such as the armed forces or approved schools.
Step 7: Multiply by 100 and divide by the denominator figure of the total number of 16-year-olds in the population.
Step 8: Take into account double counting (i.e., those gaining the standard through both academic and vocational routes).

There are suggestions from Welsh Office (1993b) that employers may be able to identify employer training. The Youth Cohort Study suggests that 9 per cent of the age cohort are double-counted (taking NVQ and academic qualifications), but 2 per cent of students have qualifications split between years or institutions (and so avoid being counted at all). These need to be taken into account before a final proportion is settled on for publication. Despite the detailed nature of the steps and the suggestions for information sources, there are many ambiguities unresolved in the calculation. For example, on one interpretation, by adding scores involving 16- to 19-year-olds and then dividing by the number of 16-year-olds, it is theoretically possible to obtain more than 100 per cent.

3.6 Sources

The Welsh Joint Education Committee (WJEC) and Welsh Office maintain national records of school-based composition, participation and qualification. Therefore, sources for the foundation indicators are as reliable as official statistics can ever be. Although there is no database of equivalent quality for adult learning, at first sight, many different sources are available which give an estimate of the frequency of lifelong target indicators in the population, and several of these are used in the next chapter. However, on consideration, all such sources suffer from defects and none is clearly preferable overall to the quarterly Labour Force Survey. Therefore, other sources are used in the next chapter primarily as a check on, or for calibration of, the LFS results.

Potential sources include the Labour Force Survey, Youth Cohort Study, GNVQ student database, Welsh Employer Survey, Future Skills Wales, TEC labour market surveys, the Modern Apprenticeship Scheme training database (plus Training for Work and Youth Training records, held by DfEE), the Basic Skills Agency, the Individualized Student Records from FEFCW, regular NIACE surveys (for example, Tuckett and Sargant 1999 used 5,054 residents including 483 in Wales), Eurostat, National Adult Learning Survey, National Information System on vocational qualifications (held by DfEE), NCVQ returns on NVQ, Census information, and academic studies (for example, Youth Cohort Study, ESRC Learning Society Programme, and National Child Development Study).

The problems encountered with many of these sources have already been suggested above. One-off surveys such as Future Skills Wales, Basic Skills survey (2,000 residents in Wales aged 16-64), and the National Adult Learning Survey (5,653 interviewees aged 16-69 in England and Wales) 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. In some cases, there may be a process of 'Chinese whispers', with some sources, such as Eurostat (1995), citing other primary sources, such as the Community Labour Force Survey, which might therefore be better used instead. In other 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 per cent. The study drew a sample of 29,951 employers, but only 5,790 (or 19 per cent) 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 the 1,866 employers whose telephone number was unobtainable, engaged or not recognized; and the 1,222 who did not keep appointments, for example. All of these omissions may introduce bias into the sample. No equivalent response rate is given for the survey of residents. Given these circumstances, any conclusions drawn must be treated with caution. In interpreting the data, it must be borne in mind that the survey may over-represent larger, more successful employers (who are less likely to move, or be cut off by BT, or who employ several telephonists, for example), and these are more likely to report training. Other surveys exhibit limitations of different kinds. The survey in Wales for the Learning Society Programme only covered industrial South Wales. 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; the NISVQ and NCVQ databases hold records of qualifications awarded but not individuals; and the OFSTED databases are too detailed for easy analysis.

Despite its own shortcomings as a measure of targets (see below), 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 1993b). It uses a rolling sample (80 per cent 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, and it is of a size that allows analysis in terms of characteristics such as gender, ethnicity, age, and occupation. However, using indirect sources such as the LFS may lead to 'fractional measurement', where variables are not measured in the way required (i.e., incompletely) and this can reduce internal validity (Johnstone 1981). However, in the absence of a tailor-made survey just for target indicators, Schagen *et al.* (1997) conclude in their appraisal of sources in England that there is no reason to reject the findings from the LFS, and they use it as their recommended source.

As with any survey, once the figures are broken down into standard statistical regions (for example, Wales) or by TEC areas, the level of reliability drops. For this reason it has been helpful to have intermittent boosted LFSs, organized by the Welsh Office in conjunction with the TECs, which probably give the best estimates available at a local level. For example, in Winter 1994/1995 the standard LFS contacted 3,130 households in Wales and the boosted survey contacted a further 3,870, giving around 1,000 households per TEC area and 16,216 interviews in all (Welsh Office 1994a, 1995). Similarly, because the LFS is too small to provide reliable data by the seven 1981 TEC areas in Wales, a boosted survey was run in Winter 1995/1996, in each TEC area,

which permitted an assessment of progress towards Lifetime Targets 1 and 2 (Education and Training Statistics 1997). It would undoubtedly be helpful to repeat these boosted surveys on an annual basis in future, to permit the provision of valid data for the Regional Economic Forum areas and for the TECs.

Changes to the LFS

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).

3.7 Regional differences

It is generally considered unreliable to use the standard LFS at the level of TEC areas or below (Welsh Office 1993b), and although regional comparisons may be more reliable, this is of no help in Wales which has hitherto been treated as a standard statistical region of Britain for disaggregation purposes. It is possible to combine, or average, different cohorts of the LFS to give more reliable estimates of local differences (Schagen *et al.* 1997), allowing TECs and LEAs to monitor their progress towards targets for example. Working at levels below this (using indicators for institutions, for example) there is always a danger of misinterpretation where small differences are treated as real changes.

As part of their review of targets, Schagen *et al.* (1997) set out to assess the relevance of regional differences. In raw-score terms, they reported figures ranging from 73 per cent in London and 58 per cent in the Midlands for Foundation Target 1 (level 2), and similar differences for level 3. Using logistic regression with a dependent variable of reaching the level (or not), and explanatory variables such as area of residence, gender, occupation, age, and ethnicity, they found little evidence of a distinct 'regional effect'. That is, once individual and institutional variations were taken into account, there was no significant difference between the regions. There is no reason to assume that the same is not also the case in Wales. In effect, progress towards attaining Targets in all parts of Wales, while different in both base figures and proportions, may be assumed to be equivalent, once population characteristics and their spatial distributions are taken into account. This notion is similar to that used in 'value-added' analyses of the performance of schools.

3.8 Calibration

Calibration of data sources consists of using estimates of the same quantity from two or more datasets in order to judge their consistency. In a sense, this is carried out throughout Chapter 4. However, as can be seem from the above limitations, unless all available figures also carry a list of underlying assumptions (for example, how are

'adults' defined? what is 'low level literacy'? how do nursing qualifications and trade apprenticeships compare? is a baccalaureate at level 3?), calibration is extremely difficult. 'There are serious difficulties in attempting to assess the reliability of one dataset by comparing its results with those of others' (Schagen *et al.* 1997, p.16). As has been demonstrated above, and is further elaborated below, if there is a consistent pattern, it is that official publications and the results from the LFS supplied by the Welsh Office generally present higher rates of progress than those from the LFS supplied by NOMIS. It is extremely difficult to interpret such variations in the absence of a clear specification of the assumptions and methods used. However, some possible explanations for this are discussed in Chapter 4.

In the next chapter, many of the technical factors considered here are illustrated in the context of an assessment of progress towards the achievement of the Lifelong Learning Targets in Wales.

CHAPTER 4: ANALYSIS OF PROGRESS TOWARDS CURRENT TARGETS

Summary of Chapter 4

- Most Targets have evolved over time since 1991, and have generally become less stringent in terms of time and proportion, but some have become more stringent in terms of the specified population.
- Of the schools Targets, only those for absenteeism and Levels 1 and 2 have figures for trends, and of these only the trend for Level 2 is clearly on target. The Targets for CSI, inclusiveness and 'looked-after' children cannot currently be measured.
- Both Targets to reduce the unqualified are attainable, particularly for 16- to 18-year-olds.
- Similarly both Targets for Level 2 are attainable, and to some extent depend on the assumptions made in calculations.
- The Target for Level 3 is unlikely to be achieved, and will be more like 40 per cent than 50 per cent by 2002. However, progress in Wales is as good as in England and Scotland (as it is for all comparable Targets).
- Attaining the Target for Level 4 is just about possible, but perhaps more like 24 per cent than 25 per cent by 2002. Again it depends on the assumptions made.
- There is no Level 5 Target, but the indicator will be around 12 per cent by 2002.
- The Basic Skills Target is vague in its terms, and hard to measure.
- Participation cannot be measured at present, and is anyway phrased in an inappropriate raw figure. Work-based training shows a slight decline, while retention of 16- to 18-year-olds in education shows a marked increase. Growth is concentrated in formal, public, initial education.
- Both Targets for Investors in People (IiP) are within reach.
- International comparisons of education show Britain to be well-placed both in terms of qualification rates, and inclusion. The relative weakness is in work-based training (especially its duration, rather than frequency).
- Much of the recent progress towards Lifelong Learning Targets is accounted for by better qualified school-leavers replacing less qualified 'retirees' in the working-age population. In fact, as much as a half of the growth in relevant indicators may be due to this continuous process of 'population change'. This has clear implications for the effects of actual increases in qualifying amongst those already in the potential workforce.
- Work-based training is largely unrelated to trends in qualifications and skilled occupations.
- There are no clear differences between the home countries, or between parts of Wales in progress towards the Targets. Nor are there differences between sections of society.
- Overall, the Targets have had little impact on the growth of indicators since 1989.

4.1 Introduction

This section considers each of the Lifelong Learning Targets in turn, in the context of the best estimates available of recent and projected progress towards them. As a preliminary, this section also briefly discusses the schools-based Targets and examines some of the ways in which they differ from the Lifelong ones.

4.2 Targets for schools

The ETAG *Action Plan* (ETAG 1999) suggested a number of Targets specifically aimed at schools, to increase qualifications at Key Stages 2 to 4 and improve attendance at school. These included:

Key Stage 2
Within the context of a broad and balanced curriculum, the percentage of pupils attaining at least level 4 in the core subjects should be lifted into the 70-80 per cent range by 2002 and to the 80-85 per cent range from 2004.

Key Stage 3
Raise the percentage of those attaining at least level 5 in the core subjects to the 70-80 per cent range by 2002. From 2004 it should be possible to go further still into the 80-85 per cent range.

Level 2 Qualifications
Increase the percentage of 15-year-olds achieving 5 GCSEs A* to C grades or equivalent from 34 per cent in 1997, to 54 per cent by 2002 and to 58 per cent by 2004.

The percentage of 15-year-olds achieving 5 GCSEs A* to G grades or equivalent should be lifted from 80 per cent in 1997, to 91 per cent by 2002 and to 95 per cent by 2004.

Core Subject Indicator
The percentage of 15-year-olds achieving GCSE A* to C grades or equivalent in Maths, Science, Welsh or English (in combination) should exceed the mid point in the BEST range of 40 to 60 per cent by 2004

Absenteeism
Absenteeism from school should be reduced to firmly below 8 per cent by 2004

LEAs
Local Authorities should work with schools to ensure that of 'looked after children' 80 per cent should leave school with at least GCSE or equivalent by 2004.

(ETAG 1999, p. 31).

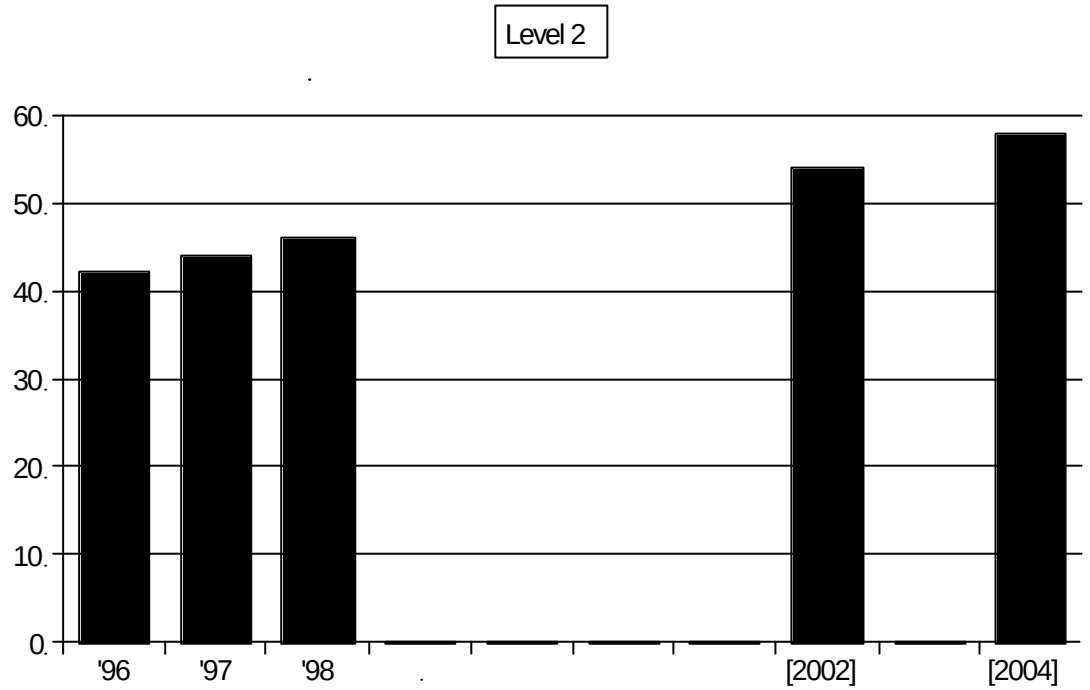
In some cases, these targets have already been revised from earlier versions. For example, the Bright Future programme originally contained a more stringent target for the Core Subject Indicator - 'By Year 2000 half of all individual 15 year olds get an A* to C grade in each of GCSE English or Welsh (first language), Mathematics and Science in combination' (*A Bright Future: the way forward* - December 1995). Schools now have until 2004, rather than 2000, to exceed the mid point of 40 to 60 per cent (i.e., 50 per

cent), rather than half (i.e., 50 per cent). (See Appendix B for further details of additional schools targets in the Bright Future programme.) In some cases, these targets are equivalent to, or higher, than the equivalent for England, and in other cases they are set lower. For example, the Targets set for England by 2002 include:

- 80 per cent of 11-year-olds reaching the expected standard for their age in literacy
- 75 per cent of 11-year-olds reaching the expected standard for their age in numeracy
- 50 per cent of 16-year-olds getting 5 higher grade GCSEs
- 95 per cent of 16- year-olds getting at least 1 GCSE

(DfEE *National Learning Targets for England for 2002*)

Figure 4.1 - Progress towards 5+ GCSEs at A*-C Target



The Key Stages 2 and 3 Targets are not easy to measure, and no figures are available yet for these. The same is true for the inclusion and LEA Targets (Welsh Office 1999). However, recent progress in terms of Level 2 qualifications is of the order of magnitude required to attain the 5+ GCSEs at A*-C Targets for both 2002 and 2004, even allowing for a slight downturn in proportionate growth (Figure 4.1). The progress towards the 5+ GCSEs at A*-G Target is proportionately much slower, and unless a dramatic change is imminent, the Targets for both years are unlikely to be reached (Figure 4.2). The Core Subject Indicator is harder to assess, but despite the vagueness of its phrasing, this target is unlikely to be attained without a major shift as a result of new examination entry policies or the literacy and numeracy schemes, for example (Table 4.1). At present, the figures for absenteeism appear to be rising, and therefore the Target for 2004 is unattainable without a major change (Table 4.1). Figures for progress towards school-based Targets from Bright Future and BEST which are not included in the ETAG plan appear in Appendix B.

Figure 4.2: Progress towards 5+ GCSEs at A*-G Target

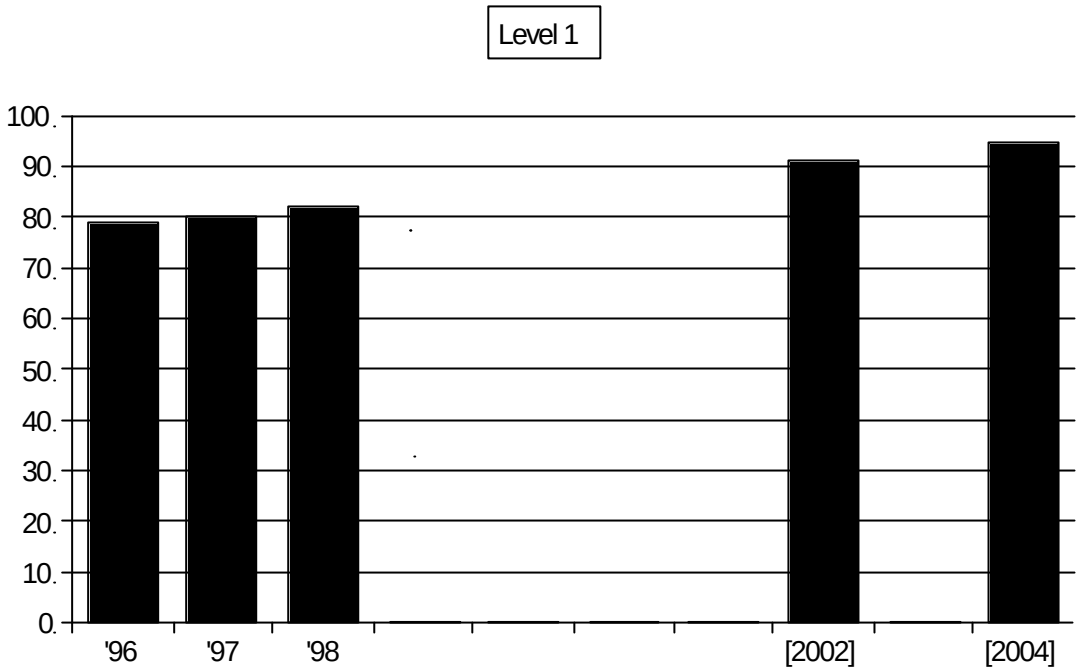


Table 4.1 - Progress towards the Foundation Targets (per cent)

School targets	1996	1997	1998	(2002)	(2004)
Level A*-C	42	44	46	(54)	(58)
Level A*-G	79	80	82	(91)	(95)
CSI	32	34	34	-	(>50)
Absence	10	10.2	10.4	-	(<8)

[Welsh Office 1999]

4.3 Differences between Foundation and Lifelong Targets

Every child at school is registered for Key Stages 1 to 3 tests, every school provides annual census returns to the Welsh Office, and the WJEC maintains a database of all qualifications taken by school-age children in Wales. For reasons such as these, the quality of data on progress towards school-based Targets is exceptionally high. There are undoubtedly mistakes in recording and transcription, as well as omissions, as there would be in any large data collection operation. Nevertheless, indicators for schools and individuals leaving school are essentially based on complete census data. At present, there is no equivalent dataset for post-compulsory education and training. There are equivalent school records for those remaining in school past the age of 16; and the Individualized Student Record (ISR) system maintains records on all those registered in Further Education institutions. However, sources such as these would be clearly biased as figures for the population as a whole. Only survey results are available to assess the overall changes in education and training in the adult population of Wales.

In addition, the two sets of 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 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. Hence, 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 4.2). Moreover, the proportion with this level of qualification is lowest amongst the older age groups. Therefore, apparent 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.

For example, the LFS suggests that some 44 per cent of females aged 59 and 34 per cent of males aged 64 have no qualifications; while 16 per cent of females aged 16 and 20 per cent 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 per cent of 20,000 and 34 per cent of 20,000 (or 7,800) unqualified people leave the work-force on retirement, and 16 per cent of 20,000 plus 20 per cent of 20,000 (or 3,500) unqualified people join it. If in 1998, 20 per cent (or 364,000) of the workforce had no qualifications, then in 1999 the figure would be 364,000 - 4,300 (or 359,700).

Similarly, if it is assumed that every year from 1993, 40 per cent 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 per cent 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 per cent 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 per cent 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 per cent 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 per cent 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 per cent 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 per cent of the working-age population, again without any improvement in terms of qualifying adults at all. Again, perhaps half of all historical progress in this indicator can be attributed solely to these population changes. Accordingly, the partitioning of these two processes needs to be computed with more accurate annual data than are available

at present. Their respective trends need to be closely monitored, as they cast significant light on the true impacts of different policy initiatives.

Table 4.2 - The results of school-leavers in Wales (per cent) (*numbers*)

Wales	1992	1993	1994	1995	1996	1997	1998
15-year-olds	*32949*	*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
CSI	-	-	-	-	32	34	34
17-year-olds	*36300*	*34900*	*34300*	*33500*	*34700*	*38000*	*37600*
2+ A-levels	-	18.7	19.5	18.9	19.3	23.4	20.6
Advance GNVQ	-	-	-	-	-	3.6	6.1

[calculated from WJEC data]

To some extent, therefore, the Lifelong Targets are not actually 'lifelong', but are partly an extension of the impact of targets for initial education. This finding is confirmed by the results of a factor analysis carried out on all indicators of education and training in the LFS.[1] This analysis suggested two latent factors - a 'training' factor and a 'qualifications' factor - underlying the 80 variables used and explaining 87 per cent of the total variance (and given that the total variance must include an unknown error component, these two factors probably explain the vastly majority of the variance that

[1] The initial variables are the scores from the LFS (via NOMIS) since May 1992 for: the proportion of the workforce involved in training in the four weeks previous to the survey; the proportion of employees in unskilled occupations; the proportion of 16- to 18-year-olds in full-time education; the proportion of the workforce with Level 3 qualifications; and the proportion of the workforce with Level 4 qualifications (as available). The scores for Wales, Scotland and England are used, as well as the scores for the seven 1981 TEC areas in Wales. The scores from Wales for: employed/unemployed, over/under 25, male/female, in service/other industries, and service/other class, are also used.

Each score correlates significantly with other scores. Extraction was by Principal Components Analysis with Varimax rotation to the best solution (see Chapter 3 in Gorard 1997). Several models were tried (with and without scores for Level 4, for example, since they are only available from 1996), and in each model the two components described here were stable. Only loadings greater than 0.3 are shown.

2 Where users' views have been made in the public domain then they are attributed to the respective body. In the case of responses to the LIFE consultation and the present evaluation project views will be attributed on a sector-wide basis.

is explicable). The loadings (or correlations) between each factor and its associated 'surface' variables are also very high (Table 4.3). Given that there must be an error component, both in the collection of the data and in the analysis, the correlations in Table 4.3 suggest that each of the surface variables is actually a pure factor variable in its own right. A correlation of 0.97, for instance, means that it is impossible, in practical terms, to distinguish between the progress of training in Wales and the progress of training as assessed by any other variable.

Table 4.3 - Loadings for two factors of progress

Variable	Training factor	Qualification factor
Training Wales	0.97	
Training employed	0.97	
Training 25+	0.95	
Training service industry	0.94	
Training service class	0.93	
Training female	0.89	
Training male	0.87	
Training England	0.82	
Training Scotland	0.81	
L3 employed		0.95
L3 Wales		0.95
L3 England		0.94
Unskilled England		-0.84
L3 Scotland		0.73
Unskilled Wales		-0.72
FTE Scotland		0.70
FTE Wales		0.66
Unskilled Scotland		-0.66
FTE England		0.64

It should be noted that these findings are indicative/exploratory rather than final, since the proportion of cases to variables is less than the 5:1 ratio recommended for principal component analysis. Nevertheless, these findings, if accepted, have several important implications. They suggest that to a large extent the increases in terms of participation, qualifications and skills in the three home countries are part of one process. In simple terms, the same thing is happening in Wales, Scotland and England for all indicators (the correlation between the scores for level 4 in England and Wales is +0.92, with a probability of significance less than 0.0005). The same thing is also happening in each of the seven TEC areas in Wales (where figures are available). Whatever steps have been taken or policies made in each region, the result in terms of growth has been roughly equivalent (therefore agreeing with the findings from England reported in Chapter 3). Similarly, progress for all the sections of society represented here also appear to be equivalent - male and female, employed and unemployed, etc. Of course, this does not mean that the actual scores for each sub-group are the same. Many more of those in employment than not in employment have level 3 qualifications, for instance, but the gap between them has not changed much in proportionate terms over time. Targets have apparently neither made training more inclusive, nor increased the gap between the 'haves' and 'have-nots' (and this conclusion is confirmed by more detailed analyses of individual targets below)..

The proportion of those who 'stay on' in full-time education at 16, the number of skilled employees, and qualifications at levels 3 and 4, are all represented by the same underlying variable: the ongoing rise of formal participation (and the decline of informal participation, perhaps). By definition (since the two factors are orthogonal by the terms of the analysis), training at work is generally unrelated to all four other indicators, suggesting that it has *little* impact on either the proportion of skilled occupations, or rates of qualification. Perhaps part of the reason for this is that while the other indicators are improving over time, participation in training is not (see below).

It is also possible to question the overall impact of Targets on the growth of related indicators, 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 policies and interventions since 1991 have been any less, or any more effective. 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 - suffer from what Huff (1991) calls the 'missing comparator'. NACETT do, however, present data elsewhere from before 1991 (Table 4.4) which give preliminary support to the idea that Targets have increased the growth in relevant indicators (NACETT 1994). However, the question changes in the LFS for 1994 make a direct comparison with later figures more complex.

Table 4.4 - The impact of the Targets: Britain (per cent)

Indicator	1988	1989	1990	1991	1992	1993
FT1 (Level 2)	47	50	52	53	57	63
% change	-	6	4	2	8	11
FT3 (Level 3)	26	28	30	30	34	38
% change	-	8	7	0	13	12
LT3 (Level 3)	27	28	30	31	33	39
% change	-	4	7	3	6	18

[NACETT 1994]

Taking a longer view, however, the picture is not so clear (Table 4.5). 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. The lowest annual growth in the indicator for the original Lifetime Target 3 is in 1996 (negative), and the growth in 1998 is otherwise the lowest since 1991. 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 cent per year, and the average growth until 1992 was 8.7 per cent. Note that the figures in Table 4.4 are both less precise, and rounded more favourably towards the 'target era' than the later figures in Table 4.5.

Table 4.5 - Proportion of 21-year-olds with level 3 qualifications: Britain

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

[NACETT 1998]

Overall then, it is likely that not much has changed as a result of target-setting, and that the Targets are both less effective in producing progress than their advocates claim and less dangerous in producing divisions than their opponents fear (see Chapter 2).

4.4 Targets for the unqualified

Young people

The numbers of 16- to 18-year-olds without qualifications to reduce from some 1 in 5 in 1996 to 1 in 10 by 2002 and to 1 in 20 by 2004.

Adults

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.

(ETAG 1999, p.32)

These Targets are 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. Hence:

- Reduce the numbers of 16- to 18-year-olds without qualifications from some 1 in 5 to 1 in 7 by 2002.
- Reduce the proportion of adults (aged 19 years or over) without qualifications from some 1 in 4 to 1 in 5 by 2002.

(*Learning is for Everyone*, April 1998)

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. The Target for young people, on the other hand, has been explicitly increased from '1 in 7' to '1 in 10' by 2002, with an even greater increase for 2004. Part of the reason for these changes lies in the relative progress towards these Targets. On the whole, while the schools-based Targets are generally attainable, the Lifelong Targets, which rely to a significant extent on simply passing better qualified young people into the workforce, are more slowly attainable.

Table 4.6 - Proportion with no qualification: Wales (per cent)

	1996	1997	1998	(2002)	(2004)
16-18	20	15	14	(10)	(5)
Working age	23	23	20	(14)	(<12.5)

[Welsh Office 1999b]

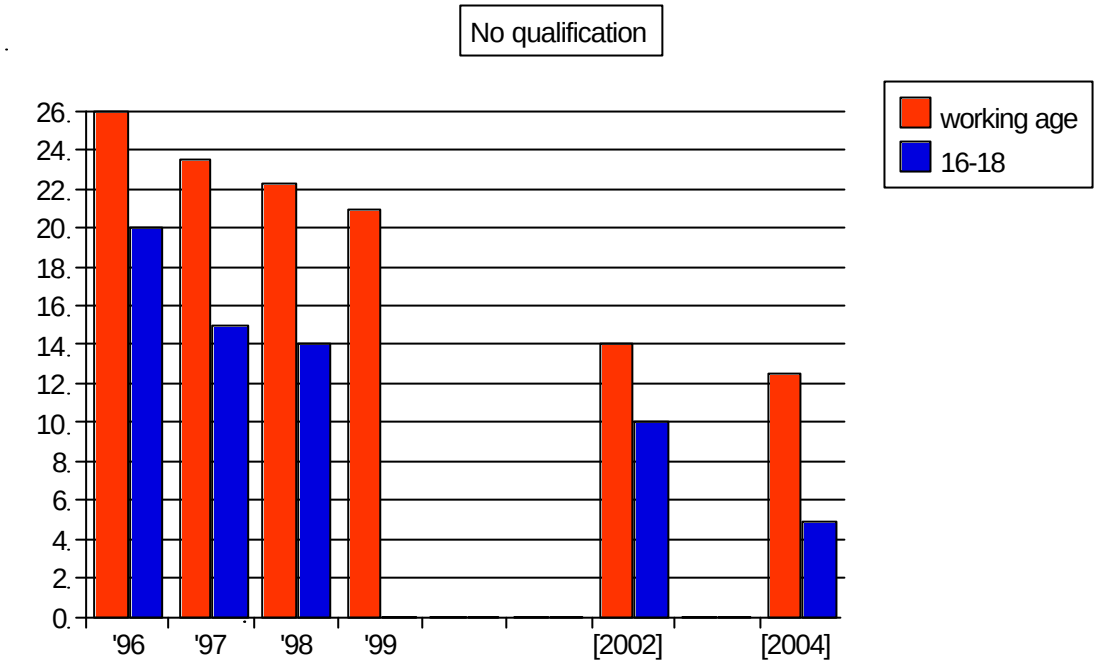
The Target for 16- to 18-year-olds looks as if it will be achieved relatively comfortably. However, there must be considerable doubt whether, despite the reduction, the Target for adults can be attained by 2002. In fact, a reanalysis of the LFS figures has actually produced lower figures than the source for Table 4.6. Hence, although Table 4.7 also suggests a significantly decreasing trend, it is not one that will meet the Target of 14 per cent by 2002 (Figure 4.3).

Table 4.7 - Proportion of working age with no qualification: Wales (per cent)

	1996	1997	1998	1999
Working age	26.0	23.5	22.3	20.9

[calculated from LFS data supplied by the Office of the National Assembly]

Figure 4.3 - Proportion of working age population with no qualification: Wales (per cent)



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

The differences between Tables 4.6 and 4.7 are at least partly accounted for by differences in the seasons used (Table 4.6 uses Autumn, while Table 4.7 uses Spring). There are also differences in the operational definition of 'working-age'. Working-age is usually defined here as being from 19 to retirement, but the analysis for Table 4.6 uses those from the 16-18 age cohort as well (thereby producing a higher total). Again, the differences display the importance of deciding on, and sticking to, one set of definitions and assumptions.

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 are being gained after initial education, and to a large extent, the growth of qualifications among adults is confined to the impact of extended initial schooling (see above). This confirms indications from other sources, as already reported. Again, the significance of this observation for the evaluation of policy initiatives should be highlighted.

4.5 Targets for Level 2 qualifications

Young people
The numbers of 19 year olds without an NVQ level 2 or equivalent to reduce from over 1 in 3 in 1996 to some 1 in 5 by 2002 and to fewer than 1 in 5 by 2004.

Adults
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.

(ETAG 1999, p.32).

This Target for young people is a considerable reduction of earlier versions for 2000:

- By 2000, by age 19, 85 per cent of young people to achieve 5 GCSEs at grade C or above, an intermediate GNVQ or an NVQ level 2.

(*A Bright Future: the way forward* - December 1995; *A Bright Future: Beating the Previous Best* - February 1997).

Indeed, it is only equivalent to the proposed figures to be attained as early as 1997 in the original Targets from 1991:

- By 1997, 80 per cent of young people to reach NVQ level 2 equivalent

(*The National Education and Training Targets 1991* - quoted in NIACE 1993, p.8).

It is also less than the target for England:

- 85 per cent of 19 year olds with a Level 2 qualification

(DfEE *National Learning Targets for England for 2002*).

However, both Level 2 targets for Wales have been increased since 1998:

- reduce the number of 19-year-olds without an NVQ level 2, or equivalent qualifications from 1 in 3 to fewer than 1 in 4 by 2002
- increase the proportion of adults (aged 19 years or over) with NVQ level 2 or equivalent qualifications from over 5 in 10 to over 6 in 10 by 2002

(*Learning is for Everyone* - April 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 this indicator, but there is some evidence that the strength of the trend is declining over time. The importance of considering seasonal variation can be glimpsed from the earlier figures from National Targets Brief (1994), which suggest 61 per cent for Spring 1993, but 64 per cent for Winter 1993.

Table 4.8 - The proportion of 19-year-olds with level 2 qualifications, Britain (per cent)

	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
% + or -	-	5	3	5	8	5	6	1	2	4	2

[NACETT 1998]

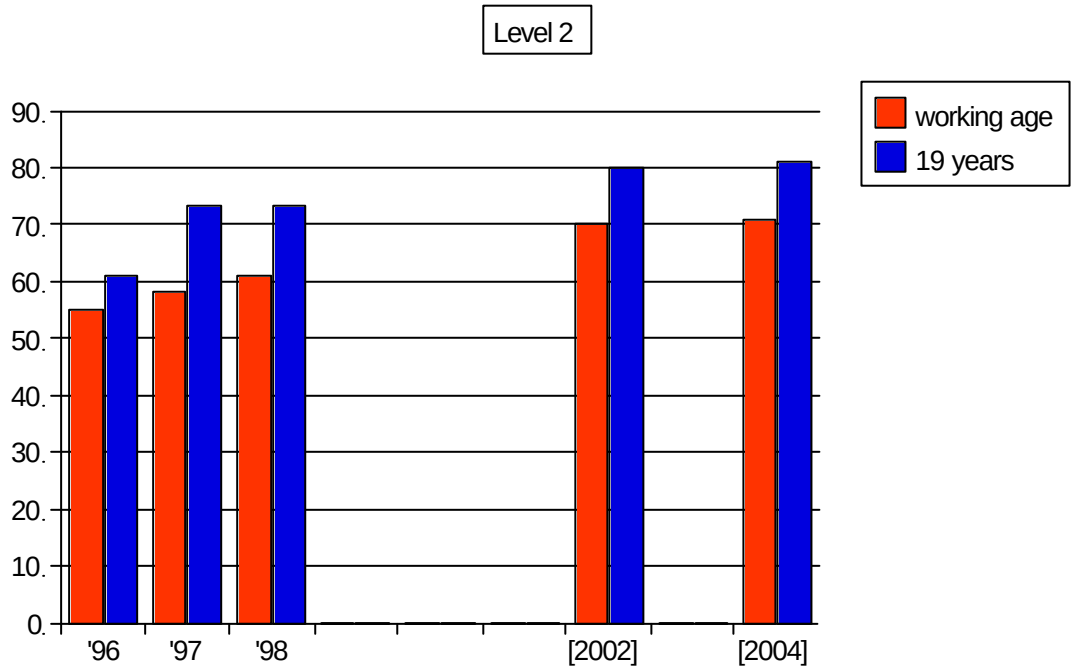
In each year until 1997, the figures for Wales are among the lowest of all the standard statistical regions, except East Anglia. While both Targets appear attainable, on the basis of the limited figures available, there is confirmation of the suggestion made for Britain as a whole that progress in the indicator for young people is beginning to stall (Table 4.9, Figure 4.4).

Table 4.9 - Proportion with level 2 qualifications: Wales (per cent)

	1996	1997	1998	(2002)	(2004)
19 years	61	73	73	(<80)	(>80)
Working age	55	58	61	(70)	(>70)

(Welsh Office 1999b)

Figure 4.4 - Proportion with level 2 qualifications: Wales



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

4.6 Targets for level 3 qualifications

Adults
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.

(ETAG 1999).

Previous sets of targets, and those for England, included a level 3 target for young people, as well as for those of working age (and for the workforce before that). The original targets in 1991 were:

- Training and education to NVQ level 3 (or equivalent) available to all young people who can benefit
- By 2000, 50 per cent of young people to reach NVQ level 3 equivalent

(*The National Education and Training Targets 1991* – quoted in NIACE 1993, p.8).

The second of these was increased to:

- For 2000, by age 21, 60 per cent of young people to achieve 2 GCE A levels, an advanced GNVQ or a NVQ level 3

(*A Bright Future: the way forward* - December 1995, *A Bright Future: Beating the Previous Best* - February 1997),

and in England the equivalent is:

- 60 per cent of 21 year olds with a Level 3 qualification

(DfEE *National Learning Targets for England for 2002*).

It is currently unlikely that this Target will be reached in England, or that it would have been reached in Wales, even with the deadline extended to 2002 instead of 2000 (Table 4.10). The seasonal variations hidden in these annual figures may be glimpsed in the report that in Spring 1993 the proportion for Britain was 37 per cent, but in Winter 1993 it was 39 per cent (*National Targets Brief* 1994). The corresponding figure for Wales was the lowest for all the statistical regions except the North of England.

Table 4.10 - Proportion of 21-year-olds with level 3 qualifications: Britain (per cent)

	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
% + or -	-	4	7	1	13	8	9	10	-2	10	3

[Spring season, from NACETT 1998]

The Target for adults of working-age has been modified downwards significantly since its inception, but is no longer limited to those in employment. It was originally phrased as:

- By 2000, 50 per cent of the workforce qualified to at least NVQ level 3 equivalent

(*The National Education and Training Targets 1991* – quoted in NIACE 1993, p.8).

In 1995 the revised Target was that:

- By 2000, 60 per cent of the workforce to be qualified to NVQ level 3, Advanced GNVQ or 2 GCE A level standard

(A Bright Future: the way forward - December 1995).

By 1998 the Target had changed to:

- Increase the proportion of adults (aged 19 years or over) with NVQ level 3 or equivalent qualifications from some 3 in 10 to approaching 6 in 10 by 2002

(*Learning is for Everyone* - April 1998).

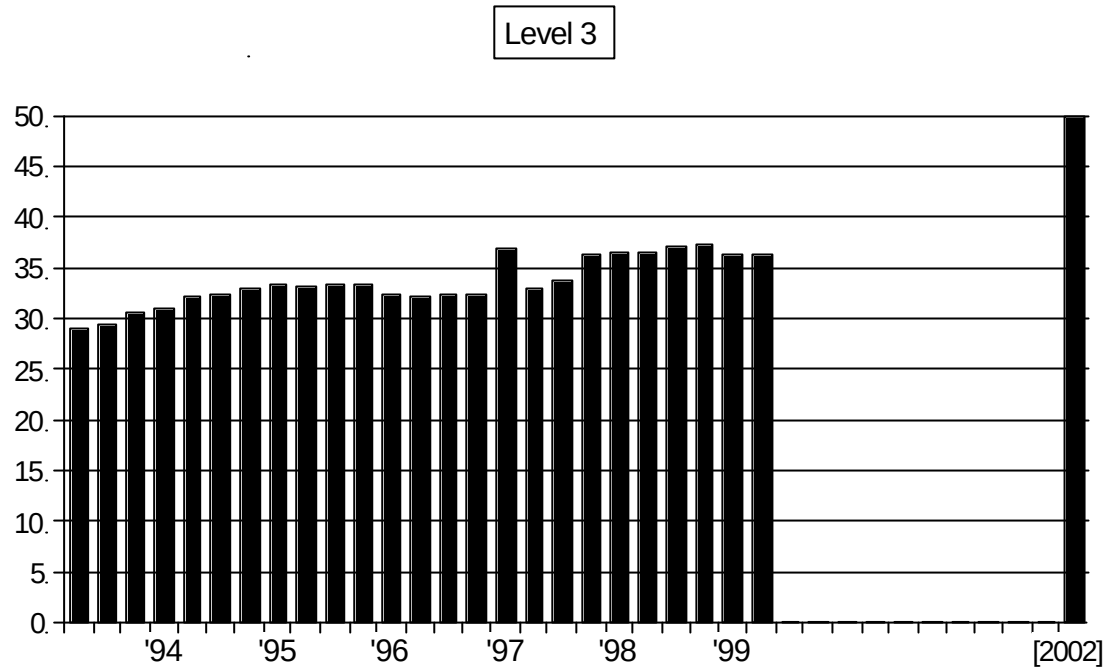
The Target is now similar to, but lower and vaguer than that for England:

- 50 per cent of adults between the ages of 18 and 59/64 who are in employment or actively seeking employment with a Level 3 qualification

(DfEE *National Learning Targets for England for 2002*).

There has been significant growth in this indicator, but despite the downwards adjustment, the figure for attainment is still a long way short of the proportions envisaged in the Target (even for 2004). This indicator could be described in the form of language used by ETAG as 'approaching 4 in 10' (Figure 4.5). However, the majority of the growth that there has been is explained by the 'conveyor belt' model of already qualified school-leavers joining the workforce and less qualified older people leaving it.

Figure 4.5 - Progress towards achieving the Level 3 Target: Wales



[calculated from LFS data supplied via NOMIS]

The Welsh Office (1999b) reports growth from 34 per cent in 1996 to 38 per cent in 1997 and 39 per cent in 1998, among adults of working age. These figures are higher than those obtained from the LFS supplied via NOMIS (which uses alternative underlying assumptions), while still being less than required to meet the Target. Earlier figures are not comparable since Lifetime Target 3 used to refer to those in employment rather than the workforce (*National Targets Brief* 1994). However, these figures do make it clear that there are substantial variations by occupational sector and class; and that women are under-represented.

Using the first set of figures and assuming that Figure 4.3 approximates to a linear distribution (which is not at all clear), then it is possible to calculate a linear regression model of time against proportion with Level 3 qualifications. If May 1993 is Time1, then May 1999 is Time25. The resultant model is:

Proportion Level 3 = 28.64 + 0.29*Time.

The model has an adjusted R square of 0.78 (i.e., it explains nearly 80 per cent of the variance) and a probability of significance less than 0.0005. It predicts that on present progress, by February 2002 the proportion of those of working age with Level 3 qualifications will be 39.08 per cent, whereas the target is 50 per cent.

The equivalent figures for all Britain are generally higher (Table 4.11), as those for Wales are generally lower than for England or Scotland (Table 4.12). In proportionate terms, growth has been the same in Wales as in England, and the same for those in the workforce and for those in employment.

Table 4.11 - Proportion of workforce with Level 3 qualifications, Britain (per cent)

1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
27.5	28.5	29.2	30.7	33.4	38.2	40.1	40.3	41.2	42.3	43.8

[NACETT 1998]

Table 4.12 - Proportion of working age with Level 3 qualifications (per cent)

	England	Scotland	Wales	Wales (in employment)
May 1993	32.3	39.5	28.9	33.5
Aug 1993	33.6	41.3	29.6	34.6
Nov 1993	34.2	42.5	30.4	35.4
Feb 1994	34.6	42.6	31.1	36.6
May 1994	34.8	42.5	32.1	37.8
Aug 1994	34.9	42.6	32.4	37.9
Nov 1994	35.4	42.6	33.0	38.7
Feb 1995	35.6	41.9	33.5	38.9
May 1995	35.4	41.6	33.1	38.3
Aug 1995	35.6	41.6	33.3	38.8
Nov 1995	36.0	42.0	33.3	38.9
Feb 1996	36.5	43.0	32.5	38.0
May 1996	35.5	42.0	32.0	37.5
Aug 1996	36.4	42.7	32.5	37.6
Nov 1996	36.9	43.1	32.3	37.8
Feb 1997	41.3	52.2	36.8	43.3
May 1997	37.2	42.0	32.9	38.8
Aug 1997	37.5	42.5	33.8	39.2
Nov 1997	38.0	43.1	36.2	41.5
Feb 1998	38.3	43.0	36.7	42.3
May 1998	38.4	42.6	36.5	41.5
Aug 1998	38.7	43.7	37.0	42.8
Nov 1998	39.8	45.1	37.4	43.0
Feb 1999	39.8	45.1	36.4	42.8
May 1999	39.9	44.7	36.2	42.7
Change	1.15	1.06	1.15	1.15

[calculated from LFS data supplied via NOMIS. Change calculated as the mean of February and May figures 1999, divided by the equivalent for 1994.]

There are marked differences between the seven (former) TEC areas of Wales, both in the actual proportion of qualifications, and in their growth over time (Table 4.13). Growth has been highest in Mid Glamorgan, North West Wales, and West Wales; and lowest in North East Wales and Powys, which have actually registered a decline over six years. Quarterly figures at TEC level are naturally more volatile, since there are fewer cases per cell, and therefore only strong overall trends should be treated as significant. For example, a change in the percentage with Level 3 qualifications in NE Wales, from 36.8% in May 1998 to 34.6% in August 1998 may not signify a real change in this indicator for the population (rather than the achieved sample).

Table 4.13 - Proportion of working age with level 3 qualifications: TEC81 areas (per cent)

Quarter	Gwent	Mid-Glam	NE Wales	NW Wales	Powys	South Glam	West Wales
M1993	28.6	24.1	29.3	29.0	31.3	38.5	26.5
A1993	27.8	25.4	29.3	30.2	35.5	36.9	28.5
N1993	28.4	27.1	29.5	30.4	30.7	36.8	30.7
F1994	30.9	27.1	33.3	28.2	32.7	38.4	30.2
M1994	32.3	27.6	34.4	28.5	32.6	38.8	32.2
A1994	33.4	28.5	33.3	27.1	32.8	41.7	31.3
N1994	33.9	28.7	32.0	29.8	28.8	41.0	33.8
F1995	31.6	30.0	31.8	31.6	30.9	43.8	33.7
M1995	30.1	30.0	28.9	32.8	32.9	42.9	33.8
A1995	30.8	28.3	26.9	34.2	30.4	46.2	33.6
N1995	30.8	27.2	26.2	35.1	26.9	45.9	35.7
F1996	29.9	25.3	26.9	33.4	30.7	44.9	34.9
M1996	30.6	25.3	29.5	33.1	33.5	43.0	32.2
A1996	28.9	25.4	28.8	35.0	32.0	45.6	33.4
N1996	29.9	26.2	29.3	32.4	35.0	44.5	32.7
F1997	27.9	27.4	30.3	32.2	39.0	45.4	33.2
M1997	26.9	28.0	32.8	32.5	38.0	42.5	34.1
A1997	29.9	28.9	34.0	32.7	35.1	42.1	35.2
N1997	31.3	30.9	37.7	34.4	33.3	48.4	36.4
F1998	31.9	31.2	36.5	33.0	33.4	50.0	38.0
M1998	33.2	31.8	36.8	30.5	30.1	48.4	38.4
A1998	33.5	32.9	34.6	32.0	34.1	49.3	38.7
N1998	34.5	33.7	32.5	30.6	32.6	49.2	41.0
F1999	34.5	32.9	31.8	32.7	33.8	45.7	39.1
M1999	34.0	32.9	31.1	36.2	28.3	45.7	38.0
Change	1.08	1.20	0.93	1.22	0.95	1.18	1.24

[calculated from LFS data supplied via NOMIS. Change calculated as the mean of February and May figures 1999, divided by the equivalent for 1994.]

Again, the published figures suggest a higher rate of qualification for those in the workforce (Table 4.14). The same source reports more Level 3 qualifications in public occupations than private, and less in clerical, craft, and personal service occupations (Education and Training Statistics 1997).

Table 4.14 - Proportion of workforce with Level 3 qualifications: TEC81 areas (per cent)

1997	Gwent	Mid-Glam	NE Wales	NW Wales	Powys	South Glam	West Wales	Wales
All	37	34	33	42	38	50	42	40
Males	41	40	36	47	40	55	46	44
Female	32	26	29	36	36	44	36	34

[Education and Training Statistics 1997]

4.7 Targets for Level 4 qualifications

Adults

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.

(ETAG 1999).

This Target is considerably lower than that set in 1995 for the year 2000 (partly because of the change in population from workforce to working-age population):

- By 2000, 30 per cent of the workforce to have a vocational, professional, management or academic qualification at NVQ level 4 or above.

(*A Bright Future: the way forward* - December 1995).

However, it is higher than the equivalent set in 1998:

- Increase the proportion of adults (aged 19 years or over) with NVQ level 4 or equivalent qualifications from 1 in 5 to approaching 1 in 4 by 2002

(*Learning is for Everyone* - April 1998).

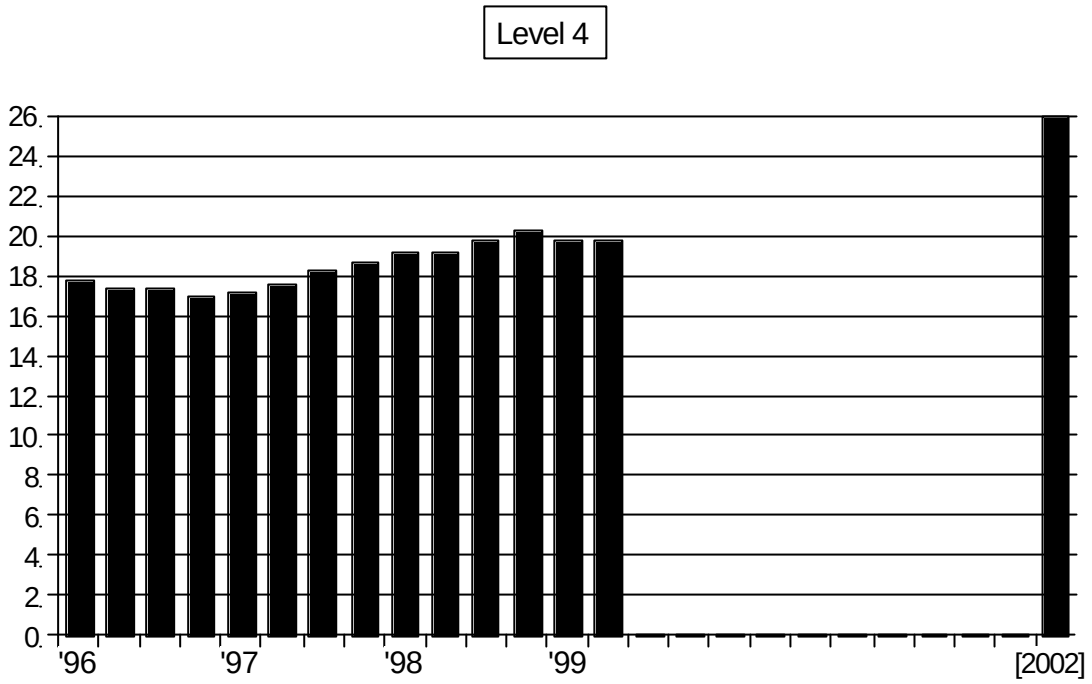
It is similar to the equivalent Target for England:

- 28 per cent of adults between the ages of 18 and 59/64 who are in employment or actively seeking employment with a Level 4 qualification

(DfEE *National Learning Targets for England for 2002*).

From the figures available, progress towards the Level 4 Target seems erratic. Although on one interpretation the 2002 target is attainable (Figure 4.5), the indicator remains at around 1 in 5 (20 per cent), and whilst there has been some growth, it has until recently been much slower than would be required to meet this Target.

Figure 4.5 - Progress towards Level 4 Target: Wales



[calculated from LFS data supplied via NOMIS]

Similar conclusions can be drawn from the LFS figures supplied directly by the Welsh Office, but not always from other figures provided by the Welsh Office (1999b). The first row in Table 4.15 is a summary of the LFS results via NOMIS, while the second row contains the results from the Welsh Office bulletin. The second row suggests a faster rate of progress, and one that brings the Targets within reach. This difference may be partly explicable in terms of seasonal variations (one set from Spring and one from Autumn of the same year), and partly due to the differences in the definition of working-age described above. Again, the considerable impact of even slight differences in methods of calculation is underlined.

Table 4.15 - Proportion of working age with Level 4 qualifications: Wales (per cent)

Level 4	1996	1997	1998	1999	[2002]	[2004]
Reanalysis of LFS	17.2	17.6	19.2	19.8	[>25]	[<30]
WO bulletin	18	20	22	-	[>25]	[<30]

[LFS data supplied via NOMIS and Welsh Office 1999b)

Using the first set of figures and assuming that Figure 4.4 approximates to a linear distribution (which is not at all clear), then it is possible to calculate a linear regression model of time against the proportion of the working-age population with Level 4 qualifications. If February 1996 is Time1, then May 1999 is Time14. The resultant model is:

Proportion Level 4 = 16.76 + 0.23*Time.

The model has an adjusted R square of 0.83 (i.e., it explains over 80 per cent of the variance) and a probability of significance less than 0.0005. It predicts that on present progress, by February 2002 the proportion of the workforce with Level 4 qualifications will be 22.51 per cent, whereas the target is over 25 per cent.

Growth on this indicator in the three home countries is roughly equivalent, and there is certainly no evidence of lower growth in Wales.

Table 4.16 - Proportion of working-age population with Level 4 qualifications (per cent)

	England	Scotland	Wales
Feb 1996	20.3	22.0	17.8
May 1996	20.0	21.7	17.4
Aug 1996	20.4	22.3	17.4
Nov 1996	20.3	22.2	16.9
Feb 1997	20.3	22.2	17.2
May 1997	20.4	22.3	17.6
Aug 1997	20.6	22.8	18.3
Nov 1997	20.6	23.0	18.7
Feb 1998	20.9	22.7	19.2
May 1998	21.2	23.0	19.2
Aug 1998	21.7	23.7	19.8
Nov 1998	22.1	24.8	20.2
Feb 1999	22.1	24.8	19.7
May 1999	22.1	24.7	19.7
Change	1.10	1.13	1.12

[calculated from LFS data supplied via NOMIS. Change calculated as the mean of February and May figures 1999, divided by the equivalent for 1994.]

Growth in Level 4 qualifications within Wales has been greatest in the Mid Glamorgan TEC area; and lowest in Powys, Gwent and NE Wales TEC areas (those bordering England).

Table 4.17 - Proportion of working-age population with Level 4 qualifications: TEC81 areas (per cent)

Quarter	Gwent	Mid-Glam	NE Wales	NW Wales	Powys	South Glam	West Wales
F1996	16.6	12.1	15.2	18.0	15.5	27.0	19.1
M1996	17.9	12.5	16.7	16.2	18.5	25.2	16.9
A1996	16.1	12.1	14.6	17.8	17.4	27.6	17.7
N1996	15.2	11.8	15.0	16.7	17.8	26.4	17.2
F1997	13.7	12.6	15.7	17.3	21.4	28.4	16.7
M1997	14.1	13.7	16.7	16.7	22.1	25.8	17.8
A1997	15.9	13.9	17.1	17.5	18.6	27.2	18.9
N1997	16.2	15.0	19.1	18.1	16.5	27.0	18.5
F1998	17.2	14.7	19.2	18.1	16.8	28.1	19.4
M1998	17.5	14.7	19.9	17.4		28.5	19.2
A1998	16.7	14.7	19.0	19.9		31.5	20.0
N1998	17.3	17.0	17.0	18.6		31.0	20.9
F1999	17.6	16.5	16.3	19.5	15.5	29.2	20.0
M1999	18.6	17.0	16.3	21.2		28.5	19.1
Change	1.02	1.36	1.02	1.19	0.91	1.11	1.09

[calculated from LFS data supplied via NOMIS. Change calculated as the mean of February and May figures 1999, divided by the equivalent for 1994.]

The figures published in *Education and Training Statistics* (1997) are slightly higher, since they represent only those in employment. They reveal a higher proportion of Level 4 qualifications amongst employees of public rather than private organizations, and a lower proportion in clerical, craft, and personal service occupations. Part of the explanation for the differential growth rates above could be related to gender (Table 4.18). In Mid Glamorgan, men still hold a marked preponderance of Level 4 qualifications; and in Powys the situation is reversed. In other areas, there is greater balance, as is indicated by the figures for Wales overall.

Table 4.18 - Proportion of workforce with Level 4 qualifications: TEC81 areas Winter 1995/96 (per cent)

Level 4	Gwent	Mid-Glam	NE Wales	NW Wales	Powys	South Glam	West Wales	Wales
All	22	17	18	25	20	33	24	23
males	21	18	19	24	18	33	24	23
Females	23	15	18	26	22	34	25	23

[Education and Training Statistics 1997]

Among the employed, attainment of Level 4 qualifications increases with age cohort from 16 to 29, peaking before age 49 and dropping to around 19 per cent for those of retirement age.

Table 4.19 - Proportion of employed with Level 4 qualifications by age-group and gender: UK 1995 (per cent)

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]

As with other indicators, there is no clear suggestion that the arrival of Targets and the setting up of NACETT in 1993 had an impact on growth (the change in Spring 1992 may be partly due to a change in the nature of the recording).

Table 4.20 - Proportion of workforce with Level 4 qualifications: Britain (per cent)

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
L4	15.8	15.8	16.6	17	20.1	22	23.1	23.5	24.1	24.5	25.3
% + or -		0	5	2	18	9	5	7	3	2	3

[Spring figures, from NACETT 1998]

4.8 Level 5 qualifications

There is no existing Target for Level 5, but such a Target has been suggested in previous consultation exercises. The existing position in Wales is given in Table 4.21.

Table 4.21 - Proportion of working-age population qualified to Level 5: Wales (per cent)

NVQ5	1996	1997	1998	1999
Wales	8.9	9.6	10.4	10.5

[Spring figures, calculated from LFS data supplied via Welsh Office]

4.9 Targets for basic skills

Literacy
The proportion of working age adults with functional basic skills in literacy to increase from some 8 in 10 in 1996 to at least 9 in 10 by 2002 and to above 9 in 10 by 2004.

Numeracy
The proportion of working age adults with functional basic skills in numeracy to increase from over 5 in 10 in 1996 to 6 in 10 by 2002 and to above 6 in 10 by 2004.

(ETAG 1999).

These Targets are an extension to 2004 of those set in 1998:

- raise the proportion of adults, of working age, with functional basic skills in literacy from some 8 in 10 to at least 9 in 10 by 2002
- raise the proportion of adults, of working age, with functional basic skills in numeracy from over 5 in 10 to at least 6 in 10 by 2002

(*Learning is for Everyone* - April 1998).

They have replaced the more formally expressed Targets, involving specific levels of competence, from the Bright Future programme:

- By 2000, 75 per cent of young people to achieve level 2 competence in communication, numeracy and IT by age 19; and 35 per cent to achieve level 3 competence in these core skills by age 21

(*A Bright Future: the way forward* - December 1995, *A Bright Future: Beating the Previous Best* - February 1997).

They can no longer be assessed in the same way as 'key skills' in England, using higher grades in relevant GCSEs, and the findings of the QCA key skills units (NACETT 1998).

There are currently no reliable figures for progress towards these Targets. In 1996, the figures were estimated as 85 per cent for literacy and 56 per cent for numeracy. These figures are in close agreement with those reported by the Basic Skills Agency (1997) for Wales in 1995. This survey found 6 per cent of the sample had 'very low' and 10 per cent 'low' reading skills; while 15 per cent had very low and 29 per cent low numeracy skills. Unfortunately, the report contains no definition of either 'low' or 'very low'. Therefore, like the Target itself, these indicators are extremely difficult to interpret. The survey found systematic differences between those with low basic skills and others, and to a large extent these differences confirm the known differences between participants and non-participants in education and training, and between those with and without qualifications. There can be little doubt that many of these indicators are measuring the same underlying variables. For example, basic skills are more problematic for older age groups (especially 55-59), the unemployed, those with no qualifications, who left school early, and are in lower social classes (D and E).

An alternative measure of skill is the proportion of employees in 'unskilled occupations'. While the data-set from the LFS is of reasonable quality, and the figures are gathered regularly, this indicator suffers from two potential defects. The concept of 'unskilled' is not clearly defined, and may be liable to change over time. Secondly, an improvement in this indicator could be achieved simply by removing unskilled jobs from the labour market, and while this would lead to a higher percentage of skilled jobs, it would also lead to fewer jobs in total. The percentage of unskilled jobs is nevertheless decreasing in Wales, and faster than in Scotland, but slower than in England.

Table 4.22 - Proportion of employees in unskilled occupations (per cent)

	England	Scotland	Wales
May 1992	5.2	6.7	5.9
Aug 1992	5.4	6.8	6.2
Nov 1992	5.2	6.5	5.6
Feb 1993	5.2	6.2	5.7
May 1993	5.3	6.0	6.1
Aug 1993	5.3	6.5	5.6
Nov 1993	5.3	6.3	5.8
Feb 1994	5.2	6.3	5.7
May 1994	5.2	6.2	5.5
Aug 1994	5.1	6.3	6.1
Nov 1994	5.1	6.3	6.4
Feb 1995	4.9	6.3	5.8
May 1995	4.9	6.4	6.2
Aug 1995	5.0	6.2	6.2
Nov 1995	5.0	5.9	6.1
Feb 1996	4.9	5.6	6.0
May 1996	4.9	5.7	5.9
Aug 1996	4.9	5.5	6.3
Nov 1996	4.6	5.5	6.0
Feb 1997	4.5	5.3	5.4
May 1997	4.7	5.4	5.6
Aug 1997	4.7	5.8	5.4
Nov 1997	4.6	5.8	4.8
Feb 1998	4.7	5.4	5.2
May 1998	4.7	5.2	5.3
Aug 1998	4.6	5.5	5.4
Nov 1998	4.5	5.3	5.7
Feb 1999	4.5	5.5	5.3
May 1999	4.3	5.7	5.1
Change	0.84	0.92	0.88

[calculated from LFS data supplied via NOMIS. Change calculated as the mean of February and May figures 1999, divided by the equivalent for 1994.]

4.10 Targets for participation

Adults
The number of participants in education and training to increase by at least 10,000 annually from 1999 to 2004.

(ETAG 1999).

This Target is both more precise, and modified downwards from the original participation Targets of 1991:

- Education and training provision to develop self-reliance, flexibility and breadth.
- By 1996, all employees should take part in training or development activities.
- By 1996, 50 per cent of the workforce aiming for NVQs or units towards them.

(*The National Education and Training Targets 1991* - quoted in NIACE 1993, p.8),

Unlike the present Target for England, it is phrased in terms of raw-score numbers of participants. Compare:

- a 7 per cent reduction in non-learners.

(The Learning Participation Target, DfEE *National Learning Targets for England for 2002*).

It is much less demanding than the old Lifetime Target 1:

- employees to take part in training 'as the norm'

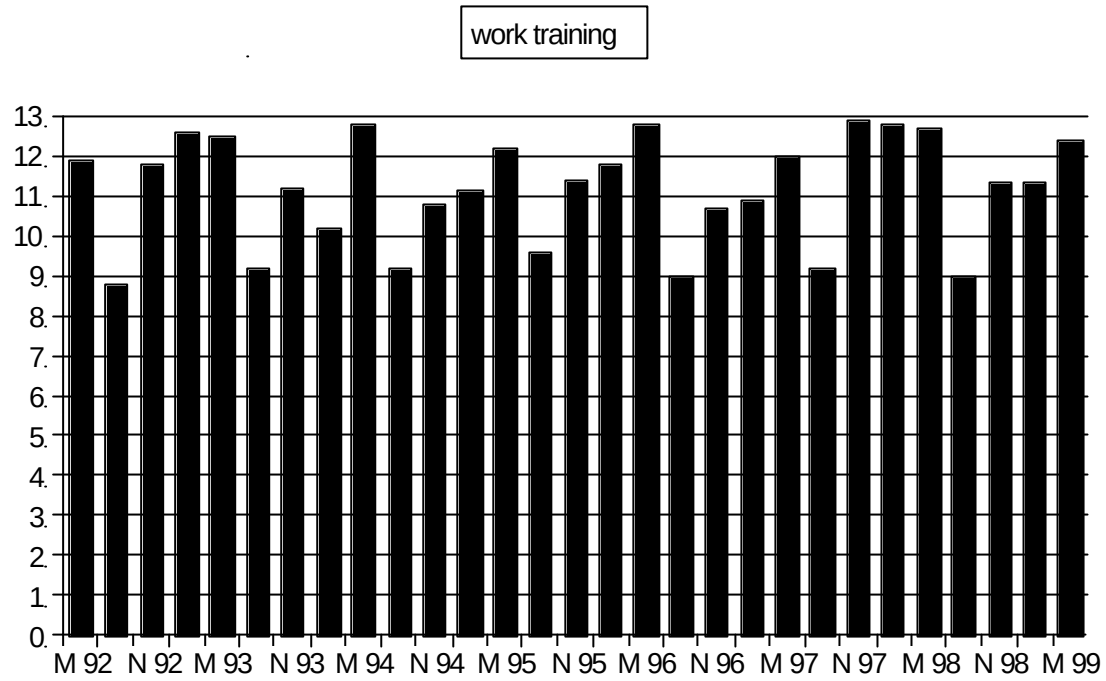
(NACETT 1993).

'Participation' in education and training is undefined in the ETAG *Action Plan* (1999), but is presumably intended to cover the same cases as the equivalent Target for England, where 'the Learning Participation Target covers everybody aged between 16 and 69, regardless of economic status, except those in full-time continuous education. The target embraces all types of taught, classroom based learning of a deliberate nature, including self-study. Both vocational and non-vocational learning are included, regardless of whether they lead to qualifications.' (DfEE *National Learning Targets for England for 2002*)

This definition, including the possibility of self-study without qualification, makes it extremely difficult to produce an operational measurement. However, the individualized student records from FE institutions show an increase from 361,430 registrants in Wales in 1996/97 to 402,459 in 1997/98. If accurate and sustainable, then such an increase would clearly meet the requirements of the Target as long as this increase was not at the expense of self-study and work-based training not involving FE institutions.

Work-based training (in the previous 4 weeks) does not appear to be increasing over time (Figure 4.7). Indeed, work-based training actually shows signs of *declining* over time, although participation amongst 16- to 19-year-olds in education and training immediately after completion of compulsory schooling is increasing.

Figure 4.7 - Proportion of workforce receiving work-based training during the last 4 weeks: Wales (per cent)



[calculated from LFS data supplied via NOMIS]

This general trend is consistent with the figures given below, which show that work-based training has certainly not increased over the past seven years, and has probably declined (Table 4.23). This conclusion is confirmed by the survey results in Gorard *et al.* (1999a, 1999b), which show a clear decline over several decades in work-based, especially employer-funded, training in Wales and its replacement by state-funded, off-the-premises provision, usually immediately after the completion of compulsory schooling. In 1996, for example, only just over half of all employers provided any training at all; and it is worth recalling that however large the company, this training could be for just one employee (Welsh Office 1996). The figures for 1995 were similar (Welsh Office 1995). Most of this provision was confined to large companies (200+ employees), of whom 97 per cent reported some training, and to public service organizations. Therefore, there was less in areas such as Mid Glamorgan, where fewer of these companies exist. It is also clear that males, those less than 25 years old, those in professional/managerial jobs, and working in the (public) service industries are over-represented in work-based training.

Table 4.23 - Proportion of workforce receiving work-based training during the last 4 weeks (per cent)

	Eng-land	Scot-land	Wales	Wales: Male	Wales: Female	Wales: working age	Wales: employ-ed	Wales:prof. occs.	Wales: serviceinds.
M92	12.9	12.0	11.9	12.6	11.1	9.2	12.0	18.8	13.1
A92	9.7	7.9	8.8	9.3	8.2	7.4	9.7	16.5	10.8
N92	12.0	11.4	11.8	11.5	12.2	9.0	12.8	19.9	14.4
F93	12.4	11.7	12.6	12.9	12.2	9.8	13.6	21.5	15.7
M93	13.4	12.5	12.5	13.1	11.9	9.3	13.2	20.1	14.4
A93	10.2	8.3	9.2	10.5	7.7	7.9	10.8	18.4	11.1
N93	12.5	11.8	11.2	10.7	11.7	8.7	11.7	18.7	13.9
F94	11.6	10.9	10.2	10.5	9.9	8.5	11.9	18.5	13.3
M94	13.5	12.6	12.8	12.6	13.0	10.3	14.0	21.2	15.3
A94	9.4	7.8	9.2	9.6	8.8	7.8	10.5	15.7	11.6
N94	11.5	11.5	10.8	10.5	11.1	9.0	11.6	17.9	13.0
F95	12.1	12.3	11.1	10.8	11.4	8.5	11.5	17.8	13.5
M95	12.9	12.3	12.2	11.5	13.0	10.0	13.3	20.1	14.5
A95	10.4	8.2	9.6	9.9	9.3	8.4	11.3	16.6	11.5
N95	12.2	12.2	11.4	12.1	10.5	9.6	12.7	18.5	14.5
F96	12.7	12.2	11.8	12.1	11.5	9.5	12.6	20.0	14.2
M96	13.3	11.8	12.8	12.7	12.9	10.1	14.0	20.1	16.0
A96	10.8	8.3	9.0	8.9	9.1	7.7	10.3	13.5	11.4
N96	12.4	11.0	10.7	10.8	10.5	8.7	12.0	17.4	14.1
F97	13.0	11.7	10.9	10.1	11.8	8.9	11.7	17.3	13.6
M97	13.8	12.9	12.0	11.1	12.9	9.7	12.9	17.9	15.0
A97	10.9	9.1	9.2	9.1	9.4	8.2	10.8	15.8	11.4
N97	13.3	12.3	12.9	11.5	14.5	10.7	14.9	22.4	17.5
F98	13.0	12.6	12.8	11.2	14.6	10.7	14.2	20.9	15.9
M98	13.9	13.1	12.7	11.7	13.9	9.9	13.8	18.9	15.1
A98	11.3	9.5	9.0	9.2	8.7	7.7	10.6	16.2	11.7
N98	13.4	12.7	11.3	10.4	12.3	9.4	12.6	17.3	14.4
F99	13.4	13.7	11.3	11.6	11.1	8.8	12.4	17.2	13.8
M99	14.2	14.7	12.4	11.8	13.0	10.2	14.0	19.1	15.3
Imp.	1.07	1.17	0.94	0.9	1.0	0.99	0.99	0.87	0.97

[calculated from LFS data supplied via NOMIS. Change calculated as the mean of February and May figures 1999, divided by the equivalent for 1994.]

The Future Skills Wales Survey (1998) reports that half of Wales's residents had undertaken some training or learning during the previous 12 months. This was mostly related to their current job, and therefore over-represents the young, full-time employed, and those already with qualifications. In this way, the Survey agrees with other recent studies which characterize those liable to be non-participants in education or training (Fryer 1997, Kennedy 1997, DfEE 1998, Tight 1998).

Employers report being aware that training opportunities exist, and that skills are important (suggesting, more specifically, that the ability to learn may be the most

significant skill), yet they are not generally prepared to pay for them (Future Skills Wales 1998). Around 20 per cent of employers admit to not providing adequate training, but this figure is disputed by their employees who suggest it is more like 50 per cent. Despite the emphasis of the Targets and of the ETAG *Action Plan* (1999), employers do not rate qualifications as important, and employees often see them as purely a means to get a job. Again, despite the emphasis of the ETAG *Action Plan*, employers are not concerned with foreign language skills, and the ability to speak Welsh was rated lowest in importance of all the abilities suggested to them.

Another recent survey found that 37 per cent of respondents aged 16 to 75+ had taken part in no 'learning' of any sort since leaving full-time education (although the figure for Wales was 34 per cent). 62 per cent of all respondents were unlikely to ever take part in the future (Tuckett and Sargant 1999). These figures are clearly related to age, social class, terminal age of education, and employment, and they confirm those from 1996 (Sargant *et al.* 1997). Although over half of respondents in Wales have not reported any learning for at least three years (58 per cent), the figure for those who have not participated *at all* since leaving full-time continuous education is 34 per cent, the lowest for all regions in Britain.

This could be seen as evidence for the often reported tradition of respect for adult education and training in Wales (Burge *et al.* 1999), and it is interesting that current trends in participation, when aggregated by home country, are almost the inverse of patterns of attainment in initial education. Hence, Northern Ireland and Scotland have higher levels of initial qualifications in comparison to England, while Wales generally has the lowest scores on any indicator of educational attainment (Gorard 1998). Yet Northern Ireland and Scotland have the lowest levels of adult participation. In summary, then, it appears that the determinants of initial and later learning are different, and might be considered in the light of these recent survey findings to be almost antagonistic. Adult participation is highest in the area with the lowest levels of initial qualifications, and lowest in those with the highest levels of school-based qualifications. This result will be a surprise to those who see 'front-loaded' and later adult learning as being positively related (such as those who believe in the accumulation of prior learning hypothesis, see Gorard *et al.* 1999c).

A more optimistic picture is suggested by Beinart and Smith (1997). The National Adult Learning Survey 1997 reports 74 per cent of adults (aged up to 69) had taken part in learning in the last three years. The corresponding figure for Wales was 71 per cent (but this is based on only 254 interviews).

Unlike the figures for work-based training, however, those for full-time post-compulsory education are unequivocal. More 16- to 19-year-olds are staying on in education every year, and more are now staying on in Wales than the other home countries. The growth over time in Wales has been greater in the last six years.

Table 4.24 - Proportion of 16- to 19-year-olds in full-time education (per cent)

	England	Scotland	Wales
May 1992	52.2	40.5	52.5
Aug 1992	45.8	35.5	50.9
Nov 1992	48.7	42.6	48.2
Feb 1993	52.6	45.1	53.5
May 1993	55.6	49.1	53.8
Aug 1993	50.8	43.5	48.6
Nov 1993	53.0	49.2	50.4
Feb 1994	55.5	48.2	52.0
May 1994	58.4	48.4	57.9
Aug 1994	53.9	44.8	54.2
Nov 1994	55.3	47.5	54.5
Feb 1995	58.4	48.7	53.0
May 1995	60.3	49.8	58.4
Aug 1995	55.9	47.5	56.5
Nov 1995	55.8	49.3	55.8
Feb 1996	58.4	54.5	56.2
May 1996	60.2	54.5	58.0
Aug 1996	57.0	51.1	51.7
Nov 1996	57.1	51.6	53.0
Feb 1997	60.4	51.4	57.8
May 1997	61.3	56.3	61.6
Aug 1997	56.9	53.5	55.5
Nov 1997	57.7	53.4	63.9
Feb 1998	58.5	55.2	63.1
May 1998	60.4	54.4	66.8
Aug 1998	53.9	49.2	58.2
Nov 1998	56.2	51.3	63.1
Feb 1999	58.3	54.4	59.9
May 1999	61.0	52.2	62.6
Change	1.10	1.13	1.14

[calculated from LFS data supplied via NOMIS. Change calculated as the mean of February and May figures 1999, divided by the equivalent for 1994.]

This increase in participation is chiefly driven by the increases in West Wales, Mid Glamorgan, and Gwent. There are no figures for Powys, but in the other three TEC areas, the proportion of young people remaining in education since 1993 appears actually to have declined.

Table 4.25 - Proportion of 16- to 19-year-olds in full-time education: TEC areas (per cent)

	Gwent	Mid Glam	NE Wales	NW Wales	Powys	South Glam.	West Wales
May 92		52.0				58.4	47.9
Aug 92	61.0	44.8				55.9	46.5
Nov 92	55.8	39.2				55.4	41.9
Feb 93	57.7	45.4				63.2	48.1
May 93	51.3	50.2				74.8	48.4
Aug 93	45.4	45.9				65.8	39.6
Nov 93	48.3	43.0				62.2	54.9
Feb 94	52.5	50.7					57.2
May 94	56.1	56.7				62.9	60.0
Aug 94	59.5	67.0				44.8	50.8
Nov 94		59.0				51.4	56.1
Feb 95		63.4				49.9	52.1
May 95	59.1	63.3					56.5
Aug 95	59.3	51.9	61.1				58.1
Nov 95	53.2	49.9					60.9
Feb 96	48.9	55.1					63.7
May 96	47.9	52.4				63.2	65.3
Aug 96	54.8	44.9					55.3
Nov 96	52.2	45.7					63.4
Feb 97	56.9	44.8		71.6			67.7
May 97	55.6	46.1	69.1	79.4			71.0
Aug 97	51.9	49.8	64.6	63.7			57.9
Nov 97	59.6	49.1	74.6	60.6		63.4	69.0
Feb 98	57.8	56.7	70.8				73.1
May 98	60.1	52.2	67.9	66.2		66.2	75.7
Aug 98	57.4	44.3		67.0			70.8
Nov 98	58.8	60.5	49.9	61.0			76.5
Feb 99		62.0				56.1	72.4
May 99	63.0	63.3	59.5			62.9	66.3
Change	1.16	1.31				0.86	1.44

[calculated from LFS data supplied via NOMIS. Change calculated as the mean of February and May figures 1999, divided by the equivalent for 1994.]

4.11 Targets for employers

SMEs

The percentage of organizations with 50 or more employees with a commitment to the Investors in People standard to increase from 30 per cent in 1997 to 35 per cent by 2002 and to 38 per cent by 2004.

LMEs

The percentage of organizations employing 200 or more people with a commitment to the Investors in People standard to increase from 52 per cent in 1997 to 75 per cent by 2002 and to 80 per cent by 2004.

(ETAG 1999).

At first sight, these Targets are only a slight downward modification of those for 2000 set out in the *Bright Future* programme:

- By 2000, 70 per cent of all organizations employing 200 or more employees, and 35 per cent of those employing 50 or more, to be recognized as Investors in People.

(*A Bright Future: the way forward* - December 1995)

Moreover, they are in line with the original target for larger employers set in 1991:

- By 1996, 50 per cent of medium to larger organizations to be 'Investors in People'.

(*The National Education and Training Targets 1991* - quoted in NIACE 1993, p.8)

They are more stringent than the equivalent Targets for England:

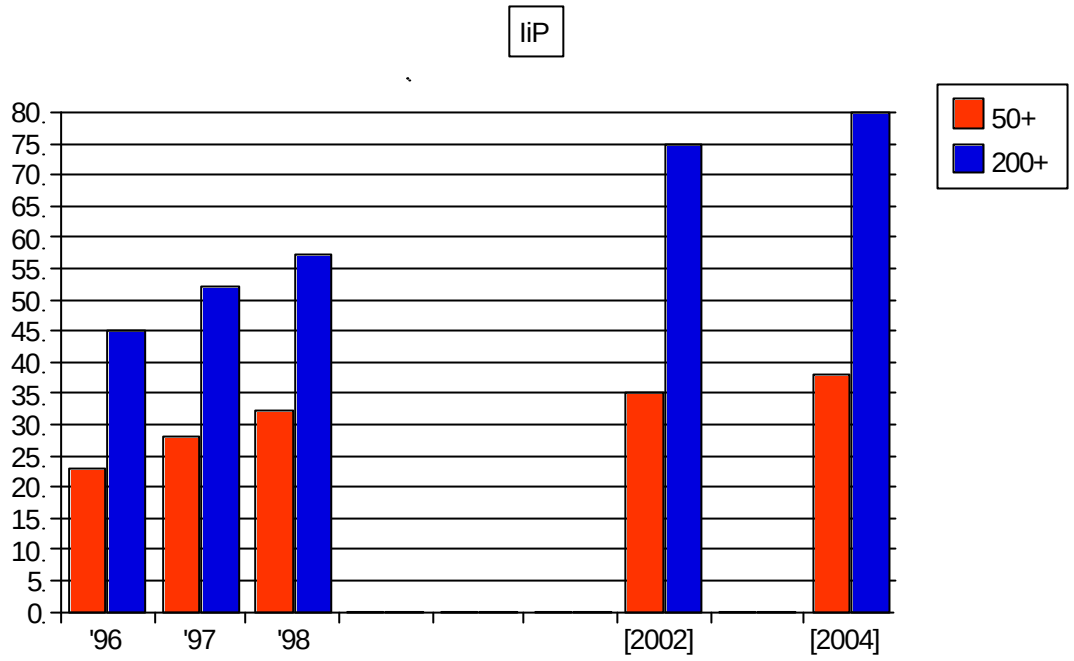
- 45 per cent of medium sized organizations recognized as Investors in People
- 10,000 small organizations recognized as Investors in People

(DfEE *National Learning Targets for England for 2002*)

However, it is not simply the proportions that have changed. The Target now specifies employers with a 'commitment' to IiP, rather than being 'recognized' as one, which clearly makes the Target easier to attain and prevents a direct comparison with the figures for England (but see Table 4.26).

With growth from the 1996 figures of 23 per cent and 45 per cent, to 28 per cent and 52 per cent in 1997, and 32 per cent and 57 per cent in 1998, both of these Targets appear to be achievable.

Figure 4.7 - Proportion of organizations committed to Investors in People award: Wales (per cent)



[Welsh Office 1999b]

Table 4.26 - Proportion of organizations committed to Investors in People award: England (per cent)

	1996	1997	1998	Committed
200+	10.9	20.9	28.7	46.5
50+	4.6	10.1	15.5	26.4

[NACETT 1998]

4.12 International comparisons in raising participation in lifelong learning

Of the 23 countries represented in Table 4.27, only Germany, Norway, Switzerland and USA had a significantly higher proportion of the population educated to upper secondary level in 1992. It was at tertiary level that the UK fell markedly behind many OECD 'competitors'. Although rates of completion continue to rise in all countries, by 1995 the situation for secondary education remained exactly the same, with only four countries having a higher rate of upper secondary completion (CERI 1997). This situation is predicted to remain so until at least 2015. By 1996, the net entry rate for university-level education was 41 per cent in the UK, the fourth highest of 18 countries in the study (CERI 1998). The UK also had one of the largest number of 'expected' years of education, and the third highest ratio of university-level graduates to population, along with perhaps the most balanced figures for participation by gender at all levels of initial education. However, in terms of basic literacy and numeracy, the

UK was near the bottom in a 12 country comparison, with the USA at about the same level and only Ireland and Poland significantly worse.

Table 4.27 - Highest education level of those aged 25-64 (per cent)

1992	Upper Secondary	Tertiary (university and HE)
USA	84.1	30.2
Germany	81.9	21.4
Switzerland	80.7	20.9
Norway	78.9	25.2
Canada	71.3	41.1
Sweden	69.9	24.1
UK	68.0	18.4
Austria	67.9	6.9
Finland	62.1	19.2
Denmark	58.9	19.2
Netherlands	57.8	20.9
New Zealand	56.4	23.6
Australia	52.8	22.4
France	52.2	15.9
Belgium	45.2	20.2
Ireland	42.2	16.9
Italy	28.5	6.4
Spain	22.9	13.0
Portugal	14.2	6.7
Turkey	13.7	4.8

[OECD 1993]

The UK has the highest participation rate in job-related training for employed 25- to 64-year-olds, the highest rate of employer-funded education and training, and one of the lowest rates of non-participation during the previous year. However, episodes of job-related training are significantly shorter on average than the other 11 countries in a detailed comparison. When the mean number of hours spent by each adult in education or training during the previous year is calculated, the rather rosy picture of participation rates changes dramatically. The UK now has one of the lower figures, around half that for New Zealand, and clearly higher than only Flanders and Poland (CERI 1998). This confirms the picture for industrial South Wales found by Gorard *et al.* (1999a) of an increase in very short health and safety or IT-related courses at the expense of more formal and extensive apprenticeships and other training schemes.

Although there are systematic inequalities in participation and qualification in the UK, these are generally smaller than in other OECD countries and diminishing over time. For example, of the 15 EU countries, only three have a smaller proportion of 16- to 19-year-olds in full-time education from families with only upper-secondary educated parents. Of the 15, the UK has the lowest proportion of 16- to 19-year-olds in full-time education from families with only lower-secondary educated parents (Eurostat 1998).

In broad summary, therefore, there is encouraging evidence of progress towards the achievement of a number of the Lifelong Learning Targets in Wales. However, the

substantial part of this improvement is attributable to the impacts of relatively well-qualified school-leavers replacing less qualified retirees in the labourforce. The Welsh performance in work-based training remains a particular cause for concern. In the next chapter, the views of policy-makers and professionals on these trends are explored.

CHAPTER 5: REACTIONS TO THE TARGETS

Summary of Chapter 5

- There is still a clash between the Targets' focus on formal credentials amongst adults of working age, and traditional conceptions of 'lifelong learning' among user groups. In particular, in spite of the changes in the phrasing of the Targets, concern over the role of 'informal' and 'non-vocational' learning and with the 'learning poor'/socially excluded persists.
- Whereas some providers appear concerned with the over-ambitious nature of the Targets (especially those from less prosperous regions), those from the employment sector argue that the Targets are not challenging enough at the higher (i.e., NVQ5) level of qualification. These views both argue that the Targets as they stand should not be seen as definitive statement of 'ideal learning outcomes'; rather they are best viewed as a minimum set of goals within an ongoing process of development.
- Users remain sceptical over the viability of accurate *and* comprehensive means of gathering data to inform the Targets. Moreover, a weak sense of ownership amongst providers and other actors remains a significant barrier to the successful implementation of the Targets.
- Although the general intention to use Investor in People as a measure of employer participation is welcomed, there are concerns from employers over the widespread viability of the scheme, especially for SMEs, in light of the bureaucratic and cost implications.
- There remains concern over the lack of recognition that learning through the medium of Welsh is given within the Targets, especially in light of the current emphasis on supporting the Welsh language in other policy areas.

5.1 Introduction

Lifelong learning has long been acknowledged as potentially the most problematic area of UK education target setting. As the 1995 NACETT Report on *Progress towards the National Targets* conceded:

> In our view, the most serious potential obstacles to the achievement of the targets arise in the area of lifelong learning … It is less clear that the attitude and framework which will encourage employers and individuals to invest effectively in adult training and development are really taking root … Unless there is a marked change in attitude and approach among employers generally, matched by a concerted drive to harness the commitment of adults to upgrade their skills and qualifications, the lifetime targets will not be achieved.
>
> (NACETT 1995, p.8).

Although the general concept of target setting in lifelong learning has been widely welcomed, consensus over the specific detail and focus of the Targets has been less unanimous. As the DfEE (1997) itself notes, the NETTs have generally faced a range of specific criticisms, being seen by various commentators as overly complicated, difficult to measure and lacking in ownership. They are also seen as including Targets which are unrealistic and unachievable, as well as excluding large sections of the adult population.

As highlighted in Chapter 2, a capacity to consult is essential if targets are to be recognized and acted upon by disparate elements of education systems. In Wales, education and training target-setting has certainly been subjected to considerable external scrutiny, with a range of consultation exercises carried out over the last five years. Therefore, this chapter examines the responses from users - practitioners and policy-makers - towards both the NETTs and the Welsh Targets and identifies the key areas of concern highlighted in external consultations. In doing so it draws upon three main sources:

- Specific responses to the *Learning is for Everyone* consultation (1998)
- A review of policy documents, academic and official literature from 1991 until 1999 reviewing and evaluating the National Targets in both a Welsh and UK context
- A small-scale consultation exercise, carried out in August/September 1999 with 23 key Welsh policy users (see Appendix A)[2]

In reviewing specific user responses to the Targets, five recurring areas of concern emerge:

- The inclusiveness of the Targets
- The scope and ambition of the Targets
- Practical Concerns: the monitoring and means of achieving the Targets
- Concerns of employers
- The relevance of Targets to other areas of policy

These echo elements in the general discussion presented in Chapter 2 and each is now discussed in more detail.

5.2 The perceived inclusiveness of the targets

Reflecting one of the general criticisms leveled at education target-setting, a sizeable proportion of comments on the Welsh Targets centre around notions of their 'inclusiveness', or more accurately, what they do *not* include. This can, in part, be seen as a result of the official construction of national target-setting by policy-makers, with the government making clear the need for the Targets to be as inclusive as possible. As the DfEE (1997, p.8) asserted:

> 'It will also be important for the Targets … fully to promote equal opportunities. The government is clear that higher attainment of skills must apply to everyone - females and males of all ages, people from ethnic minorities, those with disabilities, older workers and those with special educational or learning needs or difficulties.'

Nevertheless, as highlighted in Chapter 2, setting educational targets is an inherently political process, inevitably focusing attention on and privileging certain elements of education and training over others. In particular, the Targets' stated emphasis on 'adults of working age' and levels of attainment measured in terms of National *Vocational* Qualifications and their equivalents continue to be a cause of some concern for some users; especially those involved with non-vocational or 'informal' learning. Indeed, soon after the introduction of the NETTs, organizations such as NIACE began to express concerns over the need to avoid narrow interpretations of 'the workforce' and 'employees', at the expense of all lifelong learners:

> Older adults present a challenge to the achievement of NETTs, since many are unlikely to seek formal certification with a view to job mobility.
>
> (NIACE 1993, p.23)
>
> The way the NETTs are expressed could lead to the interpretation that skills training and employment-related education are intrinsically more important that other learning undertaken by the population at large, including those who for a variety of reasons are economically inactive.
>
> (NIACE 1993, p.9).

Despite changes in the phrasing of the Targets, it is clear that this concern with a work-based focus persists amongst certain sections of the user community, as this response to the present evaluation indicated:

> Given the philosophy of lifelong learning, we believe that it is important for all sections of the population to be included in targets, as these groups are as much part of the lifelong learning agenda
>
> (WFC 9/99).

The Commission for Racial Equality expressed concern about the lack of data collected about ethnicity in Wales, and about the problems posed by targets for those who are

relatively new to the UK: 'The targets are unrealistic unless accounts are taken of the disadvantages that they experience'.

In particular, the use of rates of completion of qualifications as the prime indicator of lifelong learning has been the source of much comment from organizations representing providers and recipients of learning:

> [We] feel that the emphasis on qualifications is too strong. The needs of many potential new learners, at first, are for functional literacy and numeracy.
>
> (Provider Organization life)
>
> … reaching out to the socially excluded who have not achieved academically, and are likely to be disadvantaged in a number of respects apart from educational attainment, implies a commitment on the part of the providers which is not always rewarded by qualification achievements. Thus, too great an emphasis on the outputs of the education process in a narrow sense could have a counterproductive effect.
>
> (WFC 1998, 1.1).

Thus, on the one hand, concerns were raised over the place of 'informal' learning within the Targets at present, a dimension of education seen as essential in encompassing sections of the population who may be considered 'learning poor':

> We draw attention to the importance of informal learning, both as a by-product of community and voluntary activity, and learning activities deliberately entered into in community settings, as a means of building citizenship, and a channel to more formal progressive learning activities … the critical value of informal learning in reaching out to the 'learning poor', whose social, gender, employment history and location all predisposes them to see formal educational institutions as inaccessible and 'courses' as not for them.
>
> (NIACE 9/99).

Moreover, regarding 'adults of working age' participating in work-based or institution-based learning, there was also a concern that the emphasis on qualifications would exclude genuine examples of participation in learning:

> One criticism of the NTET's was the lack of recognition of courses undertaken which do not lead to a recognized qualification at the end. Many ICT courses fall in this category, as do courses carried out in work-related subject areas … These courses are instrumental in providing the labour force with relevant and sometimes essential skills for employment. Whilst the Widening Participation Targets go some way to addressing this matter, this is an area which needs further consideration.
>
> (TEC 9/99)
>
> Important to define the status of qualifications not included in Dearing's National Framework, for example, BTEC Diplomas and Certificates

(Provider Organization life).

Throughout these responses, particularly with regard to 'non-traditional' learning and learners, there was a sense that the predominantly qualification and output-based focus of the Targets failed to recognize the complementary dimensions of 'input' and 'process' and, most importantly, the individual learner. Therefore, there was an underlying demand for a more 'qualitative' dimension to the Targets, although this was recognized by some respondents as problematic to achieve:

> The biggest flaw in the entire targeting process involves ignoring the added value achievements of individual learners
>
> (Provider Organization 9/99)
>
> We would argue for some kind of 'social capital' or community based indicators. But the fact that we can only be vague about this shows how much theoretical and empirical work still has to be done in this area.
>
> (Provider Body 9/99).

5.3 The perceived scope and ambition of the Targets

A second recurring theme throughout the consultations concerned the scope and coverage of the standards set by the Targets. These responses consequently took two opposing views. Firstly, following on from the previous theme of the Targets excluding those learners not following formal courses at Level 2 or above, some users raised concerns over the lack of coverage at the 'lower' end of the spectrum and the subsequent challenging nature of the Targets as at present. For some providers in less affluent areas, the Targets therefore appear unachievable:

> The targets are very ambitious and I cannot say whether they are achievable on a national basis. However, on a regional basis, they are in my opinion impossible to secure for the valleys. The work-based learning targets are particularly problematic given the SMEs in our area, and the notorious difficulties in getting these employers interested in education … It is worthwhile having ambitious national targets, but I would welcome some regional indications which recognize local challenges and difficulties.
>
> (Provider Organization 9/99).

Interestingly, there was also a sense in which users may feel unwilling to make known such views in light of the general consensus over the value of target setting:

> The targets are very ambitious – perhaps too ambitious – although we may not wish to say this publicly, as it would be taking a 'pessimistic line'.
>
> (Provider Body 9/99).

Conversely, others – notably users in industry – raised the concern that the Targets do not cater for the higher end of the credential spectrum, especially at Level 5. As these industrial respondents argue:

> Targets should reflect that successful learners must learn more. Would like to see at least one measure at Level 5
>
> (Business Organization life)
>
> At the top end of the qualifications spectrum, I would also welcome postgraduate and research degrees for industry – 'NVQs or equivalent' does not do justice to this concern.
>
> (Provider Organization 9/99).

These views therefore reflect a resolution among these sections of the user community against 'down-grading' the Targets:

> We would be concerned if NTET for Wales were downgraded simply because they are too difficult to achieve.
>
> (WDA life).

From both these perspectives, there was the assertion that the Targets should not be seen as a definitive statement of 'ideal learning outcomes', but rather as a minimum and part of a process of development:

> The NETTs must be regarded as a minimum set of targets for a qualified workforce; any temptation for employers and providers to become complacent once the targets have been achieved must be avoided.
>
> (NIACE 1993, p.8)
>
> It may be that these targets need to be revisited to make them more challenging. National Targets such as those suggested need to be linked to a range of other strategies, such as improvements in schools, so that they are part of a continuum and are built towards incrementally.
>
> (WFC 1998, 1.10).

A third concern was for the vagueness of the phrasing of the Targets:

> The way the targets are expressed is confusing and woolly. They should be expressed as simple percentages not as 'from some 1 in 5 to over 1 in 4 and approaching 3 in 10'. Better would be 20% to 25% to 30%. Also to set a target of '6 in 10 by 2002 and above 6 in 10 by 2004' is to appear not to have thought seriously about the target. Do we envisage in this and other instances a plateau effect, where it is in fact unrealistic to press for continuing improvement?
>
> (Training Organization 9/99)

5.4 Practical concerns: the monitoring and means of achieving the targets

Aside from these conceptual concerns, users also raised issues regarding the implementation of the Targets. These practically based concerns from user groups, therefore, encompassed the three stages of the Targets' implementation: (i) How they will be monitored and measured; (ii) how they will be used; and (iii) perhaps most pertinent to deliverers, how they will be achieved. As this response to the LIFE report argued:

> who will carry out the assessment? How will performance against targets be measured at a local level? How will performance be used to inform local strategies?
>
> (Employer Organization life).

In raising these issues, the views of end-users reiterate many of the technical issues already highlighted in Chapter 3 of this report, particularly in terms of the actual collection of data. Thus, some respondents recognized the problematic area of accurately gathering and collating data to inform the Targets, arguing that the cost of doing so is prohibitive:

> … whilst performance data is available for school- and college-leavers, there are difficulties with collating data regarding the population as a whole. Data for the Lifetime Targets can only be collected by the means of a household survey … This is costly, especially if reliable data is to be collected at Unitary Authority level or below. The Targets cited in the ETAG report do not appear to have sufficiently addressed these issues.
>
> (TEC 9/99).

Moreover, respondents also recognized the difficulties of accurately gathering data on students at the institutional level, particularly with non-accredited provision, part-time or short-term learners; again reflecting the earlier concerns over the 'visibility' of some elements of the learning population in the Targets:

> Difficulties [in monitoring] may arise through incomplete recording of student qualifications upon entry to FE in particular with part-time or short programme students and adult returnees … Thus there may be some under-recording of attainments
>
> (WFC 9/99)
>
> Where non-accredited provision is involved, it will be difficult to gather details about all learners' backgrounds and prior achievements. The key difficulties therefore concern reliable information systems, interfering with learners' privacy, and the lack of resourcing for additional administrative work.
>
> (Provider Organization 9/99).

Aside from the monitoring and measurement of progress made towards the Targets, wider practically-based concerns surrounded the means of *achieving* the targets. One obvious concern was the increased resourcing needed for providers to ensure that the Targets are met:

> It is also recognized that whilst the LLTs are achievable, they will require a higher level of investment to deliver because success will depend ever more upon reaching and retaining groups which have previously proved difficult and resource intensive to recruit and retain.
>
> (WFC 9/99)

However, an underlying concern was that of the actual 'ownership' of the Targets, and therefore, the obligation and accountability for their achievement. The need for a collaborative network of local actors in achieving the Targets has been stressed previously in a Welsh context. As the Welsh Office recognized in 1993:

> Wales will not achieve the targets and get beyond them without a high degree of co-operation between many organizations ... The Welsh Office looks to local education authorities, schools, colleges, training organizations and employers to play a full part in delivering these local action plans in support of the National Targets
>
> (Welsh Office 1993b, p.26).

Yet, concerns that such shared ownership and accountability would successfully develop were still prevalent in responses to the present evaluation:

> An issue that needs to be raised is the problem with lack of ownership of many of the targets suggested. As there are few organizations that have direct influence in performance towards these targets, co-ordinating partnership working may be difficult
>
> (TEC 9/99)
>
> The LLTs are set in proportions of the total population rather than whole numbers. It is difficult, therefore, for institutions, other providers and individuals to identify their own contribution towards the targets.
>
> (WFC 9/99)

5.5 Concerns of employers

Aside from these more educationally based concerns, the economic aspects of the Targets have also been raised; firstly in terms of its relevance to the 'low skills' workforce. On the one hand is the view that NVQ level training qualifications are not economically realistic. Robinson (1997) criticizes the NETTs' overt emphasis on formal training qualifications; questioning their relevance to the British labour market and the rapidly expanding lower service/ manual occupations. Moreover, by focusing on qualifications gained by those in employment the NETTs do not take account of the

extent to which their skills and competencies are actually being utilized. Do they provide the best indicators of economic competitiveness?

From the employers themselves, the use of the Investors in People criterion has received a cautious welcome, although tempered by practical concerns:

> Welcome the intention to establish IiP as the general standard for employers but suggest that the process for assessment is currently too bureaucratic, cumbersome and expensive for SMEs.
>
> (Employers' Organization life)
>
> When it comes to IiP, it will also be very difficult to secure the target when it comes to larger company involvement.
>
> (Provider 9/99)
>
> With regards to IiP, the standards should not be set any higher. The current targets are already too high, with far too much bureaucracy.
>
> (Employer Organization life).

5.6 Relevance of targets to other areas of education concern

Finally, responses from user groups also highlight perceived weaknesses in the Targets as regards their relevance to current major areas of education concern. Unsurprisingly, many of these comments have been centred around the Targets' omission of references to learning through the medium of Welsh. Thus, it has been often contested that, as they stand, the Targets do not reflect any aspect of Welsh language development policy (WFC 1998):

> Targets should be set for the development of Welsh medium courses, including work-based learning and distance learning.
>
> (Provider Organization life)
>
> Targets set for Welsh medium learning will create a high demand for bilingual/Welsh courses.
>
> (Provider Organization life).

However, there have also been responses regarding the recognition of different modes of delivery of lifelong learning, particularly in relation to the use of information and communications technology. The potential role of open learning, and 'non-traditional' methods of educational provision more generally, in attaining national lifelong learning targets has been long highlighted (Daniels 1994). In particular, the role of information and communications technology cannot be overlooked, especially with programmes such as the University for Industry and Welsh Coleg Digidol.

5.7 Value of user consultation

Despite the range of issues raised here, it is clear that these comments remain supportive of the broad notion of setting targets in Wales, generally providing constructive rather than negative criticism. Concern over what the Targets do not include and the practicality of their implementation can be seen as an endorsement of the overall thrust of the NETTs, whilst offering useful and pertinent reminders of the need for clarification and refinement.

Indeed, many of these areas of concern have been previously addressed in the setting of the NETTs. The problem of population definition has long been recognized by those revising the NETTs and is reflected in the changes in phrasing of the Targets from 1991 (from 'workforce', 'employees' to 'adults of working age'). Recognizing the bias towards work-related qualifications for adults, NACETT (1998) has also stressed the desirability for a target related to 'participation in substantive and deliberative learning' (as opposed to 'formal learning'). However, with the partial exception of the 1997 National Adult Learning Survey (Beinart and Smith 1998), there is an absence of 'robust' and 'regular' statistics on this issue.

Nevertheless, many of these concerns among users also appear to stem from a lack of consensus and clarity as to what the Targets are intended to cover and, as such, may be seen primarily as problems of definition. These will need to be addressed in future developments of the Targets.

CHAPTER 6: RECOMMENDATIONS AND CONCLUSIONS

6.1 Introduction

Recommendations and suggestions have been made where appropriate throughout this report. In this final section, the principal of these are gathered together under five sub-headings: the purposes of the Targets; setting the Targets at appropriate levels; setting new Targets; calculating the Targets; and further research.

6.2 The Purposes of the Targets

As we saw in Chapter 2, there is a substantial consensus that educational indicator systems are most effective when they include Input, Process and Output elements. This reflects their fundamental purpose as a means of contributing in the round to the development of more effective education policy initiatives. The Targets that are currently in use in Wales (and elsewhere in the UK) are concerned overwhelmingly with Outputs. They therefore run the risk of presenting a misleading picture of actual patterns of educational performance; and contribute relatively little to assessing the efficacy of initiatives aimed at raising attainment and participation levels. Some aspects of the Input element can be captured by addressing the variation in socio-economic circumstances between regions (see below). However, a more complex investigation than has been possible in this study is required, to assess methods of creating an indicator system of this kind. Accordingly,

- *we recommend that a feasibility study is carried out that explores the costs and benefits of developing an indicator system which incorporates Input, Process and Output elements.*

Again, as was seen in Chapter 2, there are tensions between the purposes of targets expressed in terms of economic goals (developing skills, etc.) and those which emphasize social ones (overcoming social exclusion). For example, the level of qualifications required for economic development purposes may well fall short of that which would achieve social inclusion: which criterion should be used in setting targets? Currently, the Targets specified for Wales combine both economic and social purposes, as if this can be done unproblematically. It is this that, at least in part, underpins some of the disquiet amongst some of the user communities – identified in Chapter 5 – over the focus in the Targets on formal and certificated forms of education and training, especially as these relate to the work-place. Clearly, there is no easy solution to this problem. However, it seems preferable to acknowledge that these tensions exist, rather than simply ignoring them. This is especially important if ownership of the Targets is to become firmly established amongst the whole range of user groups. Accordingly,

- *we recommend that the purpose - economic development or social inclusion - to which each Target is addressed is made explicit.*

The Targets are currently defined almost exclusively in terms of what are intended to be 'hard', readily quantifiable indicators of qualifications and participation levels. The

danger here is that this focus excludes a great deal of important information about educational performance, simply because it is not amenable to easy quantification. Whilst it is certainly desirable that the Targets present information simply and – as far as possible – unambiguously, to exclude 'softer' data (on, for example, informal learning, student satisfaction, and so forth) may well undermine the fundamental purpose of the Targets: that is, to assess the changing performance of the education system as systematically as possible. Accordingly,

- *we recommend that an annual report on progress towards achieving Targets should be prepared, which includes 'softer' data, as well as quantifiable indicators.*

6.3 Setting the Level of Targets

The ETAG *Action Plan* (1999) called for a revision upwards of the LIFE targets in light of recent LFS results. This report suggests a somewhat more complex and, in some regards, less optimistic scenario. As we saw in Chapter 4, there are considerable uncertainties in estimating future progress towards the achievement of the Lifelong Learning Targets. However, at present, using the standard official assumptions and simple linear extrapolation of past trends – both of which are somewhat optimistic - the values of the indicators involved in each Target are likely to be of the following order of magnitude in 2002 and 2004.

Table 6.1: Estimated progress towards achievement of Targets, 2002 and 2004 (per cent)

	2002	2004
No qualification, 16-18	10	6
No qualification, work-age	**16**	12
Level 2, 19 years	**78**	82
Level 2, work-age	70	74
Level 3	**45**	**50**
Level 4	25	**28**
Literacy	no figures available	
Numeracy	no figures available	
Participation	no clear definition	
IiP, SME	50	60
IiP, LME	75	80

NB. Estimates falling short of the Target are indicated in bold.

On this basis, therefore, it is predicted that a number of Targets will fall somewhat short of fulfilment by 2002, although the situation at 2004 appears more optimistic. It should be emphasized, however, that estimates produced on the basis of even slightly different assumptions, yield a much more pessimistic picture (as was seen in Chapter 4). On the other hand, the estimates given in Table 6.1 do give an indication of where we are likely to be, if nothing else changes (for example, through policy initiatives).

All in all, then, there is insufficient evidence to justify a radical revision of the levels embodied in the ETAG Targets (although the methodological *caveats* need to be borne in mind here). Given that there have already been substantial revisions to the Targets

during their relatively short lives, it would seem preferable to maintain the Targets at their current levels. Accordingly,

- *we recommend that the Targets set out in the ETAG Action Plan are maintained at their current levels.*

However, there are sufficient methodological concerns over the estimates set out in Table 6.1, to warrant very careful monitoring of progress towards their achievement. This is especially so, given the initial evidence presented in Chapter 4 of a 'flattening out' of the upward curve of increasing qualifications levels for a number of the Targets (which, if confirmed, would undermine the simple extrapolation of past trends used to generate the estimates in Table 6.1). Particular attention should clearly be paid to those Targets which, even on the very generous assumptions made above, are predicted to be marginal. More specifically, again as was emphasized in Chapter 4, much of the progress that is being made towards the achievement of the Targets is accounted for by what we have termed the 'conveyor belt effect' of substituting less qualified retirees by more qualified school-leavers in the working-age population. Given this, it seems appropriate that the acquisition of qualifications by adults whilst they are actually in the workforce, where our data are less satisfactory than for school-leavers, should receive special monitoring. Accordingly,

- *we recommend that separate accounting should be adopted for school-leavers entering the working-age population and for adults who are already members of it.*

- *we recommend that annual changes in qualifications and participation levels are monitored, with a view to revision of the Targets should it become clear that they will not be achieved.*

In the latter context, it is worth noting that there is no evidence from this study that setting Targets at levels which obviously cannot be achieved will have the effect of stimulating greater improvements in qualifications and participation levels. On the contrary, the effects of such a strategy are much more likely to be the undermining of ownership of the Targets amongst many of the user groups.

6.4 Setting New Targets

As was seen in Chapter 5, although there is little evidence for a distinct 'regional effect' on qualifications and participation levels, the spatial variation in socio-economic conditions dictates that the achievement of nationally-specified Targets is much more difficult in some geographical areas than others. It therefore seems appropriate to acknowledge these differences as 'Inputs' in devising 'Output' Targets. This would be best achieved by retaining a national framework of Targets (as currently), but producing a set of regional variations within Wales to take account of widely differing capacities to achieve the national averages. Again as was seen in Chapter 5, although it is possible in principle to produce precise estimates of the magnitude of these regional variations, it has not been possible to do so in this study because of the lack of adequate data. Accordingly,

- *we recommend that regional variations are devised to the national framework of Targets, reflecting differences in socio-economic conditions.*

As noted in Chapter 5, there were representations, especially from the business community, that the Targets should encompass higher level qualifications. There appears to be no clear reason why there should not be a Level 5 Target, based on the data presented in Chapter 4.

- *we recommend the introduction of a Target for Level 5 qualifications.*

There were also strong representations – noted in Chapter 5 – that there should be Targets for the Welsh language. This is inevitably controversial. In view of both the findings and the language of interview in Future Skills Wales, for example, it may be judged that this is not a relevant issue for the majority of employers and employees in Wales. However, the limitations of this study need to be borne in mind, especially as there are likely to be significant variations between different parts of Wales. Moreover, there may be wider rationales for careful monitoring of progress specifically in Welsh. However, it is much more difficult to specify how Targets for Welsh should be defined. There seems to be a broad consensus that individuals should have opportunities both to learn Welsh and to be taught through the medium of Welsh. However, it would be far more contentious to specify targets for the percentage of Welsh-speakers or for the percentage of the working-age population receiving Welsh-medium education and training. Accordingly,

- *we recommend that attainment levels in Welsh and participation in Welsh-medium education and training should be monitored and reported annually, but without the specification of targets.*

As was emphasized in Chapter 4 and again in Chapter 5, as currently specified, 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. 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. It would therefore be necessary to conduct a National Adult Learning Survey or equivalent on a regular basis to permit the setting of a Target to include the full range of adult learning. Accordingly (and in the absence of fundamental changes in the availability of data),

- *we recommend that commentary on wider patterns of adult learning should be included as part of the 'softer' data in the annual report on progress towards achieving the Targets proposed above.*

Similarly, 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. Here, however, there may 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.

6.5 Calculating the Targets

As has been shown in Chapters 3 and 4, Lifelong Learning Targets involving qualifications, unlike Foundation Targets, are not easy to assess. We rely on population surveys to provide the necessary information and these have several drawbacks – notably sampling error, changes in question format, and inability to perform regional

disaggregation. Currently, the Labour Force Survey is the most useful source for measuring progress towards meeting Targets. If, in an agreed season such as Spring, the LFS were to be boosted in Wales every year, then several of the drawbacks could be overcome. Particularly, it would then be possible to assess regional variations within the national framework more accurately.

- *we recommend that the main source used to monitor the Targets should continue to be the LFS, and that this be boosted in Wales for the same season every year.*

Other sources will continue to be useful, most notably the British Household Panel Survey, and the National Adults Learners Survey. Their chief advantage lies in their more genuinely lifelong approach. From sources such as these, it is possible to gauge the patterns of participation amongst residents who are of retirement age.

- *we recommend that alternative sources continue to be used to monitor progress among those not in the labour force.*

The data source used to monitor Targets needs to be regularly updated, large-scale, contextualised, accurate, verifiable, easily available, and cheap (Loveman 1997, Walberg and Zhang 1998). There are so many different bodies doing surveys of education and training in Wales that it cannot be considered economic. Each survey (whether NIACE, EC, ESRC, Welsh Office, or DfEE) replicates part of others, but without being directly comparable or regularly updated. Research findings also have little impact on policy-making (and it is noteworthy that despite the expenditure of hundreds of thousands of pounds by the ESRC Learning Society Programme in Wales, ETAG makes no reference to the ensuing results). As suggested in the report by Schagen *et al.* (1997), there is a clear need for better data systems on national participation and qualifications - a unified database perhaps.

- *we recommend the creation of a national data-base to collate information from a variety of sources on participation and qualifications.*

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 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.

- *we recommend that, where appropriate, the Targets are expressed in terms of average qualification (or participation) per resident.*

The calculations on which the recommendations in other sections are based use the standard Welsh Office/DfEE assumptions about problematic qualifications (see Appendix C for full list as currently used). It has been shown in Chapter 3 that these assumptions are important and 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. In the meantime,

- *we recommend that trade apprenticeships continue to be divided between Levels 2 and 3 as currently, but that other qualifications are treated as Level 1, and 'don't know' etc. are treated as unqualified.*

- *further we recommend that once agreed on , these assumptions are published and used exclusively in setting and monitoring targets.*

It should be noted that if other qualifications are treated as Level 1 at best, then the figures in Table 6.1 would all be somewhat lower.

Unless there are strong policy-related reasons to the contrary, the growth over both parts of each Target (to 2002 and 2004) should be proportionately equivalent, and changes should be calculated in genuine proportions not percentage points. Of course, the expected growth might be different between Targets, depending upon recent past trends. Where graphs show approximately linear patterns, the simplifying assumption should be made that progress is linear and that regression models of the type used here are the best estimates of future position (assuming no improvement in 'real' terms). Where progress is neither linear nor curvilinear (and therefore transformable to linear), no accurate prediction is possible.

- *we recommend that the growth over the two parts of each Target (to 2002 and 2004) should be proportionately equivalent; and that changes should be calculated in genuine proportions, not percentage points.*

- *we recommend that the regression models illustrated in this study be adopted to produce best estimates of future levels of qualifications and participation.*

Although Targets should be simple, the use of vague terms like 'some', 'approaching', 'over and 'under' should be avoided. Similarly, pejorative terms, such as 'underachievement', should be avoided as having no empirical basis. Other terms, such as 'low skills' and 'participation', need to be defined clearly before they can be measured.

6.6 Further research

With access to data at an individual level from the LFS and other sources, logistic regression and similar analyses can be used to create more accurate predictions of future progress towards achieving the Targets. They can also be used to assess the importance of the local and individual socio-economic context (likely to be almost all-important), and so judge local performance and create somewhat fairer local Targets. It is only then that progress and plans, for example at TEC level, can be reliably assessed.

Another area needing further study is the actual role of Targets. A more complex analysis than used here is necessary to establish whether the practice of target-setting has any impact at all. More detailed annual figures are required to carry out a full analysis of the 'conveyor-belt' process, and so separate the two components of progress towards Lifelong Learning Targets (the population process and actual improvements in qualifications among the adult population).

7. Appendices

APPENDIX A - The consultation exercise

Consulted Bodies were asked to comment on each of the following questions:

1. *Which Lifelong Learning Targets are most relevant to your organization/ constituent members?*

2. *What data would you or your members have to provide in order for these targets to be assessed? If appropriate, suggest any difficulties you foresee in the collection and supply of these data?*

3. *How realistic are the existing Lifelong Learning Targets? How confident are you of the achievement of those targets most relevant to your organization/ constituent members?*

4. *In your opinion, do any of the existing Lifelong Learning Targets need refining or revising? If so, how would you suggest they should be altered?*

5. *Which alternative and additional indicators should the Lifelong Learning Targets also include?*

6. *Did your organization use the old National Targets for Education and Training and, if so, what did you consider to be their strengths/ weaknesses*

The following actors were consulted [shaded box denotes reply received]

Huw Kyffin National Training Organization (NTO) Council for Wales, Technocentre Beignon Close Ocean Way Cardiff CF24 5PB	Alun Jones Director NAHT (National Association of Head Teachers) Wales Regional Office Empire House Mount Staurt Square Cardiff Bay, CF1 6DN	Mike Jones Fforwm Quadrant Centre, Cardiff Business Park, Llanishen, Cardiff, CF14 5WF,
Carole Overton FEDA Cymru Linden Court The Orchards Ty Glas Avenue Cardiff, CF4 5DZ	Prof. Danny Saunders Secretary: Universities Association of Continuing Education (Cymru) University of Glamorgan Business Department Pontypridd, CF37 1DL	Richard Hart Head of FE Division FE Funding Council for Wales (FEFCW) Linden Court The Orchards Ty Glas Avenue Llanishen, Cardiff CF4 5DZ
Roger Jones Chairman South East Wales TEC 2-7 Drake Walk Brigantine Place Atlantic Wharf Cardiff, CF1 5AN	Gareth Pierce Head of Education & Training Welsh Local Government Association 10/11 Raleigh Walk Atlantic Wharf Cardiff, CF1 5LN	Mr G. Jackson Chief Executive Mid Wales TEC 1st Floor St David's House Newtown Powys, SY16 1RB
Mr. Alan Mackey Deputy Chief Executive West Wales TEC Orchard House Orchard Street Swansea, SA1 5DJ	Mr. Graham Davies Programme Management Executive CELTEC – North Wales TEC Unit 6, St Asaph Business Park St Asaph Denbighshire, LL17 0JL	Education & Training Officer Welsh Joint Education Committee 245 Western Avenue Cardiff , CF5 2YX
Merfyn Morgan NCVQ (Wales) Unit 1 Links Court Links Business Park St. Mellons Cardiff, CF3 OLT	John Valentine-Williams Qualification Curriculum & Assessment Authority for Wales ACCAC Castle Buildings Womanby Street Cardiff , CF1 9SX	Judith Jones Education & Training Officer Commission for Racial Equality Capital Tower – 14th Floor Greyfriars Road Cardiff, CF1 3AG
Mary Dunford Acting Director Equal Opportunities Commission Windsor House Windsor Lane Cardiff , CF 10 3GE	Ian Wilox Welsh Development Agency WDA, QED Centre, Main Avenue, Treforest Estate, CF37 5YR	Mr. Meirion Prys-Jones Head of Education & Training Dept. Welsh Language Board Education & Training Department Market Chambers 5-7 St. Mary Street Cardiff, CF10 1AT
Prof. Hywel Francis Universities Association of Continuing Education (Cymru) Swansea University Swansea, SA2 8PP	David Evans Chief Executive, Council of Welsh TECs 2 Belgnon Close Ocean Way Cardiff CF1 5HF	M. Davies President National Union of Students (Wales) 107 Walter Road Swansea, SA1 5QQ
Ashley Drake	David Jenkins	Sir Christopher Ball

Assistant Director CBI Wales 3 Columbus Walk Atlantic Wharf Cardiff, CF10 4WW	TUC Wales Transport House 1 Cathedral Road Cardiff	Campaign for Learning 45 Richard Road Oxford, OX1 2JJ
Anne Poole NIACE Cymru 245 Western Avenue Cardiff , CF5 2YX	Elen Rhys Coleg Digidol Wales Digital College 1 Bridge Street Cardiff , CF1 2TH	

APPENDIX B - Other school-based indicators

The Bright Future programme sets **additional substantive goals** for achievement by the year 2000:

- 95 per cent of classes should have at least satisfactory standards of teaching and learning, and 50 per cent of classes should have good or very good standards
- All primary schools should be regularly setting their own targets for improvement, especially in literacy and numeracy
- All secondary schools should be regularly setting and announcing targets for improving attainment, for example at GCSE, A level and in vocational qualifications
- Each school should have a development plan which sets reasonable objectives and targets for improved performance in all subjects of the curriculum, including Religious and Physical Education. Plans should link educational, staff development and expenditure priorities
- Each development plan or prospectus should set out what will be done to prepare to meet the statuary obligation to provide Welsh for 14-16 year olds from 1999
- Each school should be raising standards of teacher assessment: OHMCI report that for 11 to 14 year olds only 70 per cent of secondary schools made satisfactory or better use of assessment to promote pupils' learning in 1995
- Each school should feature its targets, and progress towards meeting them, in its annual report to parents and prospectuses, giving particular attention to addressing weaknesses in literacy, mathematics and science, and to shortcomings identified by the Inspectorate
- Each secondary school should ensure that every pupil has a National Record of Achievement to show the progress he or she has made (compared to 82 per cent in 1994-95)
- Each school should be offering young people incentives to achieve personal goals; sound careers education and work experience
- Each school should offer opportunities for extra study - for example, after hours, in the holidays or at the weekends
- The proportion of pupils leaving school without any qualification should be reduced substantially: for Wales the present presumption is that the reduction should be at least 10 per cent by 2000 as against the 1994-5 level
- Many more that the 39 per cent in 1994 should achieve 5 GCSEs at grades A* to C
- Schools with fewer than 2 out of 10 pupils achieving 5 GCSE grades A*-C, or which in other ways give cause for concern, get regular attention by OHMCI
- A significant majority of pupils should achieve the standards of numeracy and literacy expected of them at 7, 11, and 14
- Almost all pupils should be achieving 5 GCSE passes at grades A* to G or the vocational equivalent; and
- Each school should have a target to reduce absenteeism including truancy
- Between 60 per cent and 70and of all 11 year olds should achieve level 4 or better
- Between 60 per cent and 70and of all 14 year olds should achieve level 5 or better
- Schools whose results fall in the lowest quartile following the statuary tests of 11 and 14 year olds in 1996 should lift performance by at least 10 per centage points
- The performance of both boys and girls should continue to improve, but the extent to which boys under-perform by comparison to girls should be cut by at least 50 per

cent in the end of Key Stage assessments; the attainment of 5 A*-C grade GCSEs; and the achievement of 2 or more A levels

- The per centage of all 15 year olds gaining 5 GCSEs or vocational equivalent at A*-C and A*-G in 1996 should increase by at least 10 per centage points
- The number of secondary schools meeting and exceeding the programme target for GCSE A*-C achievement in the core subjects should increase by at least fivefold
- No school in Wales should have less than 20 per cent of 15 year olds achieving 5 GCSEs at grades A*-C.

(*A Bright Future: Beating the Previous Best* - February 1997)

An estimate of progress towards some of these prior (BEST) targets can be glimpsed from Table B.1.

Table B.1 - Progress towards BEST targets (per cent)

	1996	1997	1998	[2002]
Satisfactory inspection: primary	80	85	90	[95]
Good inspection: primary	38	40	44	[50]
Satisfactory inspection: secondary	88	90	92	[95]
Good inspection: secondary	45	50	55	[50]
Classes of 5-7 >30	-	-	30	[0]
Unqualified leavers	7	-	-	[5.95]
Schools <25 per cent GCSE/voc benchmark	27	24	12	[0]

[Welsh Office 1999]

APPENDIX C

Qualifications used in the Labour Force Survey and their approximate 'Level' equivalents

NVQ Level 5
Higher Degree

NVQ Level 4
First degree
Other degree
Diploma in HE
HNC, HND, BTEC etc. higher
Teaching, further education
Teaching, secondary education
Teaching, primary education
Teaching, level not stated
Nursing etc.
RSA higher diploma
Other higher education below degree

NVQ Level 3
GNVQ advanced
2 A levels or equivalent
RSA advanced diploma
OND, ONC, BTEC etc., national
City and Guilds advanced craft
Scottish CSYS
SCE higher or equivalent

NVQ Level 2
1 A level, or AS levels or equivalent
Trade apprenticeship
GNVQ intermediate
RSA diploma
City and Guilds craft
BTEC, SCOTVEC first or general diploma
5 O levels, GCSE A-C, CSE grade 1 or equivalent

NVQ level 1
up to 4 O levels, GCSE A-C, CSE grade 1 or equivalent
GCSE D-G, CSE grade 2-6 or equivalent
GNVQ, GSVQ foundation
BTEC, SCOTVEC first or general
SCOTVEC modules
RSA other
City and Guilds other
YT, YTP certificate

Other qualification
Don' know
Not applicable

Did not answer

No qualification

The most problematic items are in italics. Of these the most numerically significant are Trade Apprenticeship (8% of base figure), and Other Qualification (7% of base figure).

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