Evaluating the impact of reforms of vocational education and training: examples of practice

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Impact of education and training

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Abstract

In this study 19 evaluative reports of national reforms to vocational education and training (VET) across 12 European Union countries have been selected and analysed. Criteria have been developed which clarifies the analytical framework. The study of these reports of reforms provides insights into the ways evaluations have been conducted, the role of evaluations in the reform process and the kinds of impacts the reforms have made.

A range of large-scale national reforms to VET is examined covering initial vocational training (IVT), continuing vocational training (CVT), VET in higher education, VET for employability, qualification development and financing. The trend away from central control of VET planning and financing is evident as is a deepening appreciation of the potential of VET for broadening the school curriculum and for improving the life chances of individuals.

Countries differ greatly in the ways they use evaluation. In some countries evaluation appears not to be used as a development tool and in others it is developed simultaneously with the reform process. Published impact studies are rare; the most common form of evaluation programme is a mid-term and/or summative stakeholder survey. However, there are some good examples of published impact analysis and the methodological rigour in these can be used to develop confidence in tackling impact studies. The study offers evidence-based guidance on making evaluation programmes more scientific and more impact oriented.
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1. Introduction

The main objective of this study is to provide a critical review of research dealing with evaluation of education and training system reforms that influence the organisation and outcomes of education and training at macro level. To develop this review a selection of national reforms to vocational education and training (VET) has been made and reports on these reforms analysed against criteria to provide insights into the ways evaluations have been conducted, the role of evaluations in programmes of national reforms and the impacts these reforms have made.

The task of looking at national reforms and finding evaluative reports on them has been a complex task. The specific nature of this study has meant that many reports fail to meet the exacting specification required and consequently researching sources of potentially useful information has been time consuming. In the end 19 reports have been identified as relevant to the study. Ten are what might be termed ‘core’ reports as they are especially rich in data on a reform, its evaluation process and the evaluation of the effects of the reform. Two of the 19 reports (from Denmark and the Netherlands) are specific case studies in Part IV of the third research report, but they are not considered in great detail in this study.

1.1. The nature of VET

VET is a complex subject of research because it is so wide ranging, covering multiple forms of activity from parts of mainstream initial education to short-term, highly focused job specific skill development. There are also multiple layers of activity on where learning takes place, who organises it, who pays for it and who certifies it. The value of VET is located with individuals, communities, institutions, trade unions, businesses and governments at regional, national and international levels. Development and reform of VET is therefore subject to a multitude of influences, controls and incentives. Setting up a large-scale reform to a country’s VET system demands high levels of consultation, commitment from national agencies and detailed planning. There are clearly many ways to manage a national reform ranging from a carefully conceived, multistage plan to one that sets out to achieve aims through multiple activities. In the latter type, actions are often dependent on responses to recent changes in the system and so method corresponds, for example, to setting in place an integrated transport system where the development of the train network depends on the functioning of other means of transport and the choices people make as different ways of traveling become available.

Evaluation processes also take on different roles in these different styles of reform. Some represent a feedback system to central planners on progress and are mechanical in nature using targets or performance indicators as accountability tools. We could label these evaluations as ‘summative’. Other evaluation processes are embedded in the reform process itself and offer feedback to a range of interested parties. Indicators and performance measures are less prominent here and are used to improve organisational learning. The evaluation is seen as a way of communicating thoughts and actions across a range of actors. This style could be labelled ‘formative’. The complex nature of VET and its social embeddedness makes a single prestructured summative evaluation of limited value. The evaluation process might be considered to be about learning about VET change itself and a formative evaluation process is, perhaps, essential. In fact, drawing on the experience of researching the evidence for this study evaluations of national reforms are rarely singularly summative or singularly formative but fall within a spectrum of types ranging from one to the other.

All evaluation studies respond to their objectives and report on these. However some go further and report on the implications of findings for the system being evaluated. This extension can, in some reports, lead to substantial statements that have implications for reform managers. This ‘added value’ to evaluation
reports is generally associated with evaluations of the embedded or formative kind.

In this study a wide range of types of VET reform and evaluation processes have been encountered. The spectrum of types of reform and evaluation processes makes the analysis presented a useful illuminative tool for VET researchers and offers ideas for further, deeper analysis.

1.2. Some definitions and limitations

It is useful to state how certain key concepts are used in this report.

VET is defined as all organised forms of initial and continuing or further vocational education and training, independent of location, age of participants and their level of qualification. VET is to prepare for a certain occupation or employment and could also include an element of general education, for example the development of basic skills.

Reforms of VET are limited in this study to those that are national or system-wide. Reforms need not cover the whole VET system in a country to be included, indeed no examples of this root and branch scale of reform were found, however reforms were required to cover a substantial component of the VET system. Regional reforms have also been included when the results of the reform are likely to impact on national provision. A distinct part of the focus on VET reform is to consider the financing measures. Some VET reforms include reform of financing arrangements as well as the content and delivery of VET. Some evaluation reports are not associated with any single reform. They are an evaluation of VET provision in a country from the perspective of a particular set of users. For example, evaluation of effects of qualifications on a full cohort of school leavers in 1992 has been carried out in France. Leaving out such studies would have reduced the quality of the analysis of types of evaluation.

Evaluation is research that involves use of social and economic methodologies to assess and improve the planning, implementation, monitoring, effectiveness and efficiency of measures or programmes. In this study we are concerned with evaluation of impact. We are looking for some idea of how changes to individuals, institutions, communities and systems are dependent on interventions embedded in the reform process. Stern (2003) refers to these evaluations as those that bring ‘accountability for policy-makers’ and distinguishes them from evaluations which aim to develop a reform programme, create knowledge about the VET system or aim for social improvement and change. The focus of these accountability evaluations is impact, outcomes and achievement of targets and value for money.

The next chapter outlines the research, giving an indication of scope, the work undertaken and the timescale involved.
2. Selection of reports for analysis

Searches for reports were protracted and often led to an inadequate description of the evaluation process, focusing instead on detailed descriptions of the planning and introduction of reforms. For this research there are three points of interest – the reform itself, the evaluation of the reform (process and outcomes) and how the reform and the evaluation relate to each other. The first point is always present, the second sometimes present and the latter is invariably missing. The intersection of the reform and the evaluation is important for two main reasons:

(a) it gives an insight into the way in which the reform and the evaluation methodology are matched to each other by design. For example, how well the objectives for evaluation correspond with the goals of the reform;
(b) it tells us how impact is being monitored and then weighed against other contextual factors.

Compiling a group of reports representative of the range available proved difficult; it was not possible to be as selective as one would have wished as the range of reports available was limited. Selection of reports was initially based on:

(a) the significance of the reform in the country concerned;
(b) the breadth and depth of the evaluation;
(c) the extent of the focus on evaluation of impact.

In practice, the first goal was to find at least one report from each of the 15 EU nations. It was desirable to have good coverage of cultures and VET systems across countries and in some countries there was more than one report eligible for inclusion.

Exchanges with researchers have suggested that full reports of evaluations of VET reforms are not published as frequently as one might expect. Many reasons are cited by experts including a wish for confidentiality by funding agencies, lack of political will to publish challenging evaluations and the fairly common ‘light touch’ style of evaluation that yield low levels of analytical information. In the initial stages of the work over 200 references to potentially useful sources of evaluative information were identified. These were scrutinised against the broad requirements of this study. Essentially reports were required that:

(a) had the subject of a major reform to VET within a country;
(b) focused on a reform that was not EU funded (covered in other contributions to the third research report);
(c) was written and published authoritatively (by high status people/organisations);
(d) was evaluative in nature rather than descriptive;
(e) focused on the impact of reforms;
(f) included reference to ways of financing VET provision.

There were many promising references to reports that appeared to meet these requirements but as the reports were scrutinised in detail many fell away. This a common pattern in metastudies; in the major ones into specific aspects of education in the UK (1) it is not uncommon for 2 000 references to be reduced to 20 or so useful reports. The filtering process in this study showed that there are many evaluation reports but:

(a) most are about the way a project worked rather than the impact a reform has had;
(b) many are linked to EU programmes and not reforms initiated and funded by countries to meet national goals;
(c) many are more concerned with regional or fragments of the VET system than system-wide reforms;
(d) many are linked to broad initial education rather than vocational workforce development;
(e) few have specific references to financing.

This paucity of outcome-based reporting is highlighted in evaluation literature, Griffith (2001) states in his review of school-to-work transitions most publications quote such variables as numbers of participants and numbers of work placements and few chart progress through to

(1) EPPI – Evidence based policy and practice – University of London, Institute of Education
outcome measures. Baker and Taylor (1998) report that the shortage of empirical research more generally is the issue; they found only 12 such studies published between 1983 and 1996 and these were small scale and limited in various ways.

The first sift of reports that related to all the key words (evaluation, impact, national reform, vocational, education, training) reduced the 200+ potentially useful reports to 33. These covered all EU countries and most aspects of VET and financing.

In some countries it is difficult to isolate a specific thread of evaluation on programmes. It is possible to take two fairly extreme views of this. Either there is no discernible, independent evaluation or, development and evaluation are so intertwined it is not possible to distinguish them. In the latter case development or reform takes place in relatively small stages. It would be useful to research reports of evolution of a system and trace the drivers of change. In so doing the process of evaluating current provision and making incremental changes as a result should become clear.

Some interesting reports were identified that were not conventional VET research publications but nevertheless had potential to contribute to this study. For example a Cedefop review paper (Richini, 2002) on steps to enhance lifelong learning in Italy proved useful for information on ways of better coordinating VET, two French documents (Klein, 2002; Thireau, 2001) detailed how a single cohort of school leavers fared in the labour market and in further education and training. Another report of this type compared two UK methods of financing training (Felstead and Unwin, 1999). Two Swedish active labour market policies are systematically compared in another report (Larsson, 2000). These reports have been used alongside others in forming the evidence base for this study.

In the early stages of this work potential reforms were to be classified as core, suitable for indepth analysis, and associate, useful for supplementary material for illuminating, supporting, challenging and cross referencing findings about theories, approaches, methods and results in the core metaanalysis. This categorisation proved untenable in the light of difficulties in finding reports and, more importantly, in trying to cover types of reform and evaluation within six to eight reports of reforms. A decision was made to reduce the set of 33 reports to a single set of reports on 19 reforms and to treat them in the same way. Table 1 lists these and includes a justification for including the report in the study.

Having isolated the key reforms and their associated evaluative reports, each report was analysed against the criteria described earlier and is attached as an annex to this report. These criteria are discussed in the next chapter.

### Table 1: Reports used as the evidence base

<table>
<thead>
<tr>
<th>Country</th>
<th>Reform</th>
<th>Report reference</th>
<th>Justification for inclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
<td>Die ersten FachhochschulAbsolventInnen am Arbeitsmarkt</td>
<td>Wimmer, 2000</td>
<td>The development of Fachhoch schools provides a tertiary education focus. Students and enterprises were involved in the evaluation process.</td>
</tr>
<tr>
<td>Denmark</td>
<td>Reform 2000</td>
<td>Shapiro et al., 2001 Kaasbol et al., 2001 Nielsen, 1997 Nieuwenhuis and Shapiro, 2003</td>
<td>This reform is included as it is a case study in the third research report. The reform is nationwide and involved a pilot phase and multiple evaluations. It also has a theoretical basis.</td>
</tr>
<tr>
<td>Finland</td>
<td>Valtioneuvoston selonteko eduskunnalle uuisen koululakien vaikutukista ja laessa asetettujen tavoitteiden toteutumisesta</td>
<td>Finnish Ministry of Education, 2000</td>
<td>This is a major reform to secondary education and adult education. There are changes to qualifications and new models of financing. The official evaluation report shows how evaluation is integrated with the reform process.</td>
</tr>
<tr>
<td>Country</td>
<td>Description</td>
<td>Author(s)</td>
<td>Notes</td>
</tr>
<tr>
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</tr>
<tr>
<td>France</td>
<td>Les bénéficiaires du contrat de qualification entrés à l’automne 1994: les enseignements de 4 vagues de panel</td>
<td>Klein, 2002</td>
<td>This is an example of a longitudinal study with focus on the effects of a vocational qualification. A wide range of impact measures is covered.</td>
</tr>
<tr>
<td>Germany</td>
<td>Personalqualifizierung in den neuen Bundesländern</td>
<td>Neubert and Steinborn, 1999</td>
<td>It is difficult to identify a specific reform that has been evaluated in German VET. Recent initiatives may provide such reports. This report contains information about the impact of training and contains a financial dimension.</td>
</tr>
<tr>
<td>Greece</td>
<td>Evaluation of the labour-market policies and assessment of the influence of European employment strategy in Greece during the period 1997 to 2001.</td>
<td>VFA, 2002</td>
<td>While there is no specific VET reform in this report it is possible to study the effects of VET scientifically: case/control methodology was used on a large sample. The case group and the control group were strikingly well matched demographically.</td>
</tr>
<tr>
<td>Ireland</td>
<td>Leaving certificate (applied)</td>
<td>Irish Ministry of Education, 2002</td>
<td>This is a large-scale qualification development with a strong VET dimension. A strong decentralised evaluation programme accompanies it.</td>
</tr>
<tr>
<td>Ireland</td>
<td>Vocational training opportunities scheme (VTOS)</td>
<td>WRC Social and economic consultants Ltd., 1994</td>
<td>This is a detailed evaluation of a nationwide programme of training for the long-term unemployed that contains good impact analysis. The evaluation is integrated with the programme of reform.</td>
</tr>
<tr>
<td>Italy</td>
<td>Il nuovo apprendistato e la formazione</td>
<td>Angeli, 1999 ISFOL, 2000</td>
<td>This reform is system-wide and is representative of renewed interest in apprenticeship across several countries. The evaluation focuses on the infrastructure of the reform. Other papers outlining system-wide reforms provide perspective on the apprenticeship and some impact analysis.</td>
</tr>
<tr>
<td>Netherlands</td>
<td>Adult education and vocational education act (WEB)</td>
<td>Borghans and Heijke, 2002; De Bruijn et al., 2001 Nieuwenhuis and Shapiro, 2003</td>
<td>This reform is included as it is a case study in the third research report. The reform is nationwide and involved decentralisation of management changes to VET programmes, funding changes. The evaluation has a formative function. Several as yet unpublished papers have been made available.</td>
</tr>
<tr>
<td>Portugal</td>
<td>Sistema das escolas profissionais</td>
<td>Montavavao e Silva et al., 1996</td>
<td>This is a reform of IVT. The diverse range of vocational training is to come under a more coherent approach but includes the introduction of specialist schools The new schools are autonomous although there is some regulation of them. The evaluation is phased and commissioned from an international source.</td>
</tr>
<tr>
<td>Country</td>
<td>Description</td>
<td>Source</td>
<td>Notes</td>
</tr>
<tr>
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</tr>
<tr>
<td>Portugal</td>
<td>An annual ministry-led evaluation programme that involves a ‘bottom up’ approach is included. Finance features in this evaluation.</td>
<td>Despacho Conjunto – do Ministério da Educação e para a Qualificação e o Emprego – No 123/97 de 16.6.1997</td>
<td></td>
</tr>
<tr>
<td>Spain</td>
<td>Developing a culture of professional development is the goal and evaluation of impact of the first three years of promotional activity is provided. The reform is wide ranging and involves many stakeholders.</td>
<td>Memoria Banance – I Acuerdo Nacional de Formacion Continua 1993-1996 Forcem, 1999</td>
<td></td>
</tr>
<tr>
<td>Sweden</td>
<td>A system wide reform of upper secondary education (qualified vocational education, QVE) with a strong focus on IVT. A full-scale evaluation of this reform has been written and is currently with the sponsoring organisations. It was not available at the time of writing.</td>
<td>Reformeringen av gymnasieskolan National Agency for Education, 2000 Ekstrom, 2002</td>
<td></td>
</tr>
<tr>
<td>Sweden</td>
<td>Two programmes involving training are compared. The evaluation has an econometric design to determine the effects of these programmes on earnings and reemployment probability.</td>
<td>Swedish youth labour market programmes Larsson, 2000</td>
<td></td>
</tr>
<tr>
<td>UK</td>
<td>A study of reforming planning and financing of IVT and CVT in colleges. The evaluation uses an interesting comparative method which is quasi experimental. Impact measures are included.</td>
<td>Work related further education programmes Metcaif and Dawson, 1995</td>
<td></td>
</tr>
<tr>
<td>UK</td>
<td>This is an evaluation of an initiative that includes social partner involvement, VET capacity building and financing. It deals with basic skills training in particular. The evaluation is a blend of survey and case study and runs in three annual phases thereby offering progressive reporting. Many output measures discussed.</td>
<td>The Union learning fund Cutter et al., 2000 Antill et al., 2001</td>
<td></td>
</tr>
<tr>
<td>UK</td>
<td>This is a large-scale curriculum initiative to reorientate learning to more active approaches and to increase the profile of vocational education. It has been evaluated extensively.</td>
<td>Technical and vocational education initiative Department of Employment, 1994</td>
<td></td>
</tr>
<tr>
<td>UK</td>
<td>A new apprenticeship scheme that has been evaluated for impact and over a period of three years. Learners and employers are surveyed in detail.</td>
<td>Modern apprenticeships Economic Research Services Ltd, 1998; Coleman and Williams, 1998</td>
<td></td>
</tr>
<tr>
<td>UK</td>
<td>This paper has no VET reform at its heart but paves the way for changing the way VET is funded. Two funding systems for IVT are compared and evaluated.</td>
<td>Funding systems and their impact on skills Felstead and Unwin, 1999</td>
<td></td>
</tr>
</tbody>
</table>
3. Criteria for judging reforms

One of the challenges in developing a meta-study of evaluation reports is to set analytical criteria to make the study systematic. A criterion-based review makes it possible for readers to judge the value of the review for their purposes. If necessary, readers can extend the review by refining the analytical criteria and altering judgements of reforms accordingly. Developing criteria for this study began in preparing the proposal to carry out this work. The proposal made the point that it is simplistic to use criteria based on the conventional anatomy of reforms (conception, consultation, initiation, pilot phase, implementation, review, refine, etc.). Instead it was proposed to look more closely at the evaluation procedure as well as the reform and to focus strongly on impact. For the reform this meant looking at the aims and objectives of it closely and, for the evaluation, looking for baseline assessment, comparative approaches and impact or performance criteria. It also meant looking for unexpected outcomes and system-wide implications. A set of criteria was developed using a range of literature (e.g., Barrett, 1998; European Commission, 1999; Plewis, 2001; World Bank, 2002) and expert sources within the group of researchers working with Cedefop on the third research report and within the Qualifications and Curriculum Authority (QCA).

The second stage was to seek the views of other experts of the draft criteria. Amendments were made accordingly and a working document produced. The structure of this set of criteria was based on the chronology of an evaluation process – before the reform was implemented, during implementation and post reform. To these three a set of general criteria were added on the evaluation process itself. Later, it was considered advantageous to introduce a further set of organising headings to make it clear that a chronological approach was only one way of organising the criteria. This additional set of headings is as follows:

(a) context: what external influences are likely to influence?
(b) goals: how are the aims, objectives, milestones described?
(c) planning: what is discussed in anticipation of what might happen?
(d) management: what is done to make the programme function effectively?
(e) drivers: who is shaping the evaluation?
(f) impact: what is the effect of the evaluation?

When these headings are applied and the 40 criteria within the chronological headings are allocated the coverage is as follows: context (6), goals (5), planning (4), management (13), drivers (6) and impact (6). This distribution reflects the focus of this study with the emphasis on drivers and impact being served by a higher proportion of criteria than would normally be expected. The application of these criteria to the reports of reforms is discussed later in this report.

In the next chapter the emerging observations, generalisations and issues are discussed. The headings used to group the common evaluation criteria (see annex) are used to organise the discussion.
4. Evaluating VET reform

The selected reforms and their evaluative reports represent a large body of evidence on the recent history of change in VET in Europe. In this chapter some review of VET reform is presented followed by a synopsis of findings on changes to the financing of VET. A general discussion on evaluating the effects of VET reform concludes this chapter.

4.1. VET reform

The reforms studied exemplify a wide range of VET activity. They cover vocational preparation in schools, full-scale initial vocational training (IVT) programmes, continuing vocational training (CVT) in work, CVT for those who are seeking employment, retraining activities, short programmes, long programmes and qualifications from the International Standard Classification of Education (ISCED) levels 1 to 5. The reforms aim to change the management of VET, financing of training, the learning environment for VET, the teaching approach, the content of courses and, of course, to boost outcomes of training. The image of VET gained from studying the reports is one of tremendous diversity, with multiple purposes closely related to the dynamics in families, communities and institutions. The breadth of VET means many people are agents in supporting, designing, delivering or assessing programmes and these people are generally well consulted in reform development. They are also generally well consulted in evaluation programmes.

In Cedefop’s second research report (Descy and Tessaring, 2001) it was established that there was a general move away from State-led VET and market-led VET to new forms of collaborative steering arrangements, possibly through professional associations and networks. There is considerable evidence in the sample of reforms used in this study that such a trend is continuing: examples include designing new semi-autonomous institutions for IVT in Portugal and policies to decentralise provision of State-funded VET in the Netherlands and the Nordic countries. The institutions that distribute State funds to meet the needs of individuals and employers seem to be the key brokers in the new professional associations and networks.

All reports studied described the aims of reforms; these aims reflect the wide range of VET applications discussed above. For this research study, it is important to look at the relationship between the aims of the reform and the objectives of the evaluation programme associated with it. This is key for impact analysis and is discussed in detail later in this chapter.

Almost all the reports studied examined changes to the way VET is organised. Examples include new types of IVT programmes (chiefly apprenticeship schemes and schemes for making general education more vocational), CVT programmes (chiefly State-funded schemes and other ways of organising funding). Additionally attention is being paid to reorganisation to improve social welfare and the autonomy of the individual. Innovation in VET provision is evident and takes many forms, for example in the first year of developing the Union learning fund in the UK the project had innovative ways of delivering VET at its core.

The reforms chosen for analysis were primarily selected as examples of impact studies and this will have skewed the representative nature of the reforms as depicting types of VET activity. However the reforms do reflect the span of national programmes and it is notable the focus on reforming IVT is strongly represented in these reports. Usually this involves developing IVT alongside general education and allowing those with a disposition for more applied study (experience of work, content of courses, teaching, learning and assessment styles) to opt into vocational programmes. By doing so it is hoped these people will be more motivated to learn and will develop useful skills sought on the labour market. Consequently, they will be less likely to drop out of school and lose the advantages of a good initial general education. Some believe these programmes result in a diminution of the volume of general education taught to the participating
cohort. There is also evidence of some permeation of teaching styles and resources from IVT provision to general provision when these programmes are taught in the same institution.

Access to higher education also features in the selected reforms. Returning to the changes in upper secondary IVT programmes, a common objective is that students following these new programmes should have access to higher education, so more time is needed to develop the vocational provision while retaining a core of general education. Several reforms include additional time for study in upper secondary education – typically another year. This additional time is needed for learning from workplace experience and for developing and assessing projects or assignments. In some reforms studied legal changes provide a right for individuals graduating from such programmes to have a place in a higher education institution. One reform that aims to make higher education provision more desirable and accessible to students who retain this interest in vocational programmes.

Some reforms aimed to create new learning centres, others aimed to change participation and pedagogy in existing centres. Sometimes the reforms to content, pedagogy and VET organisation are sufficiently extensive to create a new learning environment based in an existing institution. Thus it is sometimes difficult to isolate reforms for creating new environments from those simply changing content or pedagogy. In this study new learning environments were created by:

(a) the Austrian reforms where students are educated in new Fachhochshule where expertise could be concentrated on vocational courses;

(b) introducing apprenticeship programmes in Italy and the UK where employers and training providers established new ways of blending general learning with work-based learning;

(c) the reforms in Portugal where new semi-independent regionally controlled schools for IVT were established alongside existing provision;

(d) trade unions in the UK where they negotiated new provision with a different rationale and management.

Many reforms aimed to create a new purpose for learning programmes by developing existing institutions. This could be by altering management structure, financing or course provision. Examples of these reforms include:

(a) regionalisation of management of institutions delivering upper secondary education in Denmark, the Netherlands, Finland and Sweden;

(b) improvement in CVT in former East Germany to meet better the needs of workers and employers;

(c) increasing emphasis on work experience in Denmark, Ireland, the Netherlands, Finland and Sweden.

Several reforms aimed to change the content and structure of programmes within existing institutions that were not required to change significantly. Examples include:

(a) experimenting with new content in the Italian apprenticeship programme;

(b) the UK reform of the general curriculum in schools to create a more vocational focus;

(c) inclusion measures in the Irish vocational training opportunities scheme (VTOS);

(d) introducing new forms of assessment in Finland and Sweden;

(e) developing new schools leaving qualifications in Ireland.

We can classify these reforms in learning and learning environments as shown in Table 2.

Many reforms allocate time to general education and sociocultural studies as well as development of specific technical skills – the balance is sometimes contested. For example, in the Portuguese reform employers and parents see teaching and learning about general social issues reducing the time that could be usefully spent on work-based assignments and skills learning. The designers of programmes containing an element of general education clearly have to strike a balance between the expectation of users and the strong evidence supporting inclusion of elements of general education in IVT provision.
4.2. Evaluation

Evaluation reports generally describe the subject of the evaluation, outline objectives, briefly describe the method and then report findings and suggest implications. It is usually not possible to find details of the evaluation process, the practical constraints, the compromises, the adjustments, the pressures for results, the consideration of different ways to interpret results and how results and conclusions are protected from misinterpretation. Reading reports will not reveal this information. Academic research into evaluation methods usually contains discussion of the broader issues but this discussion will normally be out of the context of a specific reform. It is possible that only through discussion with planners, evaluators and programme managers will we learn about the evaluation process itself. Therefore, in reports such as this there is a gap between full knowledge of the reform, the interventions, the evaluations and what is reported in literature.

<table>
<thead>
<tr>
<th>Change</th>
<th>Aims of change</th>
<th>Examples</th>
</tr>
</thead>
</table>
| Create additional new institutions | Concentrate expertise, diversify VET provision, attract students, meet skills need. | • Austria (Wimmer, 2000)  
• Portugal (Montavavoa e Silva et al., 1996; Ministério da Educação e para a Qualificação e o Emprego, 1997) |
| Blend existing learning environments into a new kind of provision | Produce more effective programmes, shift control of training to employers, tailor courses to meet skills needs. | • Ireland (WRC Social and economic consultants Ltd., 1994)  
• UK (Department of Employment, 1994; Metcalf and Dawson, 1995), Spain (Forcem, 1999)  
• Portugal (Montavavoa e Silva et al., 1996; Ministério da Educação e para a Qualificação e o Emprego, 1997) |
| Engage social partners in planning and management of provision | Innovate in programme design (focus on learner), coordinate range of existing provision. | • UK (Cutter et al., 2000; Antill et al., 2001)  
• Spain (Forcem, 1999)  
• Portugal (Montavavoa e Silva et al., 1996; Ministério da Educação e para a Qualificação e o Emprego, 1997) |
| Develop the school curriculum and assessment and qualifications | To make curriculum relevant, assessment authentic, recognise informal learning, motivate learners, bridge initial education and work situations. | • Sweden (National Agency for Education, 2000; Ekstrom, 2002)  
• Finland (Finnish Ministry of Education, 2000)  
• the Netherlands (Borghans and Heijke, 2002; De Bruijn et al., 2001)  
• Denmark (Shapiro et al., 2001; Kaasbøl et al, 2001; Nielsen, 1997)  
• Ireland (Irish Ministry of Education, 2002) |
| Improvements in the content and teaching of specific programmes in an existing type of institution | Work force development, drive up productivity through deployment of new skills, improve progression opportunities to work and in work. | • Denmark (Shapiro et al., 2001; Kaasbøl et al., 2001; Nielsen, 1997)  
• UK (Department of Employment, 1994) |
| Develop teaching approaches to motivate and retain learners | Reduce exclusion from work and costs of benefits. | • Ireland (WRC Social and economic consultants Ltd., 1994) |
Evidence from evaluations of VET can be useful for:
(a) inform government decisions (including allocating funds);
(b) improving employer decisions on training;
(c) informing individuals of their options;
(d) designing new programmes;
(e) refining programme design;
(f) improving programme targeting;
(g) identifying ineffective programmes;
(h) encouraging public debate about VET.

Stern (2003) summarises the purposes of VET evaluation under four categories:
(a) accountability for policy-makers;
(b) development for programme improvement;
(c) knowledge production and explanation;
(d) social improvement and change.

Impact evaluation forms part of only the first of Stern's categories where he looks for 'impacts, outcomes, achievement of targets and value for money'.

When a VET programme is created or changed it is important to know if the new programme works. Programme evaluations therefore require (usually quantitative) measures of impact – to judge if an intervention has worked or not – and (usually qualitative) information to discover the reasons why the intervention has succeeded or failed. Both these measures are important but in this study the first measure is of prime interest. Interventions based on reform of VET can rarely, if ever, be isolated from other contextual influences and this makes measuring impact highly complex. To help focus hard on impact there are two questions that might be asked:
(a) what are the changes in VET (including changes to those involved in VET and the contexts in which VET learning is applied) that have occurred during the period of intervention and after the intervention?
(b) is there evidence to link these changes directly or indirectly to the VET intervention?

Restricting this study to reports that provide answers to both these questions eliminate reports of process evaluations that analyse how a programme operates and focus on impact evaluations and causality in particular. The common evaluation criteria (see annex) help with this sharp focus on the two questions.

Literature shows the way evaluation is considered varies greatly. In fact the range of practice is so wide that it is difficult to understand how a single term like ‘evaluation’ can cover all instances. There is a need to distinguish research according to purpose, i.e. accountability, efficiency, functioning (impact) and valorisation or as Stern (2003) puts it: accountability, programme improvement, knowledge production and social improvement.

One striking difference in evaluation programmes is the distinction between those that aim to answer the question ‘has it worked?’ rather than answer a series of questions based on ‘is it working?’ In other words, end-loaded summative evaluation relative to integrated formative evaluation. Evaluation helped the reform process along in just over half of the cases sampled in this study. On the potential of the evaluation to yield information for the reform process, the reports used are once again evenly split between those that have been designed to inject a sense of progress or impact at any stage during the reform implementation and those that have not.

Linked to the question of timely intervention is the question of deciding when it is reasonable to make a measurement of effect after the reform has become established. It is rare to find an evaluation that has measured changes to participants in VET programmes a year (or longer) after completing a VET programme. One of the best examples is the Swedish reform of IVT in upper secondary education (Ekstrom, 2002). In the three academic years between 1988 and 1991 the current Swedish upper secondary vocational pathway (three years duration) was piloted with students occupying 11 200 study places. The career development of these students was tracked by measuring the time spent in upper secondary education, level of university enrolment and the rate of educational or employment inactivity. However, a large proportion of Swedish youth were not eligible for this pilot programme as they were following the usual two-year vocational programme. Consequently, ‘natural experiment’ was created where important influences other than education could be assumed to be the same for both groups of students. Attempts were also made to balance various regional differences.

Results showed that the students in pilot areas, where both two and three-year programmes were available, were more likely to spend three years in upper secondary education. Higher education
enrolments were higher for the pilot group with three years of vocational upper secondary education. The effect of a third year of vocational education on the rate of inactivity of individuals was not significant. One possible explanation is the Swedish labour market declined during the pilot phase and students on two-year programmes had time to establish themselves in jobs before the decline took place. The report of this evaluation highlights the effects of changes in context over a period of years following an intervention.

The low number of evaluations such as the Swedish study that go significantly beyond intervention has major implications for this review of impact studies since the subject or focal point of any effect changes with time. This effect is discussed later. Many reports suggest that an evaluation of the long-term effects of reforms is useful but only six reports attempt gathering data after intervention is complete and analyse and report on them. However, several evaluations, possibly five more are in progress and will continue to measure progress and/or impact.

Looking across a spectrum of VET reforms and evaluation methods it is useful to look at the type of reform, the kind of desired outcome or effect, the evaluation style and the research tools used. This overview is described in Table 3.

Table 3: Broad review of VET reforms and evaluation methods in this study

<table>
<thead>
<tr>
<th>Type of VET reform</th>
<th>Intermediate impact</th>
<th>End point impact</th>
<th>Research tools used</th>
<th>Evaluation style</th>
</tr>
</thead>
<tbody>
<tr>
<td>Development of CVT</td>
<td>Increased participation of adults</td>
<td>Higher skills levels, economic growth</td>
<td>Questionnaire survey of institutions and individuals, satisfaction survey, case study exemplification</td>
<td>Continuous monitoring and reporting programme</td>
</tr>
<tr>
<td>Reform of post compulsory IVT</td>
<td>Content development, pedagogic development, institutional development, regionalisation</td>
<td>Increased participation, good progression for graduates</td>
<td>Questionnaire surveys, consultations with stakeholders</td>
<td>Monitoring and formative evaluation</td>
</tr>
<tr>
<td>New qualification development</td>
<td>Increased participation</td>
<td>Close skills gap, higher skills levels, economic growth</td>
<td>Questionnaire survey of institutions and individuals, satisfaction survey</td>
<td>Monitoring and formative evaluation</td>
</tr>
<tr>
<td>Cohort review</td>
<td>Identify successes and problems</td>
<td>Modify provision</td>
<td>Periodic survey</td>
<td>Independent monitoring</td>
</tr>
<tr>
<td>VET funding review</td>
<td>Changes to funding distribution system</td>
<td>More efficient and responsive system</td>
<td>Literature review, interview, focus groups</td>
<td>Single event evaluation</td>
</tr>
<tr>
<td>VET institutional change</td>
<td>Establish popular new learning institutions, make institutions more responsive</td>
<td>Capacity building, improve skills supply</td>
<td>Stakeholder consultation, case study exemplification, satisfaction survey</td>
<td>Formative evaluation</td>
</tr>
<tr>
<td>Inclusion measures</td>
<td>High take up of programmes</td>
<td>Lower long-term unemployment</td>
<td>Stakeholder consultation including use of controls, Post programme review</td>
<td>Mix of evaluation styles</td>
</tr>
</tbody>
</table>
The type of evaluation tool does not necessarily link with the type of reform but in this study it is clear some types of VET reform, for example VET linked to inclusion measures draws on a broader range of evaluation tools than many others. Almost all reforms use some form of user response questionnaire, usually postal but sometimes telephone based, to measure effects of programmes. These usually have three main parts:

(a) personal and demographic background information of the subject;
(b) ratings by subjects of aspects of the VET provision they are using or have used;
(c) judgements by subjects about future prospects for employment or learning progression.

Extending these questionnaire-based approaches so analysis can have a greater impact focus is discussed later in this report.

In some evaluations, there was an issue of timing of feedback from the evaluation programme to the developing reform. This is restricted to evaluation programmes where evaluators are not involved in the programme itself. Typically, data will have been gathered, analysed and then reported but in the meantime the reform will have moved on and the data appear to be, at least in part, redundant. A good example in this study is the evaluation of funding of work-related college programmes in the UK. The ways in which colleges involved in the reform produced business plans for future provision soon spread to other colleges not involved in the study. By the time the evaluators reported, the ideas permeating between colleges had become a flood and the report was more documentation of progress than something that might shape dissemination of outcomes to other colleges not involved in the study.

Having reviewed generally the nature of VET reforms and the ways they have been evaluated this report now begins using the common evaluation criteria to examine the evidence base in more detail. First, a review of criteria is described followed by deep consideration of measuring the impact of VET.

4.3. Context of reform

Almost all reforms were set in the context of broad changes brought about by governments. Whether this link to national policy was a trigger for the reform or whether in reporting on evaluation the authors attempted to locate, post hoc, the reform in a wider setting is usually not clear. However, most reforms are fundamental and it is difficult to perceive them as developing independently of central government policy, for example the Nordic reforms of upper secondary education.

Many reports describe the forces promoting change in VET. These include:

(a) the political wish or mandate to reorganise VET;
(b) economic necessity;
(c) relief of social issues;
(d) the need to find more equitable ways of funding VET;
(e) the need to overcome bureaucratic barriers;
(f) feedback from enterprises about skills needs and shortages.

Legal requirements for new structures to be established and for new individual rights to training undoubtedly carry forward VET reform but it is difficult to establish whether legal requirements are a driving force. There are numerous examples of reforms driven by law (prime examples come from Spain, Italy, the Netherlands, Finland and Sweden). Research on the driving forces for VET reform is worthy of further exploration on a European basis. There are insufficient data in literature on how different agencies drive VET reform in the reports used in this study and it may be more fruitful to gather information on drivers of reform independently and outside impact studies.

4.4. Goals

All reports included some information about goals or aims of the reforms being evaluated. These aims were usually stated in broad language and not related to impact on individuals or organisations. Typically, aims referred to improving economic performance by raising skills levels or improving access to the labour market for disadvantaged groups or developing a culture of professional development. Separate identifiable goals for the evaluation process were also present in half the reports but these were often worded to evaluate the process of reform rather than the outcome of reforms. For example, to report on the future direction of the reform, to
improve reform management or resource allocation. About one third of studies were clearly defined for measuring outcomes with stated aims of impact on specific stakeholders.

One strong differentiator of reports is the extent to which the goals of reforms and evaluations referenced theory-based reasoning for taking the proposed course of action. One third of reforms argued for a new form of VET by using evidence from research, another third made no such case and for the remaining third it is difficult to determine where the arguments for new forms of VET originated. A theory-based reform typically has theoretical proposals such as ‘knowledge is situated in specific contexts’ and include mechanisms for translating theoretical knowledge into outcomes such as ‘use a range of contexts for learning ideas’ and the outcome could be ‘greater likelihood of employment’ or ‘better performance at work’. Griffith (2001) provides useful information on theoretical perspectives in evaluation studies.

It was not possible to make judgements on how aims changed during evaluation. One study made it clear the direction of the reform had changed significantly during its implementation and the purpose of evaluation had also changed. As stated earlier only a few reports described effects of interventions some time after the intervention had taken place.

4.5. Planning of reforms

Establishing a baseline for analysis is a basic requirement for impact studies. Most reports contain information and justification of a post hoc rationale for accepting a baseline measure. It was not possible to judge whether any projects had established the baseline data to be used to judge effect before a reform got underway. There was a paucity of reports describing establishment of an ex ante evaluation process.

There were indications in about half the reports that the evaluation process was designed to aid development of the reform and was to take place simultaneously with the reform.

Reports usually set the reform in a wider political or economic context but it was not possible from the reports alone to deduce there was a sense of coordination and coherence within a set of reforms in one country. However, many reforms centred on institutional change which depended on changes in governance and funding of institutions – a coordinated approach was a prerequisite in these cases.

Dissemination of findings from evaluation processes was rarely discussed. This might signal such processes were not defined at the outset of the project.

4.6. Management of reforms

Almost all reports described the structure of the reform process but very few described in any detail how the reform was managed. Those that included descriptions of management structures and responsibilities used them to describe the reform itself. For example, in the Portuguese study the setting up of new institutions required new regional management structures. These were seen in the evaluation as the subject of the reform and not as a means of managing the reform. There was little detail on management infrastructure, steering groups and job specifications for key workers. More information is provided on accountable organisations or committees: a ministerial report on the Portuguese reform offers some insight. Annual evaluation (effectively a ministerial meta-study) is based on a hierarchy of active committees. At local level, a board of teachers evaluate performance as they see it. These reports are forwarded to a regional board that analyses the teachers’ reports and prepares a regional evaluation. This is then passed to a national council that summarises regional reports and presents an annual progress report to government.

Common evaluation criteria contain reference to the commitment of donor organisations. In fact few reforms were independent of government and there was almost always an unstated assumption that the reform would be supported to completion, that is, until a new structure was in place. There were some exceptions, for example in the UK Union learning fund the provider was the UK government and over a three-year period the efficacy of the scheme was to be established. After the first year negative results would have led to abandoning the scheme. In developing IVT schools in Portugal the first phase was to estab-
lish whether it was worth developing the programme further. It was never evident from reading the reports that the donor influence was affecting measurement of effectiveness of a reform programme. However, some researchers believe such influences exist and they can be applied when determining the scope and style of evaluation and in reporting findings (Martin, 2001).

Risk management of reforms was invisible in evaluation reports. This is perhaps not surprising since the evaluation programme itself was possibly part of a risk management strategy. Even with government-led reforms where success is highly desirable for political reasons risk considerations had a low profile. It is possible in the quest to obtain reports concentrating on impact evaluation, that good reports assessing process risks were ignored. Whatever the reason and for management appraisal in general, there are signs that programmes are finding it difficult to establish this aspect of evaluation. One reason may be difficulty in judging management in such large reforms. In each country there may be few experts with experience of such reforms.

Only one quarter of reports described a pilot phase for the reform. However, many reforms (e.g. VTOS and leaving certificate applied in Ireland, modern apprenticeship in UK, and the development of Swedish vocational programmes) were voluntary for users and therefore developed over time starting with a relatively small base before expanding to full scale. There was also little evidence of evaluation of the means by which reforms were expanded from pilot to full scale or disseminated more widely.

In many cases, how other reforms (e.g. to benefit systems, guidance services, regional management) interfaced and supported the reform were described. Many of these descriptions arise because measuring effect often demands an explanation that goes beyond the effect of the reform itself. For example, the Greek evaluation of training programmes explains that those undergoing training have a better chance of gaining long-term employment. These people often use more sophisticated job application techniques than those who do not undergo training and they find they can access other means of government support.

4.7. Drivers

As part of the contextualisation of a reform the key stakeholders in developing, carrying out and benefiting from the reform were often identified. The roles of different groups in making a project a success are almost always described. However, interaction between these stakeholders and the changes in their relative authority within VET was never discussed. This kind of discussion rarely finds its way into evaluative reports. Such changes in the power to influence are crucial for the long-term sustainability of VET reforms and consequently their impacts on stakeholders. Analysis of changes in the structure and dynamics of managing VET change is more likely to be included in process evaluation reports so these have been intentionally excluded from the set selected for this study.

4.8. Impact

Focus of the research on impact studies, the ways in which effects are measured and the problems faced are discussed in full in the next chapter.
5. Financing VET: reforms and evaluation

Keeping the financing of VET under review is important. Individuals, society and the economy benefit from an effective VET system and the State, enterprises and individuals have an interest in investing in VET to gain rewards later. The multiple funding sources for VET and the range of programmes requiring financial support make this field highly strategic – reallocation of resources from one programme to another is usually a strong indicator of values and priorities held by funding bodies. It can simply mean one programme is more effective or more important than another; it can also mean policy has changed, priorities are now different or the demand side of training is changing. Thus, to evaluate shifts in financing is a major contribution to evaluating VET itself. It is interesting to note, however, evaluation of the effects of funding of VET reform was discussed in any detail in only 5 of the 19 reports selected. One report was specifically about funding and two more were on judging whether a reform had yielded value for money. The paucity of empirical studies of the efficacy of financing procedures has been reported (Kath, 1999). Of particular note is the shortage of systematic longitudinal studies. There are major methodological difficulties in establishing such studies (Barrett, 1998). First measures of impact have to be developed and agreed as valid. Then the methods must be capable of isolating these effects from other influences and the costs (direct and indirect) and expenditure (often from multiple sources) have to be characterised clearly and unambiguously. Kath (1999) suggests that no cross-national comparison of the effectiveness of VET financing systems is yet possible because of these difficulties.

5.1. Financing reforms

There were some interesting examples of using a funding review to improve the targeting and effectiveness of VET (for example the work related further education review in the UK and the change in financing arrangements for IVT in Portugal and Sweden). In the UK example, the reform required a sample of colleges to change the way they planned their future provision, by consulting employers more thoroughly, establishing partnerships in planning and evaluating effectiveness collaboratively. This way of determining funding needs has now become part of the UK system of funding VET.

Another funding reform signalling reappraisal of the way central funds for VET are distributed was providing incentives for additional (levered) funds from independent providers. The example below shows how this expectation was measured and reported as an effect of the reform.

Some reforms include major changes in the way VET is funded; most of these concern regionalisation of control and devolution of funding responsibilities. Others involve using private funding in public provision and yet others have introduced new ways for individuals to pay more or less for their own training. The upper secondary reform in Finland has a specific focus on financing. In the new Finnish system, collectives are now required to distribute funds for training – these funds were previously held by institutions. Unfortunately, evaluating the effectiveness of this change in funding arrangements is limited to a user view of how the new systems have worked. This has revealed, for example, that users have found it too complex. Sustainability of funding systems is discussed in several reports.

Some innovative funding mechanisms are reported, one concerned the UK national government funding a union-led initiative to explore ways local networks of workers and trainers could develop systems for training for local needs. Essentially this was a union training capacity building exercise that fits well with lifelong learning objectives. The scheme expanded over the three years of evaluation and was successful in creating a range of training provision not previously available and as reported above, in leveraging funding from additional sources. The scheme was also incorporated into UK mainstream provision.
5.2. Evaluation of financing

Using evaluation data for resource allocation is an issue for governments and large-scale funders of VET (Summa, 2000). Using evaluation data as justification for changing resource allocations is difficult as evaluations tend to recommend changes to single programmes and do not provide evidence of the effectiveness of VET across different contexts. Many reports simply state costs of programmes which is of little evaluative use, but sometimes data are given as trends over the period the reform operated. This is sometimes accompanied by a description (rather than an evaluation) of the funding distribution system (e.g. VTOS in Ireland). It is possible that absence of financial data shows that analysis leading to evaluating the value-for-money of reforms is problematic. This is likely to be particularly difficult when the gains of the reform are judged against the system that existed before the reform was introduced. The key issues are likely to be absence of controllable variables and the consequential lack of a baseline for measurement. The Irish VTOS report attempts to show the differences in scale of funding for VTOS as opposed to other VET for the long-term unemployed and discusses the numbers of participants 'processed' by the different schemes. This comparative work is helpful but does not give a clear indication of value-for-money.

The econometric studies included in the sample of reports simplify judgement on whether one reform was more effective than another (within the bounds of how much it is possible to know of what effectiveness means) but rarely go further and comment on the funding process itself or of value-for-money of VET provision outside the comparative study.

Some reports include information on how learner finance issues affect take up of VET provision. The Portuguese report outlines how student financing is affecting retention. A law governs how student fees are set and the extent to which a school can borrow money and sell products. Evaluation showed the financing model to be faulty as it was too short term, highly bureaucratic and heavily dependent on government subsidy. The report also highlighted serious weaknesses in evaluation methods used to judge the effectiveness of the finance process. The Finnish report also details some research into financing measures. New upper secondary vocational provision is funded 60% by the State and 40% by regional authorities. The report also explains the possible commercial funding of provision and its limitations, although once again there is no evaluation detail.

The evidence in these reports on financial aspects of reforms is limited. There is some econometric analysis with a scientific basis which is probably more reliable for judging the effects of VET financing.

Table 4: Measuring the impact of new funding arrangements

<table>
<thead>
<tr>
<th>Year of programme</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of projects with levered funds</td>
<td>16</td>
<td>13</td>
<td>30</td>
</tr>
<tr>
<td>Proportion of total projects</td>
<td>36 %</td>
<td>20 %</td>
<td>32 %</td>
</tr>
<tr>
<td>Average amount (per project) levered GBP 1000s</td>
<td>28</td>
<td>43</td>
<td>54</td>
</tr>
</tbody>
</table>

Source: Union learning fund (UK).
6. Levels of evaluation

Measurement of impact is the key focus of this report. It may be important to distinguish between impact and outcomes. Literature suggests the most accepted classification of outcomes of training is the four-level system first described by Kirkpatrick (1998). These are:
(a) reaction to training: this determines how much the learner might learn;
(b) learning: a measure of how much is learned and therefore available to transfer to the job;
(c) behaviour transfer: how much work behaviour changes as a result of training;
(d) organisational results: in what ways and how much the organisation benefits from changed behaviour.

These four sets of outcomes are hierarchical and maximising each one provides a better base for the next. Grubb and Ryan (1999) take a broader view; they describe outcomes using the following categories:
(a) for the individual, e.g. economic, wages, employment pattern, progression, developing learning and skills;
(b) outcomes of other agents, e.g. productivity;
(c) welfare and social programmes: reduced dependence;
(d) social outcomes, e.g. reduced criminal behaviour.

A way of reconciling these two approaches is to consider all that is planned and delivered as VET as ‘intermediate’ outcomes, for example, performance of the learning infrastructure, efficiency and equity of learning providers and qualification target realisation. As stated earlier, programme evaluation, as opposed to impact evaluation, will start from changes to infrastructure as an outcome and then progress to changes in institutions and programmes and finally to impact on individuals. In fact, according to Plewis (2001), the final destination of impact is with the individual receiving VET, their families, their community, organisations and society generally. It is this model of assessing impact which underpins the analysis presented in this report although it is clear that as one moves away from the individual other variables and contextual factors often mask the effect of the specific VET intervention.

6.1. Establishing a baseline

There are no absolute positions for measuring the impact of VET intervention. Established systems – no matter how they underperform – have an impact in their current form. Around half the reports described the process of establishing a control group or making some measurements before intervention began. Some reports, not surprisingly those using econometric techniques, made strenuous efforts to make a convincing case for having measured an absolute change in a condition as a result of the intervention. There is some evidence that large-scale reforms do not appear to make ex ante evaluations or do not conduct them in sufficient detail to make impact evaluations later (2).

As stated earlier every report made an explicit statement of the aims of the evaluation in relation to the reform. Most describe their objectives in fairly general terms, for example:
(a) to support changing requirements for training (D);
(b) to develop earnings and career prospects (D);
(c) to promote innovative activity in training (UK);
(d) to maximise the value of study for employers and individuals (UK);
(e) to improve the supply of intermediate skills (UK);
(f) to diversify VET provision (P);
(g) to make the curriculum more flexible (P);
(h) to experiment with the content of syllabuses (I);
(i) training to help you get the job you want and keep it (EL);
(j) to develop student autonomy (S, NL);
(k) to lower entrance barriers to education (FIN);
(l) to create a culture of professional development (E).

Other reforms had more specific objectives:
(a) to improve student results (UK);

(2) See, for example, the final assessment report for assistance funded under Phare VET reform programme in the Czech Republic, OMAS Consortium Middle Region, 1999
(b) to reduce long-term unemployment figures (IRL);
(c) to retain more students in post compulsory schooling (IRL);
(d) to reduce youth unemployment (S).

To measure impact it is probably helpful to transform this type of aim or goal into more specific objectives. This often takes place when the objectives for the evaluation programme are drafted. Some examples from evaluation reports demonstrate this:

(a) assess the probability of getting a job, the rise in earnings, the probability of higher-level study ... all relative to a control group (S);
(b) how well VET provision meets individual demand (NL);
(c) inspect evidence of practice in schools measured against common criteria (IRL);
(d) educational gains in qualifications (IRL);
(e) comparing special VET provision and normal VET provision for satisfaction ratings (UK).

This area of evaluation design – definition of evaluation objectives – is where an evaluation programme can be optimised for generating impact.

6.2. Impact and timing of measurement

Impact can usefully be considered in two discrete dimensions. The first is the subject of impact (e.g. individuals, institutions), the second is a temporal dimension.

If we take, for example, an employer-led training programme as the VET intervention we may consider the subject of impact as any of the following:

(a) level of competence of an individual worker;
(b) capacity of a work group to work differently (flexibly, creatively);
(c) capacity of the individual or work group to disseminate new knowledge;
(d) productivity of a work unit;
(e) stability of staffing;
(f) manageability of a work unit;
(g) profitability of the company.

There will be more subjects of impact for different specific situations. The effect of the intervention also changes with time. The change can be continuous, for example the content of the VET intervention can dissipate or the skills learned can lead to learning new skills. The change can also be categoric in nature and be seen in distinct stages. For example, the effect on an individual could be focused on their reaction to learning during a training programme or about getting a job based on the course in the weeks following a programme or about promotion and further learning in the longer term.

The impact evaluations included in this study generally concern themselves with the immediate effects of a programme on VET provision or customer satisfaction with their VET programme. They generally have a weak time dimension; they are timed to measure effects during the intervention or soon afterwards. A Swedish evaluation extending several years after intervention has already been outlined above.

VET reform might change the situation of an individual (e.g. employability, earnings, promotion), the VET structures and systems (e.g. developing trainers, financing, qualifications) and associated supporting arrangements (e.g. guidance, skills needs analysis). This kind of analysis is common in evaluation literature (e.g. European Commission, 1999) and is a useful way of considering the reports included in this study.

6.3. The individual

The individual is the focus of many reforms and the views of individuals are sought in most of the evaluation programmes included in this study. However these views are often sought on how the individual feels about the intervention, for example:

The level of satisfaction from vocational training programmes was found to be quite high. Out of all trained respondents, 90.6 % were very/quite a lot satisfied by the infrastructure of training centres, 89.3 % by the quality of training, 89.8 % by the trainers’ standards and 83.8 % by the usefulness of the training provided. Overall, satisfied respondents reached more than 90 % (91.8 %) and remained high level among all demographic groups.

Source: Greek report of VET effectiveness.
While this information is important and useful there may be dominant short-term influences operating that, in time, may decay. Some evaluations attempt to draw out a longer-term perspective from participants and seek information about how individuals feel relative to others who had not participated in the intervention. For example:

Table 5: Proportion of Fachhochschule leavers who feel disadvantaged by their counterparts in ‘normal universities’ with regard to selected aspects

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Intervention sample</th>
<th>Comparison sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income</td>
<td>74.4</td>
<td></td>
</tr>
<tr>
<td>Prestige</td>
<td>58.4</td>
<td></td>
</tr>
<tr>
<td>Career chances</td>
<td>38.2</td>
<td></td>
</tr>
<tr>
<td>Opportunity for progression in company</td>
<td>24.4</td>
<td></td>
</tr>
</tbody>
</table>

Source: Austrian reform of higher education

Taking this further, the effect of an intervention might best be measured by difference in opinion between an individual participating in the programme being reformed and one that is not. This might yield more reliable information about the relative effect of the intervention. For example:

Table 6: How much an apprenticeship course is helping to...

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Intervention sample</th>
<th>Comparison sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>get skills and qualifications</td>
<td>77</td>
<td>72</td>
</tr>
<tr>
<td>find out about working life</td>
<td>63</td>
<td>10</td>
</tr>
<tr>
<td>gain entry to chosen career</td>
<td>59</td>
<td>57</td>
</tr>
<tr>
<td>decide on a career</td>
<td>52</td>
<td>38</td>
</tr>
<tr>
<td>find out how firms work</td>
<td>48</td>
<td>20</td>
</tr>
<tr>
<td>find out about job opportunities</td>
<td>27</td>
<td>10</td>
</tr>
</tbody>
</table>

Source: UK modern apprenticeship study

Both the differences in response rate and the similarities can be useful. Moving on from views about the future, and possibly increasing the usefulness of data on effects, another style of impact evaluation looks at actual outcomes as opposed to views and opinion about future outcomes. For example:

Table 7: Increases in salary from the first employment in 1992 to employment in 1997

<table>
<thead>
<tr>
<th>Qualification</th>
<th>Salary 1992</th>
<th>Salary 1997</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bac technologique industriel</td>
<td>5 500</td>
<td>7 500</td>
<td>2 000</td>
</tr>
<tr>
<td>Bac professionnel industriel</td>
<td>5 500</td>
<td>7 300</td>
<td>1 800</td>
</tr>
<tr>
<td>Bac général</td>
<td>5 000</td>
<td>6 500</td>
<td>1 500</td>
</tr>
<tr>
<td>Bac technologique tertiaire</td>
<td>5 200</td>
<td>6 000</td>
<td>800</td>
</tr>
<tr>
<td>Bac professionnel tertiaire</td>
<td>5 500</td>
<td>6 000</td>
<td>500</td>
</tr>
</tbody>
</table>

Source: French study of the 1992 cohort of school leavers
The financial effect on the individual of investing in different levels of qualification becomes clear. The final and perhaps the most rigorous approach to reporting effects on the individual is to present information on the effect of the reform on a group of individuals compared to a demographically matched group over a period of time. For example:

Table 8: The measures of success for two active youth labour market programmes

<table>
<thead>
<tr>
<th></th>
<th>Non participants</th>
<th>Programme 1</th>
<th>Programme 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earnings 1 year after programme</td>
<td>SEK 37 750</td>
<td>SEK 52 110</td>
<td>SEK 44 120</td>
</tr>
<tr>
<td>Earnings 2 years after programme</td>
<td>SEK 89 300</td>
<td>SEK 74 770</td>
<td>SEK 66 700</td>
</tr>
<tr>
<td>Employment within 1 year of programme</td>
<td>37 %</td>
<td>29 %</td>
<td>24 %</td>
</tr>
<tr>
<td>Employment within 2 year of programme</td>
<td>42 %</td>
<td>41 %</td>
<td>39 %</td>
</tr>
<tr>
<td>Study within 1 year of programme</td>
<td>11 %</td>
<td>10 %</td>
<td>5 %</td>
</tr>
<tr>
<td>Study within 2 year of programme</td>
<td>12 %</td>
<td>13 %</td>
<td>9 %</td>
</tr>
</tbody>
</table>

Source: Swedish youth labour market studies.

It is possible to deduce the relative effects of the programmes on individuals who have or have not participated in the alternative programme. A profile of effects on individuals emerges. Thus it is possible to determine a range of ways of measuring effects or outcomes ranging from the purely subjective view of the impact of intervention on an individual to a much more objective view of the impact of intervention on an individual. All of these have their value. In the case of a formative evaluation of a current programme of reform, the immediate views of the participants can help managers to respond positively and increase motivation to learn and to remove barriers to learning (3). Long-term comparative impact data can identify where further investment can be made with optimal value for money for long-term outcomes. Sometimes the proven effectiveness of the benefit of a training programme carries little weight with potential recruits compared to the ‘grass roots’, here-and-now opinion (especially if it comes from peers) about content and pedagogy. Therefore, knowledge of the latter is important if recruitment levels are important.

In addition to measuring the effects of VET interventions on the individual, it is also common practice to measure how the individual was motivated to participate and consequently how they translated the intervention into impact. Motivation is a complex area to examine in evaluation studies. The level of motivation does not depend solely on the programme or future action; it depends crucially on context and a multitude of factors important to individuals. Nevertheless, this complexity does not deter evaluators from seeking information about potential motivating features of programmes, as the following examples show.

Table 9: Why a modern apprenticeship is attractive

<table>
<thead>
<tr>
<th>%</th>
<th>Attracted a lot by ...</th>
</tr>
</thead>
<tbody>
<tr>
<td>78</td>
<td>learning real skills in the workplace</td>
</tr>
<tr>
<td>76</td>
<td>career prospects</td>
</tr>
<tr>
<td>72</td>
<td>good quality training</td>
</tr>
<tr>
<td>70</td>
<td>being employed</td>
</tr>
<tr>
<td>69</td>
<td>paid to train</td>
</tr>
<tr>
<td>63</td>
<td>earning a wage</td>
</tr>
<tr>
<td>32</td>
<td>status of modern apprenticeship</td>
</tr>
<tr>
<td>32</td>
<td>being able to leave school</td>
</tr>
</tbody>
</table>

Source: UK modern apprenticeship survey

(3) For an example of this see the German PQO study.
The information above shows the effect of characteristics of the programme on individuals.

Table 10: Motives for abandoning apprenticeship

<table>
<thead>
<tr>
<th>Motive</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>I didn’t like study</td>
<td>49.8</td>
</tr>
<tr>
<td>I was thrown out</td>
<td>12.9</td>
</tr>
<tr>
<td>I would like to study independently</td>
<td>9.1</td>
</tr>
<tr>
<td>I was not doing well</td>
<td>5.4</td>
</tr>
<tr>
<td>Family reasons</td>
<td>5.0</td>
</tr>
<tr>
<td>Financial reasons</td>
<td>3.1</td>
</tr>
<tr>
<td>Prefer another qualification</td>
<td>1.0</td>
</tr>
<tr>
<td>Did not like schools and work</td>
<td>0.9</td>
</tr>
<tr>
<td>I am studying (something else)</td>
<td>6.7</td>
</tr>
</tbody>
</table>

Source: evaluation of Italian Apprenticeship

The effects on individuals of factors external to the provision can be considered when evaluating effectiveness.

Table 11: Effect of training on long-term unemployed

<table>
<thead>
<tr>
<th>Self reported effect</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased self confidence</td>
<td>55.6</td>
</tr>
<tr>
<td>Made new friends</td>
<td>43.3</td>
</tr>
<tr>
<td>Sense of accomplishment</td>
<td>43.9</td>
</tr>
<tr>
<td>Clarified my objectives</td>
<td>20.0</td>
</tr>
<tr>
<td>Better able to occupy time</td>
<td>16.1</td>
</tr>
<tr>
<td>Improved level of education</td>
<td>42.2</td>
</tr>
<tr>
<td>Obtained qualification</td>
<td>30.0</td>
</tr>
<tr>
<td>Qualified for further study</td>
<td>20.0</td>
</tr>
<tr>
<td>Qualified for further training</td>
<td>11.7</td>
</tr>
<tr>
<td>Motivation for further education</td>
<td>29.4</td>
</tr>
<tr>
<td>Motivation for further training</td>
<td>21.7</td>
</tr>
<tr>
<td>Helped obtain job</td>
<td>10.0</td>
</tr>
</tbody>
</table>

Source: Irish VTOS evaluation

To the question how relevant is your employment subject to that of the vocational training programme you attended, almost 3 out of 10 trained employed respondents replied very/quite a lot relevant. Consequently, almost 1 out of 10 trained respondents work at this period of time (almost 10 months after the completion of the vocational training programme) in a job relevant to the subject of the vocational training programme he/she had attended.

Source: Greek evaluation of VET
These last four extracts show information about effects on individuals that reform managers can use to optimise recruitment and retention.

Sometimes the main focus of evaluation is on the principal agents managing the VET infrastructure and the effect on individuals can be lost. For example, the effect on students in training linked to UK work related further education (WRFE) reform was unclear. Colleges based their projected demand for courses on employer data (as the main focus of the reform) and failed to notice that students were becoming more conscious of employment as an outcome of further education (FE) and therefore courses with the highest chances of employment were likely to become more popular. However, most colleges in the reform programme continued to run courses with low employment prospects. It was assumed from the outset that employers were the key subjects of the impact of the reform as they determined the labour market responsiveness of the planning process. The students came lower down the list of priorities for judging effects and some were not well served by the reform.

Determining the layers of impact and the relative priority given to different recipients is important in evaluation design. The objectives of evaluation usually make clear who or what is the main subject of impact. Evidence from the set of selected reforms suggests individuals are often the main recipient and providers and enterprises follow. Larger reforms have goals linked to a better socioeconomic situation and, while difficult to measure, effects on these follow on. Returning to the temporal dimension, it is also clear from the reforms studied that enterprises and training providers may be the first to experience the changes associated with the reform but in time these are transformed into effects on individuals. Enterprises and training providers are usually the focus of reform process objectives rather than of objectives linked to outputs or effects. In this study examples exist of where the focus of the evaluation objectives are only on enterprises and training providers as part of the process of reform. Others examples exist where these agencies are omitted from the evaluation because the effect of the reform is only measured as an impact on the individual.

6.4. The organisation

There are three main categories of institutions that are subject to impact studies:

(a) businesses (as employers of trained people);
(b) providers of training (including businesses as trainers);
(c) regional or local government.

There was little information in the selection of reports on the impact of interventions on the latter two categories. This may be because it is assumed that the effect of the VET intervention on the individual is the prime outcome and only process evaluation offers added value for money, in that it helps providers and local officials to understand VET better and to place themselves in a position to modify the process for the best. Stern (2003), sees this development of knowledge as a key purpose of evaluation.

A characteristic of measuring the effect of reforms on enterprises is the difficulty of obtaining feedback on impact. Where information from enterprises is available in reports it usually takes the form of satisfaction data rather than more specific information on the changes to work process and productivity that have arisen as a result of the VET intervention. Questionnaires are usually the preferred means of data gathering, and while this kind of survey technique can reach many enterprises, the more specific type of information about impact is difficult to extract and correlate by means of questionnaire. Some of the reports in this sample show poor response rates to surveys; sometimes the evaluators are concerned about this and signal reservations about the generality of findings (e.g. the UK Union learning fund reform). Response rates are only maintained if the questionnaire is simple and not time consuming to complete, again confounding the collection of impact data. In conclusion, the data available for analysis from enterprises is likely to be shallow in terms of outcomes and effects. An example drawn from a report in this study illustrates this: ‘A number of benefits are not quantifiable which makes an assessment of impact of a project more difficult’ (Union learning fund – UK).

These findings are confirmed by evidence from research studies that enterprises generally do not evaluate the impact of VET but almost always try to estimate costs (Tessaring, 1999).

Reports indicate that employers were motivated to participate in training activities for reasons such as:

(a) improving the quality of training;
(b) staff replacement;
(c) company growth;
Evaluating the impact of reforms of vocational education and training: examples of practice

The following example, drawn from the UK WRFE reform based on a large sample of enterprises, makes seeking views, rather than hard data on outcomes or effects, a little more useful by providing a comparable analysis of employer views of training courses. Some colleges had participated in a reform to develop training specifically to match the needs of enterprises in their locality, while other colleges were not involved. The views of enterprises in the regions served by the colleges which were participating in the reform were compared to the views of enterprises in the region where colleges were not involved.

Table 12: Changes in workers as a result of VET

<table>
<thead>
<tr>
<th>Number of enterprises</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have become more qualified</td>
</tr>
<tr>
<td>Are more motivated</td>
</tr>
<tr>
<td>Have taken on new tasks</td>
</tr>
<tr>
<td>Have been promoted</td>
</tr>
<tr>
<td>Have received better pay</td>
</tr>
</tbody>
</table>

The following example, drawn from the UK WRFE reform based on a large sample of enterprises, makes seeking views, rather than hard data on outcomes or effects, a little more useful by providing a comparable analysis of employer views of training courses. Some colleges had participated in a reform to develop training specifically to match the needs of enterprises in their locality, while other colleges were not involved. The views of enterprises in the regions served by the colleges which were participating in the reform were compared to the views of enterprises in the region where colleges were not involved.

Table 13: Employers’ views on the reform (%)

<table>
<thead>
<tr>
<th>Colleges provide training very well/quite well in terms of:</th>
<th>employers’ views in regions of the reform</th>
<th>employers’ views in other regions</th>
</tr>
</thead>
<tbody>
<tr>
<td>The courses provided</td>
<td>76.1</td>
<td>42.6</td>
</tr>
<tr>
<td>Relevance of course content</td>
<td>77.5</td>
<td>39.1</td>
</tr>
<tr>
<td>Using appropriate machinery</td>
<td>75.5</td>
<td>34.7</td>
</tr>
<tr>
<td>Training for a workplace setting</td>
<td>69.1</td>
<td>34.9</td>
</tr>
<tr>
<td>The timing of the courses in the year</td>
<td>80.1</td>
<td>60.3</td>
</tr>
<tr>
<td>The mode of attendance</td>
<td>84.9</td>
<td>62.1</td>
</tr>
<tr>
<td>Cost effectiveness</td>
<td>84.0</td>
<td>63.7</td>
</tr>
</tbody>
</table>

(4) More details on this issue can be found in a synopsis of research into how training impacts on enterprises is given in Tessaring, 1998, pp. 72-77.
This is useful material for those judging the effectiveness of the scheme and could be used for any extension and dissemination of the reform. An extract from the Austrian Fachhochschule reform shows another example of how satisfaction ratings can be made more scientific. In this case the views of enterprises were sought about the qualities of graduates from the new vocational institutions compared to graduates from traditional universities.

Table 14: Fachhochshule graduates compared to graduates from traditional universities

<table>
<thead>
<tr>
<th></th>
<th>Better</th>
<th>Same</th>
<th>Worse</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ability to meet practical work demands</td>
<td>37.3</td>
<td>49.3</td>
<td>13.4</td>
</tr>
<tr>
<td>Ability to work in a team</td>
<td>29.9</td>
<td>66.2</td>
<td>3.9</td>
</tr>
<tr>
<td>Relevance of qualifications</td>
<td>27.0</td>
<td>59.0</td>
<td>14.0</td>
</tr>
<tr>
<td>Introduction phase (length of time spent)</td>
<td>21.3</td>
<td>72.5</td>
<td>6.2</td>
</tr>
<tr>
<td>Ability to cope with new tasks (speed)</td>
<td>19.3</td>
<td>66.7</td>
<td>14.0</td>
</tr>
<tr>
<td>Creativity in problem-solving</td>
<td>15.6</td>
<td>67.5</td>
<td>16.9</td>
</tr>
<tr>
<td>Ability to apply their knowledge</td>
<td>13.0</td>
<td>70.1</td>
<td>16.9</td>
</tr>
<tr>
<td>Career chances</td>
<td>7.8</td>
<td>77.9</td>
<td>14.3</td>
</tr>
</tbody>
</table>

Surveys of employers sometimes pinpoint where VET can be improved. Enterprises involved in the German PQO initiative identified three areas:
(a) consider the demand side of training carefully and customise training accordingly;
(b) be proactive in marketing their training programme;
(c) be flexible about when and where to deliver training.

These features were also identified as effects of the UK review of work related learning in colleges. Employers witnessed growth in tailor-made courses and in methods used for identifying demand. They believed colleges had become more flexible.

The German PQO study sought opinion on the characteristics of good training. Good training was rated by employers as better in the following ways:
(a) breadth of courses;
(b) exclusion of extraneous skills from courses;
(c) more appropriate machinery used;
(d) links with the company’s way of working;
(e) handling of suggestions or complaints.

Only the first two had statistically significant positive outcomes from employers.

In reforms where fundamental changes to the structure of VET are taking place (for example in Spain and Portugal) effects on employers can take on a different focus. The chief area of impact is involvement itself and participation measures are used extensively to judge the effects of reforms. This is as far as assessment of impact on enterprises extends in countries with these large-scale reforms.

In many of the more educationally focused reforms, for example development of qualifications systems, businesses were not considered a direct source of information about impact in the reforms selected. What would be a measure of impact on an enterprise of a school-based reform? It is interesting to think about what useful measures of effects, examples might be: easier recruitment, lower initial training/induction costs, better skills supply or reduction of staff turnover.

In the light of all of the difficulties of gathering employer views of impact, the wish to continue involvement with a VET initiative may be the best indicator of an employers’ view that the impact is positive. However, more information would be gained if values were compared for different pathways. For example:
Trade unions have not usually been the subject of impact evaluation, though in the case of the introduction of the Union learning fund in the UK the effect on unions was measured specifically. The reform aimed, amongst other things, to develop the capacity of the union to deliver training and to distribute funding for training. When the unions were asked to define what effects had occurred on building capacity they had diverse views: some stated ‘the delivery of learning activities’; others mentioned ‘developing credibility’ and ‘developing sustainable resources such as websites’. Clearly the definition and agreement on likely or desired effects at the stage of programme design would have helped in determining capacity building. The evaluators suggest it is possible to group the diverse kinds of effects for unions under three headings: (a) developing resources and expertise; (b) securing ownership of the lifelong learning agenda within the union; (c) developing union strategy and policy.

6.5. The aggregate level of the economy and society

It is much more difficult to measure the effects of VET interventions on broader society. The links between improved individual performance, improved commercial performance, greater well-being for individuals, their families and their community is hard to establish in quantitative terms and none of the reforms selected have attempted to establish such links. However, some of the reforms, notably the German and Spanish reforms, have had as their central aim the development of the regional economy.

In their report on the impact of human capital on economic growth, Wilson and Briscoe (2003) find that several fields of economic research suggest a link between investment in education and training and general national economic performance. For example they show that micro-economic research suggests ‘... strong links ... between education productivity and output levels. Although some have questioned the direction of causality and argued that much education simply acts as a screening device to help employers to identify more able individuals, the general consensus seems to be that education does result in higher individual productivity and earnings. On balance, the results suggest a strong and positive causal link between investment in education and training and earnings. This applies both at the level of the individual and when considering the broader social returns to such investments. The evidence seems to suggest substantial social as well as private benefits to this kind of activity. The implication is that what is good for the individual at a micro level is also good for society at large at a macro level.’

They reach a similar conclusion when they consider ‘rates of return’ literature and the literature on skills and organisational performance.

Green et al. (2003) reach similar conclusions about the immaterial benefits of VET. They also look at the micro level and cautiously affirm that: ‘raising educational, skills and training levels is neither a necessary nor sufficient condition of promoting macro-social benefits. However, improving the distribution of educational outcomes may be one way in which education and training can make some contribution to more general economic and social redistribution.’

Many of the reforms, notably the Nordic reforms, have had the general well-being of
society at the heart of developments. It will be difficult and will take time to evaluate the effects of IVT on these broad goals and it is likely that other social and economic changes will render such analysis impossible. However, proxy measures for social change are being used and do provide some impact data. Dropout from upper secondary education is often reported as a proxy measure; the reasoning is that new IVT courses will appeal to young people who might have rejected further non-compulsory general education.

Table 16: Five years after gaining a qualification how many young people in France are registered as unemployed or inactive?

<table>
<thead>
<tr>
<th>Qualification</th>
<th>Registered unemployed</th>
<th>Inactive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bac technologique industriel</td>
<td>13</td>
<td>1</td>
</tr>
<tr>
<td>Bac professionnel industriel</td>
<td>11</td>
<td>0.5</td>
</tr>
<tr>
<td>Bac général</td>
<td>12</td>
<td>6</td>
</tr>
<tr>
<td>Bac technologique tertiaire</td>
<td>18</td>
<td>4</td>
</tr>
<tr>
<td>Bac professionnel tertiaire</td>
<td>16</td>
<td>3</td>
</tr>
</tbody>
</table>


Another proxy measure for evaluating the wider impact is the success of individuals entering work and/or study. This data is often reported as trends, for example:

Table 17: Destinations on completion of Portuguese IVT programme

<table>
<thead>
<tr>
<th></th>
<th>1998</th>
<th>1999</th>
</tr>
</thead>
<tbody>
<tr>
<td>Continuing studies</td>
<td>42</td>
<td>29</td>
</tr>
<tr>
<td>Employment (active life)</td>
<td>39</td>
<td>41</td>
</tr>
<tr>
<td>Other</td>
<td>19</td>
<td>30</td>
</tr>
</tbody>
</table>

In some reforms the aim was to provide a means for the excluded to gain access to education and training so that they might return to work. Clearly there are wider benefits for society (as well as for the individual and their family) for reducing the number of those dependent on benefit payments. These proxy measures of wider impact are also reported. For example, the Irish report on VTOS attempts to show the effect of education and training on unemployment. The effect on unemployment of VTOS participation is not reported against that of non-participation but the evaluators focus instead on the reduced probability of unemployment with higher levels of qualification.

Table 18: Labour-market situation immediately following VTOS by certification achievements

<table>
<thead>
<tr>
<th>Qualification</th>
<th>unemployed</th>
<th>in education</th>
<th>in job</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 or more subject leaving certification</td>
<td>80</td>
<td>20</td>
<td>0</td>
</tr>
<tr>
<td>4 or less subject leaving certification</td>
<td>70.6</td>
<td>17.6</td>
<td>8.8</td>
</tr>
<tr>
<td>Portfolio of achievements</td>
<td>76.9</td>
<td>23.1</td>
<td>0</td>
</tr>
<tr>
<td>Vocational qualification</td>
<td>68.8</td>
<td>3.1</td>
<td>28.1</td>
</tr>
<tr>
<td>No certification</td>
<td>64.6</td>
<td>6.2</td>
<td>16.9</td>
</tr>
</tbody>
</table>
The ease of entry into the labour market after training is clearly a key output measure. In some reforms, for example the Portuguese IVT development and the Irish VTOS reform, there is a requirement that training organisations consult with local employment agencies and employers before determining the training provision they provide. Unfortunately there is no comparative data available for drawing conclusions about the impact of this requirement.

Finally, the impact on broader society of reforms which have a decentralisation of control at their centre (for example the Italian, Spanish and Swedish reforms) is important. No evaluation of this kind of impact is reported nor is there evidence of the intention to attempt to measure this type of impact. However, there are likely to be significant impacts arising from the effects of local decision-making and greater opportunity to focus on issues more important locally than they are nationally. The driving forces for these reforms are often located in the notion of maximising the effect of VET and minimising bureaucracy.

Labour-market dynamics, training infrastructure, qualifications systems, funding schemes, societal pressures, cultural values are all deeply inter-related and to look for effects in one dimension may not be the best way of informing improvements for individuals and businesses.

Having studied and analysed the set of reports in depth, there are some general points which emerge which could help with improving evaluations in the sense of making them more impact oriented. These points are discussed in the next chapter.
In general terms impact should be measured with three parameters in mind:

(a) qualitative measures: measures that locate the intervention in a wider context of the issue being addressed and what theory we can draw on to illuminate the changes in the position of stakeholders;

(b) quantitative measures: the depth and breadth of the impact of the intervention on potential stakeholders in relation to those of comparable position that are not participating;

(c) temporal measures: indication of impact over a longer timescale to see effects that may result from the initial intervention.

The analysis of the evaluations of VET reforms has suggested that there are some steps that can be taken towards securing a better evidence base for their impact. These steps do not represent fresh thinking about impact analysis; they simply emerge from the reports in response to the question ‘how could we discover more about the outcomes of reforms when we evaluate them?’.

In setting up an impact evaluation the following considerations might improve the measurement of the impact of a reform:

(a) identify what is driving the reform; why is the reform happening? This examination can clarify the need for impact analysis; will the data on impact affect the forces for change? Will these forces continue regardless of feedback?

(b) clarify the purpose of the evaluation programme. Is the identification of outcomes on individuals, enterprises and wider communities adequately represented in the purpose of the evaluation?

(c) ensure the objectives of the evaluation programme cover the desired outcomes of the goals of the reform. Check that the data which is likely to be generated by the evaluation can be analysed in a way that fully meets the objectives of the evaluation programme and covers the desired outcomes of the reform;

(d) consider methodology and use opportunities to make the process as rigorous as possible. This does not necessarily involve developing quantitative approaches but it does mean considering baseline measurements and timelines carefully;

(e) if possible, analyse the effects of variables that cannot be controlled, for example the changes in the vigour of the labour market or changes in attitude towards certain working methods;

(f) where resources allow, use survey methods that are sensitive to context. These usually involve using semi-structured schedules in face-to-face interviews, telephone surveys, focus groups or on-line adaptive survey techniques;

(g) consider how the results will be presented to sponsoring organisations and highlight the need for an extended timescale for true impact statements to emerge and to take account of the tentative nature of interim impact-related findings.

The following example illustrates how the process of breaking down the objectives of a reform and transforming them into a plan for evaluation can raise the level of impact measurement.

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**From aims to enquiries**

It may be helpful if the following process is used to identify areas where impact measures may be located and profitably measured. It involves resolving the aims and objectives of reform into lower level questions for evaluation. In reporting impact the answers to these lower level questions can be reported and aggregated to determine a response to the main questions.

**Main reform objective:** to introduce employer-led apprenticeship

**One of the objectives for evaluation:** to determine the response from employers

A qualitative response and a quantitative response are sought – taking the latter first:

**How many employers were involved?**
The impact of a reform occurs at several levels; evaluation programmes might consider the primary impact on individuals and institutions, secondary effects on user organisations and communities, and tertiary effects on society and the economy. A key step in enhancing impact measures is to consider the timing of data gathering from stakeholders. This usually takes place in stages: during the reform, immediately afterwards, one year afterwards and three to five years afterwards.
8. Summary and conclusions

The 19 reports in this meta-study provide an overview of the kinds of national reforms to VET that have taken place over the last 10 years. The selection of reports (the main focus being impact study) may have distorted the review but it seems clear that VET is now less centrally determined than it once was and that its educational role is now wider in terms of participation, content and assessment.

Key dimensions of impact evaluations have been highlighted: the ways in which data is collected can facilitate more scientific analyses; in-depth study of the aims of reforms and appropriate objectives for evaluations; careful consideration of levels of impact; and the timing of measurements is important.

Common evaluation criteria have been developed which have the potential to make studies of this kind more systematic. The criteria have proven to be useful in highlighting aspects of evaluation to be considered in setting up a programme. As a tool for analysing existing reports they functioned well. However, they were limited in their capacity to create comparative analyses by the varied nature of the reports in this study. The criteria used to evaluate reports are worthy of wider dissemination and are now ready for application in other contexts.

This research has shown that evaluation practice in the context of VET across EU countries is variable, ranging from a wish to integrate evaluation into the infrastructure of reform to practices which minimise investment in evaluation. Evaluation of impact is also generally restricted to satisfaction surveys of current experience of a reform programme and they rarely investigate the long-term effects of programmes. There are strong indications that there are differences in the way countries value evaluation. Further work is necessary to elaborate on this point but experts have reported a dearth of evaluation, for example, in Germany and in Greece. There seem to be thorough evaluative approaches linked to reforms in Portugal and Spain. In Finland and in Sweden we see evaluation tightly entwined with the reform process.

It is possible that this variability may also be related in some countries to the availability of people who are confident and experienced in both VET policy planning and delivery and in evaluation methodologies. Cedefop has a role in developing expertise in the impact evaluation of VET interventions. Dissemination of good practice is the key and the publication of the third research report will be an important step.

There may be circumstances where cross-national studies of impact evaluation are sought. The experience of this study indicates that a panel of researchers would probably be the best way of carrying out such studies. This would have the advantage of sharing expertise as well as ensuring sensitivity to any national context by using experts from different countries on the panel.

The examples in the previous chapter show that it is relatively easy and inexpensive to improve basic satisfaction surveys to provide more information on effects. More work can be done to construct guidance for those embarking on evaluation design applied to VET. This guidance must be sensitive to the political nature of evaluation, to the socioeconomic context in which it is conducted and to the range of stakeholders with an interest in VET reform.

Such an improvement in the volume and quality of impact analyses will possibly influence those who commission evaluations to be more confident that impact analysis is reliable, valid and useful. Until impact analysis can be relied on for what it can offer it will not draw the investment it deserves and will not be used as much as it should. The strength of impact analysis is also its weakness in that it is a long-term evaluation of a reform and reports on whether it has worked or has not worked. Commissioners of process evaluation are confident about it because it is short term and yields results that give a sense of good housekeeping and uses open, democratic processes.

The reports studied contained references to the driving forces that create VET reform. However, there is little detail provided about how
these forces operate and how feedback from evaluation programmes might intersect with them. One of the main reasons for conducting impact evaluations is that this intersection is facilitated. Research might usefully be conducted on the dynamics of this process and could begin with a review of the literature describing the driving forces behind the reform of VET.

The findings of this study are soundly based in the evidence from the sources used. However, it is clear that the research conducted could be extended. The current study is limited by such factors as the availability of reports and it is possible that some useful reports of reforms have not been included in this study. The study would also benefit from a more extended understanding of national contexts, particularly about the key developments in countries undertaking reform of VET. It may prove useful to study the evolution of a VET system and trace the drivers of change. In so doing the informal process of evaluating provision and making incremental changes as a result should become clear.

The meta-study methodology used in this study is limited by what is written and published about a reform and its evaluation strategy. It is likely that much more evaluative evidence exists in the minds of reform managers and evaluators. Access to this information demands careful strategic planning, face-to-face interviews and assurances as to the purposes of the wider meta-study process.
List of abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>CVT</td>
<td>Continuing vocational training</td>
</tr>
<tr>
<td>IVT</td>
<td>Initial vocational training</td>
</tr>
<tr>
<td>PQO</td>
<td>Personalqualifizierung in Ostdeutschland</td>
</tr>
<tr>
<td>QCA</td>
<td>Qualifications and Curriculum Authority</td>
</tr>
<tr>
<td>QVE</td>
<td>Qualified vocational education</td>
</tr>
<tr>
<td>VTOS</td>
<td>Vocational training opportunities scheme</td>
</tr>
<tr>
<td>WRFE</td>
<td>Work related further education (programme)</td>
</tr>
</tbody>
</table>
Clarification of purpose of these criteria

We are looking for criteria we can apply as we read evaluations of programmes that come under our remit. These will be fairly large-scale evaluations completed by reputable individuals and organisations.

While we are concerned about ‘impact’ evaluation, we will take account of ‘process’ evaluation if we are to make useful conclusions about evaluating impact and the design of reform programmes. Hence the breadth of territory covered by the criteria below.

The criteria are grouped by chronology of project implementation. They are further grouped by the following characteristics of evaluation programmes:

(a) context: what external influences are likely to influence?
(b) goals: how are the aims, objectives, milestones described?
(c) planning: what is discussed in anticipation of what might happen?
(d) management: what is done to make the programme function effectively?
(e) drivers: who is shaping the evaluation activity?
(f) impact: what is the effect of the evaluation?

Before the implementation of the programme

Context

Reform setting
Was the background (political, social, economic, cultural) for the reform made clear? How much attention was given to setting when designing the evaluation?

Policy relevance
Was the nature of any explicit link between national economic goals and the reform (e.g. skills needs, workforce development and partnership) made clear? Was consistency of reforms with other policies evaluated?

Policy description
Was a description of national policy used to underpin the reform and its evaluation? Was it intended to measure impact? If there was no policy description what was the purpose of the evaluation?

Goals

Reform aims
Was the aim of the reform included? What was to change (e.g. learning, institutions, frameworks, and certification)? What was to be maintained? Was this the principal focus of the evaluation programme? Were there clear targets for the reform?

Purposes of evaluation
Was the purpose(s) of evaluation made clear? For example to inform decision-making (government, employers, providers, and trainees), improving reform management, improving resource allocation, improving the quality of programmes, a mechanism for stimulating debates, a process of bringing reform designers and managers to account.

Theoretical basis
Did the reform have an explicit link between hoped-for outcomes and a theoretical basis for expecting the interventions to lead to these outcomes?

Planning

Baseline for analysis
Was the evaluation set up in such a way that a baseline for measuring the effects of interventions was established? Was this baseline established and agreed amongst stakeholders before the start of the programme?
Management

Management structure
Was the management infrastructure of the reform discussed? Who was consulted? Did the evaluation look at this?

Donor commitment
Is there a declaration of intent and continued commitment to the reform from any donor authority? Did the evaluation investigate it?

Risk management
Were the risks associated with the reform made explicit? What was done to reduce risk? How was risk management organised? Did the evaluation include programme risks?

Legal embedding
Is there evidence in the evaluation that legal arrangements were considered as a preparatory step towards implementing the reform?

Programme handbook
Was there a publication describing the reform? Who was it aimed at? How did any donor institution contribute to this publication? Was the manual evaluated for content and usefulness to users?

Preparatory studies
Were feasibility studies carried out or ex ante evaluations planned? Did the evaluation look at the quality of these studies?

Drivers

Reform actors
Was there evidence of pressure for change? Who was opposed to it? How did they act? Was there evidence of involvement from policy level actors? Similarly was there evidence of bottom-up demand for reform? Was a stakeholder analysis part of the evaluation?

Impact

User impact
Was it planned to make interventions that could be measured by changes in opportunity and practice amongst end users (learners, communities, organisations, and countries? How was the evaluation organised to measure impact?

During implementation

Context

Familiarisation
Did the proposed reform become widely known? Who discussed it? Did evaluation consider dissemination throughout the duration of programme? If so what issues were discussed and why?

Goals

Stability
Did the goals of the reform change during the implementation? If so did the evaluation identify the influences that were driving the change?

Planning

Formative influence
Is there evidence of change in intervention programmes as a result of information arising from the evaluation process or intermediate outcomes of the reform? Was evaluation ever present during discussions of the reform?

Complementary activities
Is there evidence of organisations at national, regional and local levels working jointly towards common targets in a complementary top-down and bottom-up approach, and were they involved in the evaluation?

Management

Transitional arrangements
Were there transitional arrangements in place between existing VET systems and those introduced as a result of reform during the period of reform? How were these introduced, managed and dismantled? Did evaluation consider this?

Piloting arrangements
Is there evidence that any pilot phase was useful because it linked strongly to systemic change, and was effectively disseminated? Were issues of mainstreaming and sustainability addressed during the expansion phase, and did evaluation consider these?
Drivers

Stakeholder motivation
Were people and organisations incentivised to participate? Did it work? How was this incentivisation differentiated and assessed?

Stakeholder groups
Were key groups participating in VET involved? For example, those in pre-employment activities, those upgrading their skills used in their job, those retraining in another area of work, those requiring VET to improve employability.

Stakeholder activities
Was the involvement of individuals and key groups monitored? How were they used as indicators of success or failure in programme and the evaluation?

Impact

Timely information
Was there a means of summarising evaluation information and regularly feeding into the reform management activity? How is this done?

After the programme had reached maturity, been completed or was terminated

Context

Programme context
Was the political, social, economic and cultural influence considered important for the success of the reform, and how did evaluation take context into account?

EU priorities
Were the EU-wide common themes for VET (such as improving access to VET and increasing participation) addressed in the programme, and the evaluation?

Goals

Duration of outcomes
Was there a plan to look at long-term effects of interventions? How sustainable is the reform? Was this evaluated?

Planning

Dissemination phasing
Is there evidence of the dissemination process culminating at this point at the outset of the activity?

Management

Reform organisation
Did evaluation consider the appropriateness of the basic structure of the reform and its interventions (e.g. legal, structural, management, funding)?

Programme timing
Was a timescale specified and did the reform process meet its time-related goals?

Programme budget
Were cost considerations (of reforms) included in the evaluation specification? What were the intended costs?

Monitoring tools
Were monitoring and evaluation tools in place to identify, take account of and measure the impact of policy changes during the course of the reform and did evaluation analyse them?

Programme flexibility
Was the programme adjusted to take account of changing financial, social and political contexts? Did the evaluation programme seek evidence for this?

Drivers

Social partners
Was there a plan for full engagement of social partners? Were they involved in the evaluation?

Programme spillover
Is there evidence that the programme and evaluation practices (introduced from the EU) resulted in activity in a Member State and a programme of national action?
Impact

Personal impact
Is there evidence that the intervention has had an impact on individuals for job change, learning progression, and reward?

Institutional impact
Is there evidence that the intervention has had an impact on institutions in terms of behavioural transfer of learned skills into results?

Societal impact
Was the impact of interventions on communities measured? For example, families and social organisations.

Systemic impact
Is there evidence of a systemic link between the outcomes of the interventions included in the reform and policy development, and how was it measured?

The evaluation process: some overarching criteria

Development Process
Was there evidence that the evaluation was understood as a development process, which aims at capacity and institution building, and creates self evaluation skills amongst beneficiaries? Was the evaluation integrated into the reform process?

Culture
Were the perceptions of major stakeholders (EU funders, national government, major actors, and social partners, evaluators themselves) made explicit?

Autonomy of evaluators
Was there evidence that the evaluators had some choice in the style and direction of the evaluation and in the choice of tools? Is the evaluating institution independent of the reform?

Coordination of evaluation projects
Was the evaluation programme made of separately commissioned elements? If so how well coordinated was the whole programme?

Method
Were practical constraints on the evaluation process discussed? Was there evidence of methodological weaknesses in the evaluation programme – e.g. sampling, instrument design, time and constraints? Did the impact analysis include a control group? If so was the process experimental or quasi-experimental? Was there a combination of qualitative and quantitative assessment of impact?

Completeness
Is there evidence of the whole process of reform being fully evaluated? Were there shortfalls in evaluation effort in specific phases?

Indicators
Is there evidence of use of quantitative and qualitative indicators being developed for the evaluation process? If there were no indicators (developed by, for example, benchmarking and target setting) what effect has this had?

Evaluation skills
Was the experience of the evaluation team discussed? Were the methods and mechanisms understood by stakeholder organisations?

Evaluation censorship
Was there any evidence of evaluation findings and reports being shelved or not disseminated?

Evaluation budget
Was the size of the evaluation budget appropriate in relation to the activity as a whole (as a rule, 5 % of budget for small projects, and 3 % for large programmes should be made available)?

Reporting formats
Is there evidence that the dissemination materials are being targeted to different audiences as opposed to a one-size-fits-all policy?

Evaluation dissemination
Are evaluation results being made available to the project partners and to all other member countries?
References


