

THE ROLE OF QUALIFICATIONS AND END POINT ASSESSMENT IN APPRENTICESHIPS: AN INTERNATIONAL COMPARISON

RESEARCH REPORT

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Lorna has directed many research projects in vocational education and training in the UK and from an international comparative perspective. Her most recent book (edited with Alison Fuller) is *Contemporary Apprenticeships: International Perspectives on an Evolving Model of Learning*, published by Routledge.

CONTENTS

About the Author	2
Overview	3
Foreword	4
1. Introduction	6
2. Methodology	8
3. From Continuous to End Point Assessment: Policy Context	9
4. International Comparisons	15
Alberta Canada	19
Austria	20
Denmark	21
France	23
Germany	25
Switzerland	27
The Netherlands	28
5. Concluding Remarks	29
Assessment Procedures	30
References	31

OVERVIEW



Apprenticeships are crucial to the UK economy – especially to the advanced manufacturing and engineering sector Semta represents. Around a quarter of the sector’s workforce has been through an apprenticeship and there are scores of directors of engineering companies up and down the country who started off on that route.

The government has recognised the positives of apprenticeships and has targeted them as the best way to ensure the UK meets its wider skills needs. The government is targeting three million apprenticeship starts by 2020 – which can be either young people starting out or older workers looking to re/upskill. The government is also introducing a raft of reforms to the apprenticeships system which it hopes will contribute to the quality as well as the quantity of apprenticeships.

One of the biggest departures – and amongst the most contentious – is the move to an End Point Assessment (EPA) as the sole formally recognised method of assessing an apprentice’s competence to do the job they’ve trained for. In engineering, this is not the way that things have traditionally been done. With engineering apprenticeships often taking three or more years to complete, employers have looked to continuous assessment of their apprentices, with formal qualifications used as the mechanism through which they can both assess and ensure that the full range of skills and knowledge has been learned, and that apprentices’ attainment has national recognition.

With EPA here to stay, Semta has commissioned this report to examine how it is used in other countries. Rather than taking an ‘off-the-shelf’ approach, the government, in designing its new apprenticeship system, has taken inspiration from a host of different countries and pieced together aspects from various systems to create a bespoke approach that is designed to work for England. However, in those systems abroad where an EPA is used, it tends to be used in conjunction with other assessment and formal accreditation practices, with the assessment of skills taking place over the whole lifetime of the apprenticeship, as well in a summative form at the end of the programme, and through formal qualifications.

Given the importance being placed on apprenticeships to provide young people with opportunities to get into the workplace, and given the importance of apprenticeships to the engineering sector, it’s so important that the government gets this right. I hope this report will inform and influence the further development of the End Point Assessment system by the Institute for Apprenticeships, and shape an apprenticeships system which equips people with, and provides formal recognition of, the skills and knowledge they need not just to do the jobs of today, but also for the jobs of tomorrow and for their career progression.

Alison Fuller

Semta Board Member & Pro-Director - Research and Development
University College London, Institute of Education

FOREWORD



Both in terms of Government initiatives, the Sainsbury and other reports and now legislation, we are embarking on constructing a skills system and framework, including apprenticeships at its core, which could, and probably should, last for a generation. I have emphasised this in Parliament to both HE and FE ministers repeatedly, and, as Lorna Unwin's excellent internationally focused report makes clear here, a key feature of successful apprenticeship structures abroad has been collaboration and stability. Britain, by contrast has followed a traditionally top down and centralist approach, as initiatives from Whitehall, Ministers and governments have come and gone.

But now, with a broad consensus of support from both stakeholders and cross party for the direction of travel - though the devil as always will be in their resources and detail - we have a chance to break free from that pattern. Doing so though will require both evidence- driven policy, a respect for what has worked (and clear analysis of what hasn't) in the past and an appreciation and respect for what works on the ground as well as what a policy unit's or think-tank's organogram says should do so. The increasing preponderance of policy makers, politicians and commentators with academic rather than vocational or apprenticeship backgrounds means we need to make a determined effort to give due weight to the experience and lessons learnt from those who do -including employers and providers.

HE institutions and universities have traditionally had autonomy and flexibility to determine how to deliver and assess their own degree courses. As I know from my own experience both as an Open University tutor and twelve years as editor of a magazine that worked extensively with academic contributors and institutions, this has produced an often rapidly changing landscape of courses and degrees. Some of these have been entirely modular, some of them have been partly so but with a weighting towards final year course or exam work for a degree, and some of them have stuck to a 'winner takes all' final year exam to determine the grade of the degree or qualification.

The End Point Assessment in that process has therefore been highly variable. In the world of work also, there has often been very little End Point Assessment. Individuals learn and hone their skills on a daily basis and are often assessed by their managers periodically, with reviews and opportunities to reflect and improve built into the process.

In shaping an assessment system fit for the 21st century, Government must be aware that in some cases an End Point Assessment won't itself be sufficient to ensure that an individual is fully competent and knowledgeable. Lorna Unwin's research report here, enriched with her enormous experience over many years of the worlds of technical and vocational education, underlines how a hybrid approach is used in some countries where there are EPAs in place. This is food for thought for a number of sectors, including engineering, in striking the right balance.

If we are to achieve true parity of esteem between technical and academic routes - something I have consistently championed both as a previous chair of the all Party Parliamentary Skills Group and latterly as Shadow Skills Minister – it is crucial that there are structures to accommodate the transferability of skills and knowledge in a world where an apprenticeship will not guarantee a particular job for life, as my father was promised when he gained a coveted engineering apprenticeship with Crossley Brothers in Manchester in the 1940s.

We need to equip not just young people, particularly those from disadvantaged backgrounds, but also older ones (for retraining and reskilling will be as critical a part of the equation as apprenticeships). They will need to work in a 21st century where adaptability to innovation, automation and indeed whole new ways of imagining - as well as imaging the world of work will be key to individuals' life chances as well as to the UK's economic and indeed civic success.

So the advice of sectorally focused organisations like Semta and the research and thinking they promote ought to be heeded by politicians and policy makers – especially given the welcome refocusing on developing an Industrial Strategy for the UK. That - and indeed the End Point Assessment issues discussed here - will need to balance the bespoke and often rapidly changing skills needed by specific employers and the enabling personal skills - ways of seeing, creating and doing that will keep individuals and businesses at the top of their game and the UK as world leaders in crucial sectors for the 2020s and 2030s. This report offers routes into that and it's why it's timely now.

Gordon Marsden MP
Shadow Minister for Skills

1. INTRODUCTION

This paper provides a commentary on the role of qualifications and End Point Assessment (EPA) in apprenticeships in a range of countries. The context for the paper is the introduction of EPA for apprenticeships in England and the removal of the requirement for all apprenticeships to lead to the attainment of specified vocational qualifications. This marks a significant change to the current continuous assessment approach that has been in use since the introduction of competence-based National Vocational Qualifications (NVQs) in the late 1980s. The paper draws on a range of sources (published in English), including research-based and country-specific government literature, to identify the different approaches to apprenticeship assessment and certification and to highlight any lessons that could be useful for the development of new assessment procedures in England.

Before continuing, it is necessary to insert a health warning. Comparative studies of apprenticeships are problematic because they cannot fully capture the historical, cultural, economic and political drivers that have shaped the way education and training systems have evolved (and continue to evolve) in different countries (Green 2013).

Even though some systems appear to be structured in the same way and share specific characteristics, the lived-reality of the way apprenticeship is conducted can be very different from one country to another and within countries (Fuller and Unwin 2013a). Nevertheless, comparative research has an important contribution to make when any country attempts to hold up its own system to robust scrutiny.

There is an extensive international literature on assessment, some of which in recent years has debated the merits of encouraging policymakers, educators and trainers to shift to the concept of ‘assessment for learning’ and away from the traditional educational focus on summative assessment:

Assessment for learning is any assessment for which the first priority in its design and practice is to serve the purpose of promoting students’ learning... An assessment activity can help learning if it provides information that teachers and their students can use as feedback in assessing themselves and one another and in modifying the teaching and learning activities in which they are engaged (Black, et al 2004, p. 10).

As a model of learning (Fuller and Unwin 2010a and b), apprenticeship conforms to these characteristics and, hence, has been remarkably resilient over centuries and across countries.

The way assessment in apprenticeships is conceived and practised is critical to a model of learning that develops expertise through supervised practice and instruction over time. There has, however, also been a long tradition of EPA in the form of requiring apprentices to make a 'test piece' (such as miniature tables, chests of drawers, tool boxes, cutlery and so on) at the end of their apprenticeship to both assess the standard they have reached and to celebrate the rite of passage of moving to the next stage in their occupational journey. Some apprenticeship employers and training providers in the UK and other countries continue this practice and it also forms the basis of the WorldSkills competitions. Today, however, there is an element of problem solving involved rather than a straightforward replication in miniature of a piece of furniture or other type of artefact.

The paper is divided into four further sections and concludes with references to cited documents.

AUSTRIA
HAS ROUGHLY EQUAL
NUMBERS OF YOUNG
PEOPLE ATTENDING

38.7%*



39.3%



**FULL-TIME
VOCATIONAL SCHOOLS**

**AND
APPRENTICESHIPS**

**AND MORE UNDERGRADUATES
COME FROM VOCATIONAL SCHOOLS
THAN FROM GENERAL EDUCATION**

2. METHODOLOGY

The research for this paper was guided by the following questions:

- **How do countries with internationally respected apprenticeship systems conceptualise the role of assessment in apprenticeships?**
- **What forms of certification do these countries use to accredit apprentices' performance?**
- **What do they understand by the term 'end point assessment'?**
- **Who is involved in assessing the performance of apprentices and what form does this take?**
- **What are the key challenges for these countries in relation to the governance and efficiency of their assessment regimes?**

A review was conducted of the relevant international research literature, policy documents (where available in English), material on government (and associated agency) websites, literature published by supra-national agencies (e.g. OECD and European Commission), and relevant employer organisations (e.g. skills councils).

Particular attention was paid to assessment and certification arrangements in countries with apprenticeship systems that continue to be judged internationally as being of high quality (Austria, Denmark, Germany, Switzerland and the Netherlands). France was included because of the hybrid nature of its qualification system and a brief description of apprenticeships in the Canadian province of Alberta is provided as this includes both a high school model and a traditional trade model.

“SOCIAL PARTNERS AT THE LOCAL AND REGIONAL LEVEL ARE ACTIVELY INVOLVED IN SHAPING CURRICULA AND DESIGNING ASSESSMENT.”

3. FROM CONTINUOUS TO END POINT ASSESSMENT: POLICY CONTEXT

In his 2012 government-commissioned *Review of Apprenticeships*, Doug Richard recommended the introduction of ‘recognised industry standards’ to set out ‘what apprentices should know, and be able to do, at the end of their apprenticeship’ (Richard 2012, p.17). He argued that the existing method of continuous assessment was ‘time-consuming’ and amounted to ‘bureaucratic tick-boxing’. Instead, there should be a final, ‘holistic’ test of ‘the full breadth of the relevant competencies not merely the incremental progression of the apprentice.’ (p.7).

Richard also called for the tests to be administered by ‘neutral examiners’ with ‘no interest in the outcome’. He said that these examiners should include employers as well as educators ‘since employers themselves are best able to assess what makes an apprentice employable’ and that, in this regard, ‘we can learn from our continental peers’ (p.8). Finally, Richard recommended that the new test should result in ‘the official awarding of a degree, a diploma, a certificate or a qualification, call it what you like, that signals to the world that this person has accomplished something real and meaningful’ (p.8). Here, Richard may have had in his mind the traditional ‘test piece’ referred to in the introduction to this paper. In direct contrast to the existing apprenticeship frameworks, he also recommended that each apprenticeship should lead to only one qualification. It is easy, however, to overlook the report’s somewhat equivocal use of the terms ‘qualification’, ‘outcome’ and ‘standard’, which, at various points, become interchangeable.

In March 2013, the then government conducted a consultation on its proposals for implementing Richard’s recommendations. This included the statement, ‘We believe that there is a strong case to apply grading to Apprenticeship qualifications, to maximise their usefulness in the labour market and as an incentive to strive for excellence.’ (DBIS/DfE 2013, p.2). In the following October, the government published an ‘implementation plan’, which included an assessment approach ‘focused primarily on testing (apprentices’) competence at the end of their Apprenticeship’ (HM Government 2013, p.4).

POLICY CONTEXT

Although the plan said that there should be a ‘synoptic element’ to the EPA, the two terms seem to have merged, as in this statement by Ofqual:

An EPA is intended to be a synoptic assessment, taken at the end of an apprenticeship, to assess whether an apprentice has developed the knowledge, skills and behaviours identified by employers for a particular occupation. Successful completion of the EPA means the individual has met the requirement of the apprenticeship standard and is fully competent in their occupational role.’ (*Ofqual’s Approach to the Regulation of New Apprenticeship End Point Assessments*, 2016, p.3)

The plan stated that a ‘standard **may** specify any qualifications that are necessary’ (my emphasis). This could be traced back to Richard’s equivocation on meaning of the term ‘qualification’ as mentioned earlier. At the time of writing, those standards that have been approved for delivery differ in terms of whether they stipulate the achievement of a nationally recognised and/or industry/sector recognised qualification, or none at all.

The government’s website, however, currently states:

Apprentices are aged 16 or over and combine working with studying for a work-based **qualification** - from GCSEs or equivalent up to degree level. <https://www.gov.uk/take-on-an-apprentice/overview>

(accessed January 26th 2017)

It also directs individuals interested in apprenticeships to a Factsheet, which states:

An apprenticeship is a real job with training which would allow you to earn while they learn, whilst gaining a nationally recognised **qualification**. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/570436/A_Guide_to_Apprenticeship_Factsheet.pdf

(accessed January 26th 2017)

The university admissions’ organization, UCAS, states on its website that:

Apprenticeships mean you can earn a salary and gain a qualification at the same time. <https://www.ucas.com/ucas/16-18-choices/search-and-apply/post-16-apprenticeships>

(accessed January 26th 2017)

POLICY CONTEXT

In contrast to the flexible attitude to the inclusion of qualifications in apprenticeship standards at all other levels, the current government's promotion of 'Degree Apprenticeships' focuses squarely on the benefit of gaining a higher education qualification as stated in this Factsheet from the Skills Funding Agency:

With a degree apprenticeship you can achieve a full Bachelor's or Master's degree. And just like traditional degrees, an apprenticeship is a great route to a great career.

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/571516/Higher_and_Degree_Apprenticeship_Factsheet.pdf

(accessed January 26th 2017)

Unsurprisingly, the retreat from the mandatory inclusion of nationally recognised qualifications within an apprenticeship continues to draw considerable public criticism. Critics are particularly concerned about the impact on apprentices (whether young people or adults) in terms of their labour market mobility and future access to further and higher education.

Qualifications play an important role in the UK's education and skills system and in society more generally. They act as powerful (though not necessarily accurate) external signals of an individual's capability and positioning within a national hierarchy of 'levels' of expertise. They have been used increasingly by governments over the past 30 years as the basis for funding arrangements, as measures of provider efficiency, and as a means to boost the UK's ranking in international education and skills leagues (Raggatt and Williams 1999; Unwin et al 2004; Wolf 2011).

For individuals, qualifications can open and close doors to further and higher education, apprenticeships and the labour market, and for young people, they are central to the significant transitions they have to navigate from the age of 14. Although there are regular reports claiming that UK employers are not interested in qualifications, preferring other ways to judge an individual's competence and/or potential, the reality is that employers of all sizes and across all sectors continue to use qualifications to select potential recruits, as incentives, and as a means to develop and show they have an appropriately skilled workforce. Understandably, therefore, qualifications attract regular attention, particularly from governments seeking to improve and/or recast the way the provision of education and skills is organised and delivered.

Unlike many other countries, the UK has a long-standing 'qualifications industry' comprised of some 160 Awarding Organisations (AOs) and many thousands of branded qualifications (though relatively few are in current use). Hence, vocational qualifications (VQs) in the UK have long had an identity that is separate from programmes of study (e.g. ex-apprentices refer to doing their 'City and Guilds'). In relation to apprenticeships, the inclusion and use of VQs has evolved over time, varying considerably across industrial and commercial sectors. A key change has been the shift from marking the completion of an apprenticeship according to the amount of 'time served' to continuous assessment of performance. This was supported by the introduction of modularisation from the late 1960s onwards, followed by the introduction of competence-based qualifications in the late 1980s.

POLICY CONTEXT

The 2013 implementation plan also stated, ‘We will introduce grading to Apprenticeships - pass, merit and distinction. This granular but standardised approach to grading will encourage apprentices to strive for excellence and will maximise the usefulness of an Apprenticeship in the labour market’ (ibid). The plan acknowledged, however, that responses to the consultation had provided a different view on grading: ‘There were mixed views with a reasonable level of support from a number of respondents who thought that grading was possible, but with a larger number of respondents stating that grading did not work for competency-based qualifications’ (ibid, p.34).

Having listened to the concerns of a range of stakeholders, the then Minister, Nick Boles announced in 2014 that any Trailblazer group devising new standards could apply for an exemption from including grading, though this would only apply to specific standards and not to whole sectors or industries.

Three years later, apprenticeship standards with accompanying (and highly variable) assessment plans are being introduced. Further associated developments include the establishment of a new regulatory government agency, the Institute for Apprenticeships and Technical Education (as referred to in the 2016-17 Technical and Further Education Bill currently being debated in Parliament) and a national register of approved apprenticeship assessment organisations. It should also be noted that since the Richard Review was commissioned (by the then Minister, John Hayes), two further ministers (Matthew Hancock and Nick Boles) have come and gone. Since July 2016, a fourth minister (Robert Halfon) has had responsibility for apprenticeship policy.

It is important to note this ministerial merry-go-round and the speed with which reforms are introduced and changed across the so-called further education and skills system as it is a key distinguishing characteristic that marks out England from the other countries discussed in this paper (Keep 2006).

Before moving to the comparative section, it is useful to provide a couple of examples of how the concept of EPA is being interpreted in the newly published apprenticeship standards and assessment plans. Both examples include the requirement to achieve nationally recognised qualifications.

“ IN ALL THE COUNTRIES, NATIONALLY RECOGNISED AND VALIDATED FORMS OF ACCREDITATION ARE REGARDED AS IMPORTANT. ”

POLICY CONTEXT

The first example is from the assessment plan for the Aerospace Manufacturing Fitter Apprenticeship Standard, which includes a binary achievement classification (Pass/Fail) for the work-based competence elements and a 3-level grading system (Pass, Merit, Distinction) for the knowledge-based elements (technical certificates):

The EPA should be synoptic, requiring the apprentice to identify and use effectively in an integrated way an appropriate selection of skills, techniques, concepts, theories, and knowledge from across their training. Synoptic assessment should look to test skills and knowledge together, for example asking someone to demonstrate their ability to accurately build an engine to specification and quality criteria and asking them to explain why they are doing what they are doing as they build it (showing their knowledge and skill). Synoptic assessment should also focus on higher order skills, which give assurance of lower level skills without requiring specific assessment. For example, the baker doesn't need to be assessed that they can use an oven if they are able to successfully bake a cake.

The second example comes from the Professional Accounting/Taxation Technician Apprenticeship assessment plan. This apprenticeship has two grades, Pass and Distinction, with the latter awarded on the basis of the 'role simulation' element of the EPA:

Our Assessment Plan includes two distinct elements: an On-programme Assessment and an EPA. The On-programme Assessment is an important element of the learning process as Apprentices acquire the relevant Knowledge, Skills and Behaviours. The EPA, which is attempted after the On-programme Assessment, is the single determinant that the Apprentice has met the competencies of the Standard. All Apprentices will attempt the same EPAs; however, we are proposing two distinct and separate routes to completing the On-programme Assessment: The Examination Route and the Work Experience Route. The difference between these two routes is the weighting apportioned to Examinations and Work Based Assessment in the On-programme Assessment. For the avoidance of doubt, the On-programme Assessment in the Work Experience Route will be weighted towards Work Based Assessment. The EPA for the Work Experience route will be equivalent to the EPA for the Examination Route.

A noticeable difference here is the use of the term 'examination route' in the second example, reflecting the continuation of the examination-based qualifications as part of the accountancy apprenticeship, which is situated within that profession's career structure. It is not surprising, therefore, that apprenticeship standards and assessment plans vary considerably due to the nature of the occupational fields from which they arise.

As was noted in the introduction, apprenticeship is first and foremost a model of learning that prepares an individual to become a member of an occupational community of practice. Since the end of the 19th century, apprenticeships have also become an institutional component of many national education systems, including, since 1994, in the UK. At the same time, the concept of 'occupation' and notions about occupational expertise and how it should be evaluated and measured have continued to evolve (Fuller and Unwin 2013b). Indeed, the dynamic nature of the workplace can often be ahead of educational understandings of what constitutes occupational knowledge and skills and how they are best developed and assessed.

POLICY CONTEXT

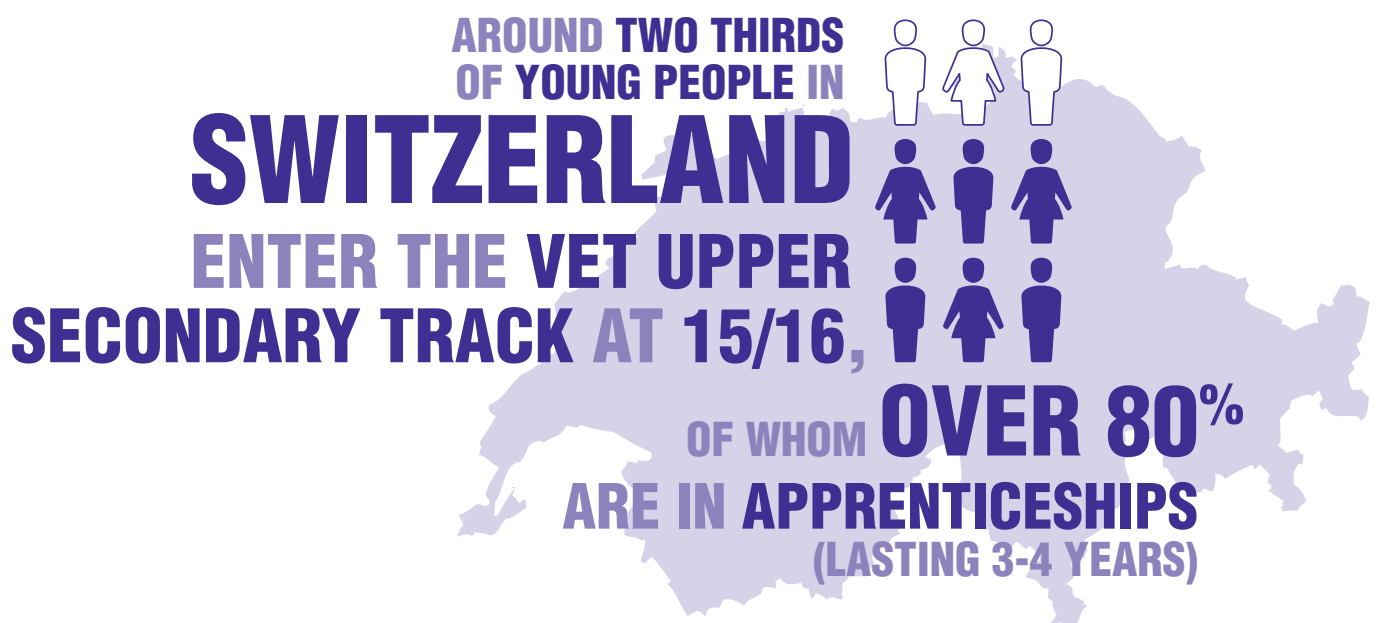
From their review of the literature and a study of electro-mechanical apprentices in Denmark, Tanggaard and Elmholdt (2008, p.113) capture how assessment forms a natural part of everyday workplace activity:

Assessment is an integrated aspect of everyday work and learning in the workplace and the appropriate standards of evaluation are the quality standards of good work that will satisfy both customers and the professional pride of the community of practitioners. The apprentices' work is evaluated continually in terms of these standards of good work. The primary goal is not to select and rank individuals, but to form competent practitioners.

Similarly, studies of apprenticeships in Australia have found that employers are active in monitoring apprentices' work and providing feedback to apprentices on their performance (Strickland et al 2001). This can be done in an overt and transparent manner and apprentices might be involved by being invited to assess their own performance and/or that of their peers.

It can also be done in a more covert manner such as employers giving apprentices problems to be solved. As with the Danish study, workplace assessment is seen as being central to the development of a competent practitioner.

The great challenge for apprenticeships is to protect this contextual approach to assessment whilst also meeting requirements that are external to the immediate workplace. All countries struggle to achieve a balance that will satisfy the needs of the stakeholders: the apprentice, the employer, the occupational field, and the State.



4. INTERNATIONAL COMPARISONS

(ALBERTA CANADA, AUSTRIA, DENMARK, FRANCE, GERMANY, SWITZERLAND AND THE NETHERLANDS)

Apprenticeship is an institution within the national education systems of several European countries and, hence, it is part of the upper secondary level of those systems. It is usually referred to as being part of IVET (Initial Vocational Education and Training).

In Australia, an apprenticeship has a similar status to that found in England whereby it is part of a much more loosely configured post-compulsory education and training landscape. In Canada, there are both trade apprenticeships for adults and high-school apprenticeships within the education systems of some provinces. The Australian and UK all-age models enable apprenticeships to operate as a government-supported and approved pathway for school leavers, but also as a means of providing initial training for adults aged 24 and over and for the retraining or upskilling of existing employees.

As both countries also share a similar system of competence-based qualifications, apprentices can be accredited for their existing skills as part of their programme. This raises questions about the value-added aspect of an apprenticeship if it is reduced to providing little more than top-up training to fulfill the requirements of a qualification (Fuller et al 2015).

The age of apprentices across Europe has been increasing for some time reflecting a number of trends, including: a) a shortage of apprenticeship places; b) a tendency for young people to remain in supported forms of education and training well beyond compulsory school age; and, relatedly the aspiration to access higher education; and c) growing uncertainty about finding meaningful employment. Germany has seen growing numbers of school leavers who have achieved the level of qualification to apply for university choosing to complete an apprenticeship before doing a degree (Pilz 2009). Similarly, in Australia, significant numbers of university graduates apply to become apprentices (Harris et al 2005).

INTERNATIONAL COMPARISONS

There is no internationally agreed definition of apprenticeships, but, the European Commission has proposed that the following captures the characteristics shared by most national apprenticeship systems (with the proviso that here ‘degrees’ refer to qualifications):

...(apprenticeships) formally combine and alternate company-based training (periods of practical work experience at a workplace) with school-based education (periods of theoretical/practical education followed in a school or training centre), and whose successful completion leads to well and nationally recognised initial VET certification degrees. (IKEI 2012; *original emphasis*)

This ‘dual’ or ‘alternance’ approach to apprenticeship dates from the late 19th century when countries such as Germany and Switzerland were establishing their national schooling systems and decided to include apprenticeships (and VET more broadly) within the same structure. This necessarily meant that all apprentices would combine the study of general education vocational knowledge related to their occupational field with workplace practice. To complete an apprenticeship required achieving success in both the vocational school/college and ‘workplace’ components. As a consequence, apprentices in ‘dual’ style programmes are assessed both by the school/college and the employer culminating in a joint declaration of competence. Requirements for vocational trainers (as opposed to vocational teachers in colleges) to have nationally recognised qualifications in training vary, but many countries are seeking to strengthen this (see Cedefop 2016b).

One test of how seriously a country might be said to take apprenticeship and VET more generally is the strength and continuity of the legal basis that underpins programmes and institutions and may extend to the regulation of occupations. It was only in 2008 that an apprenticeship was put back on a statutory basis in England (the Statute of Artificers introduced in 1563 was repealed in 1814) and even then it was included in a more general Act of Parliament covering other aspects of compulsory education. In all the other European countries, VET and apprenticeships are governed by specific laws and in the ‘Dual System’ countries by ‘vocational ordinances’. In those countries where many of the occupations included in apprenticeships are regulated (e.g. Germany, Austria, France, Switzerland and the regulated trades in Canada, Australia and Ireland), this ensures those apprenticeships have status within the national education and training system and in the labour market.

INTERNATIONAL COMPARISONS

A second key characteristic that all European countries share is a ‘Social Partnership’ approach (employers, education institutions, local federations/ government, and the State) to the design and implementation of VET programmes including apprenticeships. The devolved nature of these arrangements plays a major role in the sustainability of trust by all the actors in the system. In the majority of countries, vocational teachers and trainers and employers are involved in the design of qualifications and there are feedback loops back to government to ensure the qualifications are ‘fit for purpose’ (both socially and economically). All countries struggle with this and it is important to note that even in Germany and Switzerland (the ‘gold standard’ for apprenticeships) only a third of employers are involved. Yet, in all the European countries (and in the Red Seal element of the Canadian system), the mechanisms for employer involvement seem to be clearer. The Chambers of Commerce in Germany stand out as important physical embodiments of the concept of employer engagement.

Over the past 15 or so years, most European countries have introduced a ‘learning outcomes’ and ‘standards-based’ approach within their VET systems (and to some extent in general education). There are a number of ways in which the concept of ‘standards’ is being interpreted as the European VET agency Cedefop has found (2016, p.45):

- **occupational standards, describing the activities and tasks for a specific job as well as the competences typical of an occupation;**
- **competence standards, referring to knowledge, skills and/or competences linked to practice of a job or daily life;**
- **education standards, statements of learning objectives, content of curricula, entry requirements and the resources necessary to attain the learning objectives;**
- **assessment standards, statements of the learning outcomes to be assessed, as well as the assessment methodology to be used;**
- **validation standards, statements of the level of achievement to be reached by the person assessed, and the methodology used;**
- **certification standards, setting out the rules for obtaining a certificate or diploma and the rights conferred.**

INTERNATIONAL COMPARISONS

This has necessarily had an impact on their assessment regimes and has encouraged some countries to introduce more innovative assessment methods, such as the use of portfolios. However, achieving alignment of assessment practices with intended learning outcomes ‘remains a significant challenge in most countries’ (2016a, p.29). This reflects the conservative nature of many VET and apprenticeship systems (and indeed education more generally).

Before turning to a discussion of the assessment approaches used, it is important to recognise the need to be alert to the variable ways in which terms such as ‘examination’ and ‘qualification’ are used in different countries. Whereas in England, ‘examination’ in an educational context is commonly understood to mean a written test, in many European countries it will encompass both written tests and other forms of assessment including practical skill tests. It is often used interchangeably with the term ‘assessment’. Table 1 on page 30 provides a summary of the ways in which assessment in an apprenticeship is organised and regulated in the selected countries.

THE ASSUMPTION IN THE NETHERLANDS
IS THAT A VET STUDENT STUDIES FOR

40 HOURS

PER WEEK FOR 40 WEEKS A YEAR SPLIT BETWEEN CLASSROOM-BASED, WORK-BASED AND SELF-REGULATED LEARNING

The infographic features a light purple map of the Netherlands in the background. A large, dark purple stopwatch icon is centered, with the number '40' and the word 'HOURS' inside its face. To the left of the stopwatch, there are three icons: a teacher standing at a whiteboard with a refresh symbol, a group of four student silhouettes, and a single student silhouette reading a book. Below the stopwatch, there is an icon of an open book with a hand pointing to a page. To the right of the stopwatch, the text 'PER WEEK FOR 40 WEEKS A YEAR SPLIT BETWEEN CLASSROOM-BASED, WORK-BASED AND SELF-REGULATED LEARNING' is written in a bold, dark purple font.

INTERNATIONAL COMPARISONS

Alberta, Canada

Alberta is an interesting contrast to the European examples because it offers a school-based Registered Apprenticeship Program (RAP) for high school students from age 15, the Interprovincial Standards Red Seal Program covering the regulated trades, and apprenticeships in non-regulated occupations.

The RAP, along with other initiative such as a Green Certificate (to develop knowledge and skills related to the agriculture sector), career internships, and work experience placements, counts towards the high school diploma awarded at 18. The Alberta Apprenticeship and Industry Training Board oversees the RAP and apprentices have dual status as employees and high school students.

In Alberta, apprenticeships are available in 49 designated and regulated trades and nine designated occupations. The Red Seal programmes last between two and five years and the rest one and four years.

To work in the trades covered by the former requires having completed an apprenticeship, whereas for the latter this is not the case. Apprentices spend 80% of their time training on-the-job and 20% attending courses at a community college or technical institute on either a block or day-release basis. They take exams (mixture of written and practical tests) at the end of each block of training and must achieve a 65% pass mark. On successful completion, they are awarded an Alberta Journeyman Certificate. Red Seal apprentices take multiple-choice examinations based on the national standards for each trade. In the non-regulated occupations, a network of provincial industry advisory committees is involved in monitoring standards and supporting employers in the development of training and certification standards for new and emerging occupations.

**IN ALBERTA,
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INTERNATIONAL COMPARISONS

Austria

Austria has roughly equal numbers of young people attending full-time vocational schools (38.7% in 2010/11) and apprenticeships (39.3%) and more undergraduates come from vocational schools than from general education. Since 2008, all apprentices have had the right to enter for the Berufsmatura examination, which provides entry to all areas of Austrian higher education. This covers: German; mathematics; a modern foreign language; and a specialist subject (related to the apprentice's occupational area). The numbers of apprentices taking this examination have quadrupled since 2008.

There are 206 legally recognised apprenticeships, entry to which is on completion of nine years of compulsory schooling. The majority of apprentices achieve this requirement by attending a pre-vocational course in their final year of school.

Apprenticeships last a minimum of two years and maximum of four years, but the average length is three years. Apprentices divide their time between training in a company (80%) and attending a part-time vocational school. Each apprenticeship has a national training regulation designed by advisory councils comprising the Social Partners (government, employers and trade unions) setting out the competence-based curriculum to be followed in the company. The Federal Ministry of Economy, Family and Youth regulates the company-based training guided by the Federal Advisory Board on Apprenticeships. At the end of the apprenticeship period, apprentices take a combined practical and theory examination overseen by an examination committee comprising employer and employee representatives. If successful, apprentices can then take a further examination to achieve the status of 'master craftsman'.

At the provincial level, an apprenticeship is organised by Economic Chambers with the help of the Chambers of Labour. They inspect and authorise the companies taking apprentices and examine and record apprenticeship contracts. They offer advice to both apprentices and employers and they appoint the chairs of the apprenticeship examination boards in conjunction with the Regional Advisory Board on Apprenticeships.

INTERNATIONAL COMPARISONS

Denmark

Denmark, in contrast to other Scandinavian countries, has a vocational pathway similar to the German ‘dual system’ apprenticeship (referred to as IVET), although the Danish model has a longer school-based component. The average age of young people entering IVET has increased steadily in recent years and now stands at 21, whilst the average age for completion is 28 as they can switch from one programme to another and can suspend their studies for periods of inactivity. IVET’s roots go back to medieval apprenticeships and it continues to have strong support due to its close relationship with the labour market. There are, however, concerns about the levels of completion (around 40 per cent for the main apprenticeship programme) and the numbers of work placements.

IVET is governed through a combination of national laws and a Social Partnership between employers, trade unions and government. The Danish Parliament sets out the legislative framework and the Ministry for Children and Education allocates funding to the Social Partners. The National Advisory Council for IVET comprising 30 representatives including the Social Partners, student organisations, teacher unions, and the unions covering college principals and head teachers advises the Ministry.

Standard setting and curriculum planning is done by 50 Trade Committees with an equal number of representatives of employers and trade unions drawn from specific industries. They determine the content (expressed as competences), duration and assessment requirements of VET programmes (for both young people and adults), including the balance of time to be spent on practical and theoretical components. The Trade Committees are responsible for setting the standards for the final examinations and for issuing the Journeyman Certificate at the end of the apprenticeship stage (known as the Main Programme). They carry out labour market research and monitor changes in working practices.

The Trade Committees appoint Local Education and Training Committees (comprising local employers, college managers, VET teachers, and students), to cover each of the VET programme areas for every vocational college. The local committees approve local companies to take students on work placements and ensure there is a sufficient supply of placements, adapt the curriculum requirements set out by the different Trade Committees to suit the needs of local employers, discuss pedagogical approaches, and act as mediators when there are disputes between apprentices and companies.

Students entering apprenticeships take a 20-60 week Foundation Course (FC) depending on the subject area and student capabilities, in a vocational college. Anyone between the ages of 15 and 17 must also undergo an assessment of their academic, personal and social competences by a vocational college or a youth guidance centre to be declared ‘study-ready’. The FCs are assessed through project-based externally graded oral and written examinations leading to a certificate listing the subjects covered and levels of attainment. The external examiners are appointed by each college from a pool of examiners authorised by the college’s Local Education and Training Committee. The Main Programme lasts on average for three years and combines college-based study with workplace training.

INTERNATIONAL COMPARISONS

Denmark

Each programme includes a number of 'steps' (trin), which correspond to specific roles in the labour market. An individual can leave on completion of a 'step' (for which they gain a partial qualification) to enter the labour market and can then return at any point up to the age of 25 to complete their course. Assessment is through oral and written examinations for both the practical and theoretical components of the programme, and on the ability to combine the skills and knowledge gained through the programme as a whole. Two external examiners per programme in each college are appointed by the Trade Committees. On completion of the work placement component, an employer sends a certificate to the apprentice, their vocational college, and the local education and training committee detailing the students' achievements. In the trade-related apprenticeships, students also receive a Journeyman Certificate classifying them as a skilled worker.



INTERNATIONAL COMPARISONS

France

In French, the word, qualification, tends to refer to the skills (or capacities) that an individual has to enable them to work and which become codified through the collective agreements (negotiations) between employers, employees and trade unions. However, apprenticeships in France do lead to certificates and diplomas which are ranked for the French NQF and the EQF in relation to qualification levels. The term, professional as opposed to vocational is used in qualification titles.

At 16, around 90 per cent of young people continue in education or apprenticeships and this remains high (around 80 per cent) at 18. IVET is fully integrated with the general education system at the upper secondary level and the majority of IVET takes place in vocational schools (lycée professionnel). In the 1980s and in response to high unemployment as well as to business demand for better educated school leavers, reforms were introduced to try and ensure that all young people gained a recognised qualification of, at least, the equivalent of a basic vocational certificate. The vocational pathways, including apprenticeships, all now lead to the Baccalaureat Professionnel. This is recognised for entry to all higher education (except for the elite Grandes écoles which are selective).

The Ministry for National Education is responsible for: a) developing frameworks for vocational diplomas and examinations in consultation with sector-based Consultative Professional Committees (CPCs); b) awarding certificates and diplomas; c) monitoring quality; and d) recruiting and paying teachers (classed as civil servants). The 26 regional authorities are charged with planning vocational training in the light of their economic and social priorities, in consultation with the State and Social Partners (employers and trade unions) and do this through a network of vocational committees. The CPCs are comprised of employers, employees, and VET specialists (including teachers and trainers) and they are supported by research carried out by Céreq (the national research centre for research on qualifications).

INTERNATIONAL COMPARISONS

France

In their design, all vocational qualifications have to include:

- The standard the candidate will have to reach to be competent.
- The professional and general competences expected to be achieved, including the related knowledge, and the conditions in which the competences will be performed.
- The assessment standard including the units that constitute the qualification, the types of assessment to be used, the conditions under which assessment can take place, and regulations regarding who can assess.
- A description of the compulsory on-the-job training period.

Apprenticeships, which are funded through an employer levy, combine on the job training with an employer (between 60 and 75 per cent of their time) and general and vocational education in a Centre de formation d'apprentis (Apprenticeship Training Centre). There are two main apprenticeship pathways at Level 2 and 3 (equating to the Baccalaureate levels), and higher apprenticeships at Levels 4 and 5. Numbers of apprentices have been increasing since the mid-1990s when the vocational baccalaureate was given equal status to that gained in general education and, more recently, through government initiatives in response to high youth unemployment.



INTERNATIONAL COMPARISONS

Germany

The German 'Dual System' apprenticeship is under acute pressure due to the insufficient number of employers who now recruit apprentices. As a result, there are close to the same number of young people in what is termed the 'transition system' comprising a range of vocational and pre-vocational programmes (organised at both Federal and regional level). Yet, the long-standing strengths of the German approach continue to set a standard for other countries to reach.

The Dual System is underpinned by the concept of Beruf, which though it has no direct English translation, equates to the concept of occupation and occupational identity. The key goals of apprenticeship are to develop occupational identity, responsible citizens, and skilled employees who can adapt to advances in work technologies. The Federal Ministry of Education and Research is responsible for VET strategy under the requirements of the Vocational Education and Training Act (last reformed in 2005), for funding and guiding the work of the national VET research centre, the German Federal Institute for VET (BIBB), and for improving VET. Other ministries endorse vocational qualifications, but do so in agreement with the education ministry.

At regional level, the Länder have sole responsibility for the part-time VET schools of the dual system. They design the curricula, train and pay the teachers and are responsible for legal supervision of the Economic Chambers, which are based at local level and provide a range of services to local employers. The Chambers also register apprenticeship contracts, assess and monitor the participating companies, assess the competence of VET trainers, and provide advice for apprentices. They act as the 'responsible agencies' for organizing and hosting the final apprenticeship examinations. Teachers from the VET schools are not involved in these examinations.

The majority (around 60%) of German apprentices are in service sectors, notably in business administration and retail.

The Federal Ministry of Economics and Technology is responsible for the recognition process for regulated occupations, but the Ministry of Education and Research has the final approval. The regulation for each training occupation is based on two elements: the Training Ordinance, which covers the workplace element; and the Framework Curriculum for vocational education in colleges. The Training Ordinances are regulated by federal law and list the (broadly defined) knowledge, skills and competences to be covered in the workplace as well as the assessment specifications. Changing the ordinances takes time, leading to complaints that the Dual System is too conservative, but adaptation does occur: for example, in 2003, the occupation of 'car mechanic' was replaced by that of 'car mechatronic' to reflect the increasing importance of integrating mechanical and electronic skills in light of technological advances in engineering.

The registered occupations of the Dual System German are also called, 'training occupations' (Ausbildungsberuf) because they comprise: a) a vocational education and training standard; b) occupational characteristics; c) a training plan of two or three years; and d) a curriculum framework. Once the Federal-Länder Coordination Committee for Vocational Training Regulations and Framework Curricula has approved a new vocational training regulation and associated curriculum, it is issued by the Federal Ministry of Education and Research, published in the Federal Gazette, and adopted for use by the Länder.

INTERNATIONAL COMPARISONS

Germany

Apprentices log their progress in the company and the vocational school in report books, which are checked and signed by their trainers at regular intervals. They are examined at the end of their programme to assess their occupational competence in a practice setting and the underpinning knowledge. They are also examined in the general education subjects delivered by the vocational schools and their school reports are included. The structure and content of examinations is contained within the nationally recognised training regulations.

Assessment methods and length of assessment vary according to the demands of each occupation. The written examinations usually take two hours and oral examinations around 30 minutes. The Chambers, which are responsible for administering examinations and issuing the certificates, set up examination committees for each occupation, which comprise at least three members (one representative each of employers and employees and a vocational school teacher).

A further challenge for the German system is that, unlike Austria and Switzerland, there has been little progress in relation to opening access to higher education for apprentices. This is a very controversial issue in Germany as many people fear that by blurring the distinctions between the Dual System and higher education would damage the high labour market currency guaranteed to an apprentice on completion of their programme.

The qualification gained by an apprentice is a culmination of their successful participation in an holistic programme of education and training, so any attempt at aligning aspects of that programme with the academic requirements for university entrance are treated with caution (Pilz 2012; Deissinger et al 2011). Similarly, there is a fierce debate about introducing modularisation to enable individuals to switch from one apprenticeship to another or between an apprenticeship and full-time education. This latter route has already been integrated into the new ICT courses in order to allow for specialised training relevant to a particular employer or sector.

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INTERNATIONAL COMPARISONS

Switzerland

Like Germany and Denmark (and in similarity with Austria and The Netherlands), Switzerland has a predominantly Dual System approach with the majority of young people in apprenticeships. Unlike Germany and Denmark, however, Switzerland has developed much stronger integration between upper secondary vocational education and higher education. This is reflected in the title of the Federal Vocational and Professional Education and Training Act which governs the joint system of VET/PET: Vocational Education and Training (upper secondary level)/Professional Education and Training (tertiary level). Around two thirds of young people enter the VET upper secondary track at 15/16, of whom over 80% are in apprenticeships (lasting three to four years), with the rest in full-time vocational schools. Entry to apprenticeship is governed by the training companies and generally includes an aptitude test as well as consideration of educational attainment. There are two separate levels of vocational training, each with its own certification. The lower level, two-year apprenticeship leads to Switzerland's federal vocational certificate (Eidgenössisches Berufsattest, EBA). The three/four-year course leads to a certificate of proficiency (Eidgenössisches Fähigkeitszeugnis, EFZ).

Whilst schooling is devolved to the autonomous cantons, the VET/PET system is regulated and organised through a partnership between the Confederation (the State), the cantons and professional organisations. The legal basis for each VET programme is enshrined in the national VET ordinances issued by the Federal Office for Professional Education and Technology (OPET). The VET ordinances are developed with trade associations (which include strong representation from SMEs), rather than with individual companies so that the specified competencies are kept at a broad level rather than reflecting the immediate and potentially narrow requirements of individual employers. These cover the requirements for each regulated occupation (currently 250), the content of training, the criteria for assessment, procedures for administering qualifications, and quotas for the numbers of students. In contrast to the German Dual System, which has problems with the structural separation of the vocational schools from the workplace component, the Swiss ordinances for each occupation are designed to clarify the relationship between the work-based and school-based components and there is much greater communication between vocational teachers and workplace trainers. The creation of an ordinance takes between two and three years and a standing committee is set up to oversee its development and quality assurance procedures whilst it becomes established.

At the end of all vocational programmes, young people sit examinations in general education, occupational theory, and practical application. There is also some continuous assessment during the period of education and training. The cantons are responsible for apprenticeship examinations (administered by assessment specialists) and equal weight is given to the learning outcomes from both the workplace and vocational school components. A variety of methods are used to try and match appropriate forms of assessment with the types of skills and knowledge being assessed. In the vocational schools, a student's performance is judged at the end of each semester on a 6-point scale: excellent; sufficient; insufficient. In the case of apprentices, if their performance is not satisfactory then the school contacts the training company and an apprentice may be required to repeat a year. In the companies, the trainers discuss progress with their apprentices and produce a report each semester, which combines the results from both the workplace and vocational school.

INTERNATIONAL COMPARISONS

The Netherlands

From the age of 16, young people in the Netherlands can enter the upper secondary vocational education track (MBO). This was reformed in the 1990s bringing together school-based VET and apprenticeships into one national system with one qualification structure. The Diploma achieved by apprentices and students in full-time VET programmes provides access to institutes of applied higher education. The system is designed and maintained jointly by a Social Partnership of the State (through the Social Economic Council), regional vocational colleges, employer bodies, and trades unions. Programmes are provided at four levels, ranging from pre-basic and basic vocational training (1 to 2 years) to middle management training (3 to 4 years). The highest level (4) gives entry to higher professional education, but the gap between Levels 2 and 4 is still seen as very problematic.

There are two pathways which both follow a ‘dual’ model with study in a vocational college and training in the workplace:

- **the full-time, college-based pathway (BOL), which includes work placements for between 20 to 60% of the time;**
- **the part-time work-based pathway (BBL), which includes an apprenticeship, and comprises 60–80% of the time in a workplace and one or two days in college.**

The levels of participation in each pathway fluctuate according to the state of the economy and the availability of apprenticeship places.

Colleges design the programmes based on qualifications (Diplomas) in the national qualification framework. A qualification covers one or a small number of occupational profiles derived from a national occupational classification that is publicly available. It should be noted, however, that VET colleges have considerable autonomy in the way they design their curricula. The duration depends on the level, from one year for Level 1 to three years for Level 3. At national level, the assumption is that a VET student studies for 40 hours per week for 40 weeks a year split between classroom-based, work-based and self-regulated learning (including homework). However, there are no formal regulations for the division of study.

In 2012, the Ministry of Education established a new national centre (SBB) to provide advice on VET and to oversee eight ‘sector chambers’ comprised of Social Partners (including the VET colleges). The SBB also initiates cross-sectoral and cross-regional approaches. From 2016, a revamped qualification system, which has reduced the number of qualifications by 25% has been in place, created clusters of qualifications and broadened the occupational definitions. Optional models, jointly designed by colleges and employers and which are independent of the qualifications, have also been introduced to enable colleges to respond to labour market demands. Assessment is the responsibility of the colleges who use the qualifications as benchmarks. The companies providing work placements must also be involved. The education inspectorate monitors the quality of assessment and the curricula, and the centralised compulsory examinations in Maths and the Dutch language (at Level 4 also in English). The vocational modules are continuously assessed with the results recorded in transcripts, but there are no final examinations.

5. CONCLUDING REMARKS

In the light of this review, the key questions for consideration are:

- **to what extent will the introduction of EPA bring England into line with countries with strong vocational education and apprenticeship systems?**
- **to what extent might EPA disrupt existing assessment approaches which are appropriate for testing skills and knowledge in specific occupational fields and settings?**
- **what impact will the removal of the mandatory requirement to include a nationally recognised qualification in the new apprenticeship standards have on the apprentice's prospects for further education and training and labour market mobility?**

All the countries discussed in this report, apart from the Netherlands, require apprentices (to a greater or lesser degree) to pass written examinations as well as tests of their practical competence at the end of their training. However, none of the countries relies totally on EPA and EPA comes in many shapes and sizes. Evidence for making assessment judgements is derived from both the workplace and the off-the-job setting and usually carries equal weight.

In all the countries, nationally recognised and validated forms of accreditation are regarded as important and apprentices receive some form of certificate or diploma. Yet, Social Partners at the local and regional level are actively involved in shaping curricula and designing assessment. This level of involvement and the feedback mechanisms that enable the partners to communicate with national government about their experiences and concerns generates trust within the system.

No one country has all the answers and all countries struggle to maintain quality at the same time as being responsive to societal and labour market change.

A major development in some of the countries has been the introduction of dual or hybrid forms of qualification to enable vocational students and apprentices to gain access to higher education as well as enter the labour market (see Deissinger et al 2013). This indicates the desire to see much greater permeability between vocational pathways and higher education, though there are concerns about protecting apprenticeships from having to bend to meet requirements that are inappropriate or may even damage its key characteristics as a model of learning for developing occupational expertise.

ASSESSMENT PROCEDURES

Table 1: Assessment Procedures in selected countries

Assessment Procedures	Alberta Canada	Austria	Denmark	France	Germany	Switzerland	The Netherlands	England
Standards set solely by employers	X	X	X	X	X	X	X	X
EPA only	X	X	X	X	X	X	X	X
Qualification Awarded	✓	✓	✓	✓	✓	✓	✓	✓*
Regulated assessment bodies	✓	✓	✓	✓	✓	✓	✓	✓
Independent assessment of competence	Trainer / Independent	Trainer / Independent	Trainer / Independent	Trainer / Independent	Trainer / Independent	Trainer / Independent	Trainer / Independent	Trainer / Independent
**Mandatory training for assessors	X but CPD encouraged	✓	✓	✓	✓	✓	✓	✓*
Mandatory training for trainers and vocational teachers	X***	✓	✓	✓	✓	✓	✓	X
Minimum legal duration of apprenticeship	2-5 years	2-4 years	3 years	3 years (+ foundation year)	2-3 years	3-4 years	2-3 years	12 months
Access to HE	Varies by occupation	✓	✓	✓	X	✓	✓	X

* Some new apprenticeship standards do not include qualifications

** Only applies to NVQ Assessors

*** Red Seal apprentices trained by certified journeyman

REFERENCES

- Black, P., Harrison, C., Lee, C., Marshall, B. and Wiliam, D. (2004). Working inside the black box: Assessment for learning in the classroom, *Phi Delta Kappa*, 86(1), 8–21.
- Cedefop (2016a) *Application of learning outcomes approaches across Europe: a comparative study*, Luxembourg: Publications Office.
- Cedefop (2016b) ReferNet thematic perspectives series on vocational teachers and trainers. <http://libserver.cedefop.europa.eu/vetelib/2016>
- BIS/DfE (2013) *The Future of Apprenticeships in England: Next Steps from the Richard Review*, London: Department for Business, Innovation and Skills.
- Deissinger, T., Aff, J., Fuller, A. and Jorgensen, C.H. (2013) (eds) *Hybrid Qualifications: structures and problems in the context of European VET policy*, Bern: Peter Lang.
- Deissinger, T. Heine, R. and Ott, M. (2011) The dominance of apprenticeships in the German VET system and its implications for Europeanisation: a comparative review in the context of the EQF and the European LLL strategy, *Journal of Vocational Education and Training*, 63(3): 397-416.
- Faurschou, K., Pedersen, M. and McNeill, A. (2009) *Study on quality assurance systems in work-based learning and assessment in European Vocational Education and Training*, ENQA-VET Report, Dublin: FETAC.
- Fuller, A., Leonard, P. and Unwin, L. (2015) *Does apprenticeship work for adults?: the experiences of adult apprentices in England*, London: UCL Institute of Education.
- Fuller, A. and Unwin, L. (2013a) (eds) *Contemporary Apprenticeships: International Perspectives on an Evolving Model of Learning*, London: Routledge.
- Fuller, A. and Unwin, L. (2013b) *The concept of occupation*, London: The Gatsby Foundation.
- Fuller, A. and Unwin, L. (2010a) Change and Continuity in Apprenticeship: The Resilience of a Model of Learning, *Journal of Education and Work*, 25(5): 405-416.
- Fuller and Unwin (2010b) The content of apprenticeships. In Dolphin, T. and Lanning, T. (eds) *Rethinking Apprenticeships*, London: IPPR.
- Green, A. (2013) *Education and State Formation, 2nd edition*, London: Palgrave Macmillan.
- Harris, R., Sumner, R. and Rainey, L. (2005) *Student traffic: two-way movement between vocational education and training and higher education*, Adelaide: NCVER.
- HM Government (2013) *The Future of Apprenticeships in England: Implementation Plan*, London: The Stationery Office.
- IKEI (2012) *Apprenticeship Supply in the Member States of the European Union*, Luxembourg: Publications Office of the European Union,
- Keep, E. (2006) State control of the English education and training system – playing with the biggest train set in the world, *Journal of Vocational Education and Training*, 58(1): 47-64.
- Pilz, M. (2012) Modularisation of Vocational Training in Germany, Austria and Switzerland: Parallels and Disparities in a Modularisation Process, *Journal of Vocational Education and Training*, 64(2): 169-183.
- Pilz, M. (2009) Why do abiturienten do an apprenticeship before going to university?: the role of ‘double qualifications’ in Germany, *Oxford Review of Education*, 35(2): 187-204.
- Raggatt, P. and Williams, S. (1999) *Government, Markets and Vocational Qualifications*, London: Falmer Press.
- Richard, D. (2012) *The Richard Review of Apprenticeships*. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/34708/richard-review-full.pdf
- Strickland, A., Simons, M., Harris, R. and Robertson, I. (2001) *Evaluating on and off-the-job approaches to learning and assessment in apprenticeships and traineeships*, Adelaide: NCVER.
- Tanggaard, L. and Elmholdt, C (2008) Assessment In Practice: An inspiration from apprenticeship, *Scandinavian Journal of Educational Research*, 52(1): 97-116.
- Unwin, L., Fuller, A., Turbin, J. and Young, M. (2004) *The Impact of Vocational Qualifications: a review of the literature*, Research Report 522, Nottingham: Department for Education and Skills.
- Wolf, A. (2011) *Review of Vocational Education – The Wolf Report*. London: Department for Education.

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