Federation for Industry Sector Skills & Standards

21st Century Apprenticeships

Comparative review of apprenticeships in Australia, Canada, Ireland, and the United States, with reference to the ***Richard Review of Apprenticeships*** and implementation in England

Contents

Foreword

England is going through one of the biggest reforms to apprenticeships in decades. Coupled with the recent launch of traineeships, the landscape in which employers and aspiring workers engage in workforce development is set for significant change.

Securing entry to the skilled jobs of the future is not just optimal for firms and apprentices; these technical and higher-level skills are critical. They are the backbone of a competitive, inclusive, and productive economy. Everyone benefits.

Doug Richard's *Review of Apprenticeships*, published on 27th November 2012, highlighted a number of major challenges for the English system. The aim of his review, supported by government, employers' organisations, and industry skills partnerships, was to chart the course for increasing the quality and quantity of real apprenticeships. He recommended whole-system change to deliver the ambition.

England has made significant improvement in apprenticeships over the past twenty years. In Parliament, cross-party support for apprenticeships has resulted in increased and sustained investment. A great deal still needs to be done. Compared with some of our major international competitors, England has a hurdle to climb: in the group of five countries studied in this report, England lies in third place overall in terms of its performance on apprenticeships.

In the anniversary since the publication of the *Richard Review* – a report that has been hotly debated – employers, stakeholders, and providers are keen to get on with the operational phase of implementation and delivery. It is timely to remind everyone of the challenges and stretching principles Doug Richard set out twelve months ago, but, equally, for all the players involved – with leadership from government and industry – people are now impatient to see a better system put in place.

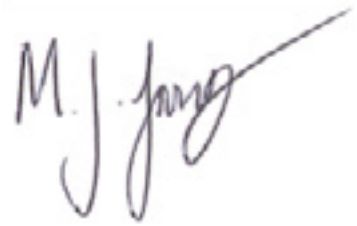
The Federation for Industry Sector Skills & Standards is working with its members, government officials, and stakeholders to develop practical proposals and delivery models for how England can rise to the challenge of 21st century apprenticeships. We are sponsoring a number of work-streams – consultations, independent research, and activities – to help ensure the new delivery models that emerge reflect employer demand and are employer friendly (not bureaucratic).

A key part of understanding the implementation challenge is to look at similar systems of apprenticeship abroad – not simply going over old ground, but providing some new insights. We commissioned the International Skills Standards Organisation (INSSO), to undertake an independent five-country study of apprenticeships in predominantly English-speaking countries because we wanted to understand more about how some of the lessons learned from these countries could directly help inform England's new apprenticeship delivery model. This is the first comparative study of its kind that specifically addresses the issues raised by the Richard Review, which we hope will be useful to all the countries involved in this study as well as the organisations involved in apprenticeship delivery in England.

The report shares some important insights about the contemporary challenges faced by Australia, Canada, England, Ireland, and the United States. Based on Doug Richard's ideal model of

apprenticeship, it would seem that some international reforms echoing his views have been successful, while other reforms have been tried, yet some implementation challenges remain. The report makes some positive suggestions about how these challenges could be addressed in the months ahead.

The Federation is making this positive contribution to the debate to try and bring together players who have, to date, not fully engaged in a positive way. Our aim is to continue the informed debate begun by Doug Richard, as we move into implementation. We will be holding a conference in March 2014 at which we want to bring together all those involved in building this new approach to learn lessons. As part of that debate, the Federation wants to identify what 'good' looks like and, as in this paper, understand the lessons we can learn from both our own and others' experiences.



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Background to the report

The Federation commissioned this work in August 2013 to conduct a comparative review of apprenticeships from a selection of English-speaking countries.[i] The main aim was to learn the lessons from different systems, particularly as they relate to the issues raised by the Richard Review of Apprenticeships in England.

The public report is part of a broader project that The Federation is leading to develop thinking about how to implement the Richard Review. The lessons we can learn from apprenticeship models overseas can help inform the development of a new delivery system for apprenticeships in England. The aim is to produce a series of working papers, consultations with stakeholders, and a final report and conference in March 2014.

The Richard Review

Entrepreneur Doug Richard published his independent review of apprenticeships, submitted to government, in November 2012.[1] The review marked a radical departure from previous reforms in that he proposed 'whole systems change' to boost demand for apprentices, improve quality, streamline bureaucracy, and enact reforms to apprentice funding and delivery in England.

Richard put forward 10 major principles and proposals to reform the system.

1) **Importance of a strong vision for apprenticeships, supported by government and driven by employers:** *'It is in society's interests because it provides a ladder into meaningful employment; it improves the quality of our workforce; and most importantly, it provides a tool for Government to fulfil its obligations to young people to prepare them for a lifetime of employment.'*[2]

2) **A clear definition of apprenticeships that is fundamentally a contract between an employer and employee:** *'Apprenticeships require a new job role, a role that is new to the individual and requires them to learn a substantial amount before they can do that job effectively.'*[3]

3) **Greater parity of esteem for apprenticeships as a highly valued learning pathway, including attracting the best students:** *'It is inappropriate for [apprenticeships] to be viewed as a lower-status alternative to a purely academic path through university to adulthood.'*[4]

4) **One industry standard and qualification designed by employers:** *'The new standards should form the basis for new, overarching qualifications... The new apprenticeship qualifications should replace today's apprenticeship frameworks... We must let competing educators, public and private, innovate and explore to*

[i] Australia, Canada, England, Ireland, and the United States. Canada is a bilingual country with two official languages – English and French. Ireland speaks Gaelic, and Australia, Canada and the United States have substantial aboriginal communities. The United Kingdom has, since 1999, devolved responsibility for education and skills to England, Wales, Scotland, and Northern Ireland.

find the best ways to get our apprentices to the level of competency that the standard defines.'[5]

5) **A test at the end to prove the apprentice is competent:** *'The final test and validation must be holistic, in that it seeks to test the full breadth of the relevant competencies, not merely the incremental progression of the apprentice.'*[6]

6) **Functional maths and English as key components in the standard:** *'Achieving a good level of maths and English, a more stretching level than many apprentices currently attain, should be a pre-requisite for completion.'*[7]

7) P**urchasing power of training in the hands of employers, ideally through the tax system:** *'To become real consumers of training, employers should have control of Government funding and, also, contribute themselves to the cost of training.'*[8]

8) **Innovation in marketing and Big Data to drive awareness and demand for apprenticeships:** *'We need to get better at utilising the web and social media to inform employers and learners of all ages about apprenticeships, and we need to ensure that all relevant data is made freely available to help drive this change.'*[9]

9) **Innovation in quality assurance with less emphasis on box ticking**: *'There will be many paths and approaches that an apprentice can take to reach "the standard" and we should strip out any unnecessary prescription and regulation of the process for getting there.'*[10]

10) **Lower levels of bureaucracy, including a less complex array of intermediary bodies:** *'Although, in principle, employers can influence apprenticeship frameworks and qualifications today, a strong and recurring theme that I heard from stakeholders was that the system is far too complex and that, in practice, SSCs and Awarding Organisations – rather than employers themselves – were the ones in the driving seat.'*[11]

Summary

Lessons from abroad

Apprenticeships are in vogue. This report examines the experience of Australia, Canada, England, Ireland, and the United States in delivering apprenticeships. We call these countries the Group of Five, or G5 for short.

The research team focused on English-speaking countries because the Richard Review of Apprenticeships was explicit that England should not attempt to emulate the German dual system of training with 350 apprentice trades, which studies have found – since time immemorial – to be broadly incompatible with the culture of vocational and workplace training in Britain.[ii] For example, the vocational track in schools at ages 14, 16, and 18 is not as well developed in Britain as it is in the dual model, lacking widespread parental and political support.[iii]

Some industry sectors in the UK, like the creative industries, take a more expansive view of apprenticeships, a distinctive feature of the English model. Other sectors are trailing the idea of 'higher apprenticeships', including non-university pathways to professional competency and qualifications (although they are already established in industries such as engineering). These features mark out the English apprenticeship system to those practices followed on the continent and elsewhere in the world.

Our focus on English-speaking countries, therefore, with similar service-orientated, open, liberal, 'innovation-led' market economies, is to frame our analysis in terms of what can we learn from training cultures and workforce apprenticeship systems that share a similar heritage and contemporary economic climate to England. And, crucially, how do these systems measure up to the Richard Review ideals?

Brief overview of the G5 apprenticeship systems

Australia

Australian Apprenticeships include both traditional apprenticeships and traineeships. They are available in a variety of certificate levels in more than 500 occupations, which include the more traditional skilled trades but also a range of emerging careers in most sectors of business and industry.[12] The Australian Government supports Australian Apprenticeships through a number of programmes, which offer financial incentives to both employers and apprentices. The National Skills Needs List identifies trades deemed to be in national skills shortage and is used to determine eligibility for employer incentives and personal benefits. Australian Apprenticeships Centres are contracted by the Australian Government to deliver Australian Apprenticeships Support Services.[13]

Canada

The Canadian apprenticeship is regulated by the provinces and territories, resulting in 13 different systems that respond to labour market needs in each region. Each province and territory has

[ii] Britain is used interchangeably with England, when apprenticeships are not specifically being referred to. Education and skills policy is a devolved responsibility, hence the focus here on English apprenticeships.
[iii] An attempt by the Labour Government in 2008 to introduce overarching vocational Diplomas from the age of 14 has largely been scrapped, following the election of a new coalition Government in 2010.

its own apprenticeship authority, which is responsible for regulation and certification. There are over 300 designated trades in Canada, which vary by province and territory, and 55 of these are Red Seal trades covering 80% of registered apprentices in Canada.[14] The Red Seal Program is a partnership between the Government of Canada, the provinces, and the territories.[15] An apprentice typically becomes certified in their trade upon completion of their apprenticeship program, including the required number of on-the-job and technical training hours, and successfully passing either the Red Seal exam in their trade or the provincial/territorial certification exam. In some cases, an apprentice may need to pass a provincial or territorial exam before writing a Red Seal exam for Red Seal endorsement. The Government of Canada offers a variety of supports to apprentices, including taxable grants to apprentices registered in designated Red Seal trades, and Employment Insurance benefits to apprentices during block technical training.[16] In addition, the provinces and territories offer various supports to apprentices within their jurisdiction.

England

Apprenticeships in England are available in all sectors and industries across the country. An Apprenticeship is a set of qualifications making up a 'framework' developed by Sector Skills Councils. The National Apprenticeship Service (NAS) supports, funds, and coordinates the delivery of Apprenticeships across England. The NAS has total end-to-end responsibility for the delivery of Apprenticeships that includes: Employer Services, Learner Services, and a web-based vacancy matching system.[17] Funding is available from the Government through the Skills Funding Agency, but this varies according to the sector and demographic of the individual apprentice.[18]

Ireland

In Ireland, apprenticeship is the recognised means by which people are trained to become skilled craftspeople. The trades have been designated by SOLAS Further Education and Training Authority and come within the scope of the Statutory Apprenticeship system, which is organised in Ireland by SOLAS in cooperation with the Department of Education and Science, employers, and unions. The apprenticeship programme is based on pre-specified standards, which are agreed and determined by industry. On completion of the programme, the individual gains a FETAC/Quality and Qualifications Ireland (QQI) Advanced Certificate. This qualification is recognised internationally. SOLAS pay all apprentices an Apprentice Allowance and, where appropriate, a contribution towards travel or accommodation costs. There are also financial incentives for employers in the form of grants, which encourage employers to recruit and register female apprentices.[19]

United States

In the United States, the formal Registered Apprenticeship is available in over 1000 occupations and comprises a partnership involving sponsors, federal and state governments, apprentices, and other stakeholders. The sponsor can be an employer, employer association, joint labour management organisation, or the military, and it is the industry sponsor that invests in the design and delivery of the apprenticeship programme. The Registered Apprenticeship is driven and primarily funded by industry, and the majority of funds are leveraged from the private sector. The federal government, through the Office of Apprenticeship, works in conjunction with State Apprenticeship Agencies to administer and regulate the programme nationally.[20]

Diverse approaches

We discovered a diverse range of assumptions about what constitutes an apprenticeship, and different structures of how best to deliver apprenticeships, particularly in terms of governance and accountability. We found varying roles for government, industry, and other stakeholders in designing apprenticeships; different approaches to competency and standards development; and both traditional and experimental funding models to help engage or better incentivise employers and apprentices to become certified.

Despite these varied approaches, we found both similar and divergent trends in each apprenticeship system, particularly in terms of learning outcomes. The main report sets out in detail some of the key findings.

In addition to our comparative research, we also examined the likely impact on English apprenticeships as a result of the full implementation of Richard.

Issues and challenges for apprenticeship reform in England

Based on the comparative research and available evidence, the report concludes:

1. **Demand for apprentices in England may fall in the short to medium term**

What the precise reductions will be is hard to say, but using a forecasting model that takes into account recent regulatory changes and assumes implementation of the Richard Review proposals in full, we estimate a moderate fall in apprenticeship starts of up to 110,000 between now and 2017, as the impact of recent regulatory changes works through the system, and potentially a steep fall of around 190,000 in 2017, (assuming the Richard model of apprenticeships is implemented in full). Depending on the outcomes of the Trailblazers' exercise, we would expect volumes to recover to about the level they were in 2010, by the year 2020. The analysis points to the adoption of a counter-cyclical approach being needed to avoid apprenticeship starts plummeting.

2. **Both regulation and market forces have a part to play**

We did not find any publicly funded apprenticeship system in our study that was not regulated to some degree or other. The key issue would appear to be getting the balance of regulation right and better aligned with improving both employer take-up and quality of apprentices – intelligent regulation.

Richard argued that government should strip back unnecessary regulation and bureaucracy in the system, injecting more market discipline in the process. Our research found that, where industry training is aligned with market demand, apprenticeship outcomes are usually better. However, we also found some limitations of the purely market-driven approach, notably in Ireland, where apprenticeships were decimated following the 2008 financial crisis. More intelligent regulation may have a part to play in improving the quality and take up of English apprenticeships.

3. **A quality 'Kitemark' – or Richard Compliant approval scheme – may be required in order to secure greater trust in the apprenticeship brand**

In purely market-based systems, consumers look for impartial signs of value and credibility. We suggest that it might be desirable to implement a quality assurance mark – or Richard Compliant scheme – that clearly identifies those apprenticeships that are on a par with the perceived *Gold Standard* of A-Levels, being both rigorous and responsive to industry needs. The Richard Compliant system could potentially act as a self-regulatory tool in addressing Richard's main point that currently, as in England, parents and young people too often undervalue apprenticeships.

4. **An employer-driven support system that will require sustained investment**

Other countries examined in this study have engaged in incremental change, yet they would appear to have delivered better performance in some aspects of apprenticeship delivery than

is the case in England. The evidence suggests that employers value stability and sustained investment in apprenticeships where their actions to drive the system are supported.

5. **Simpler occupational standards that remain world class**

All the G5 countries have developed occupational competency standards. Methodologies are similar, even if their complexity varies. Other countries respect England's (UK-wide) approach to standards development; however, all G5 countries recognise the issue of keeping the standards simple and up to date with changing employment and technological trends, including the growing need for international standards that may be required by some sectors. Sectors that make use of skilled migration and global supply chains are particularly likely to want skills standards that are transnational. All G5 countries are striving to produce simpler standards.

6. **A combination of end-testing and competency assessment is likely to work best**

A key pillar of the Richard reforms is the shift from the current occupational competency standards and apprenticeship frameworks to a new end-testing regime. There are many merits in a final exam, not least giving the apprentice a very clear benchmark of their accomplishment. We found that Canada has one of the most advanced apprentice end-testing regimes in the world. It is also amongst the most generously funded. The model has been in existence since 1958 and is mostly valued by employers. Some anecdotal feedback from industry representatives, however, has suggested loopholes in Canada's current testing methodology, including some foreign migrant workers passing the test while still being judged incompetent by employers and the wider industry.

Pilots are currently underway in three Canadian sectors to rewrite the occupational competency standards, simplify them, and look at the introduction of 'essential skills' in literacy and numeracy as part of pre-screening for apprenticeship trades, and, in future, to corroborate the end-test exam results with some additional practical assessments in relevant occupations. Canada's development supports the approach that is being taken by the eight Trailblazers, announced as part of the government's Implementation Plan for apprenticeships in England, where employers are encouraged to experiment with different approaches, while ensuring rigour and efficacy.

7. **Giving individual purchasing power to employers is important, as is enabling collective means of investment to flourish**

Redirecting the purchasing power for apprentice training from providers to employers is a bold step, providing employers with more control. The most radical of the proposals on which the government has consulted relates to financing the off-the-job training element via a partial subsidy or cash-based tax credit. The tax credit potentially would be offset against employers' payroll tax liability, a preferred option of the UK Commission for Employment and Skills.[21]

The international evidence about tax credits and other incentives, of which some were reviewed in this report, is mixed. The *prima facie* evidence would suggest that Canada has been able to boost apprentice completion rates using tax credits as a targeted incentive mechanism. Similarly, South Carolina has recorded a five-fold increase in apprenticeship since a $1000 tax credit per annum,

per apprentice, was introduced. However, we should not read too much into these findings, as there are other reasons for this growth and, as no independent or empirical evaluations have yet been commissioned that examines specifically the impact of these tax credit-based systems, we cannot draw firm conclusions.

Our research found that well-functioning skills systems also require a collective system of employers purchasing training. Industry levies are one traditional example, as are group-purchasing consortia (funded by Employers from their tax credit) or from commission payments on money saved, a model put forward by the Federation to the government's funding consultation on apprenticeships.

8. Providing the right balance of incentives and rewards

Apprenticeship reform is ultimately about changes in human and societal behaviours. England has a unique opportunity to look afresh at the balance of incentives and rewards in the apprentice system.

Rewarding employers through the tax system for taking on apprentices and using the government's procurement power to link public contracts to wider opportunities for young people are just some of the possibilities that the implementation of the Richard Review reforms opens up for English apprenticeships.

Conclusion

No one country has developed the perfect system of apprenticeships, be they the famed Germanic models, with their emphasis on dual systems of training and employer engagement, or the ones in English-speaking countries (similar to the ones examined in this report) which operate alongside culturally pervasive attitudes that place a lot more value on academic routes to success. It is fair to say that every apprenticeship model has both strengths and weaknesses.

The comparative information contained in this report and case studies of what other countries are doing will be useful to policymakers in a number of countries, including the Trailblazers in England: i.e., the companies and industry groups appointed to trial and test out Implementation of the Richard Review reforms.

Download the full report at www.fisss.org/21st-century-apprenticeships

Real and high quality apprenticeships – of the kind Doug Richard envisaged – comprise just one part of a nation's path to prosperity. Levels of innovation and entrepreneurship are just as important. The challenge for England, as it recovers from one of the deepest recessions in recent memory, is to combine all these international best practice approaches, to genuinely create a system of world-class skills that will last for decades to come.

Chapter 1

Key international developments

> *'Since OECD countries cannot compete with less developed countries on labour costs, they will need to compete in terms of quality goods and services they provide. That means a highly skilled labour force, with a range of mid-level trade, technical and professional skills alongside those high-level skills associated with university education. Many of the unskilled jobs which existed in OECD countries a generation ago are fast disappearing.'*[22]

There is growing interest in apprenticeships around the world as a means to smooth over the education to workplace transitions that all economies must now confront. The OECD estimates that as many as 20 million young people in advanced economies are 'Not in Education, Employment, or Training' (NEET). Globally, *The Economist* calculates that nearly 290 million young people, almost a quarter of the world's total youth population, are neither working, in apprenticeship, nor studying.

Young people and their future prospects, therefore, are at the heart this debate.

What are the broader forces shaping apprenticeships policy internationally, and the factors that will need to be considered in meeting the shifting patters of employment and skills demand in future? Drawing on international data sources, we examine where the G5 countries are currently positioned in the global skills system.

After the crash

Despite strong economic growth across the industrialised world between 2002 and 2007, in some countries, notably England, France, and Germany, unemployment continued to rise for young people. Since the global financial crises, only Germany has seen youth unemployment significantly decline, while the UK's youth unemployment rate is 30% higher than it was in 2007.

The challenge for many young people trying to break into the jobs market, or older workers who may suffer from out-dated skills, is that, in addition to these barriers, they often face growing competition in a market where employers have become more selective. In some parts of the world, like in the European Union, the free movement of low-skilled and skilled workers presents employers with a classic buyer's market: the ability to hire the best, or subservient, low-paid, high-paid, or hard-working people at the lowest unit labour costs, particularly in high-turnover service industries. Those fortunate enough to have a job are often involved in part-time work or under temporary contracts. Due to their relative inexperience when compared to older employees, they are also usually the first to be made redundant.

This has given rise to a rapidly growing number of people, particularly college-age graduates, who are unable to find work. Recent data for the UK states that a significant wage penalty, as a result of time spent out of work during youth, can have an impact for several years. This equates to a wage penalty of 15% for males and 17% for females at ages 30 to 34.[23] This is a stark counterpoint to the general idea that, on average, college graduates will earn a significant 'wage premium' as a result of their studies.

Collapse in entry-level jobs?

One theory about the decline of job opportunities for young people is that employers no longer require as many entry-level positions as they once did. The UK Commission for Employment and Skills (UKCES) in particular advances such a view, seen as a reason for Britain's stubbornly high rate of youth unemployment.[24]

However, the World Bank says that policy analysis of this kind needs to look beyond simple theories of derived demand, the platform on which many skills development initiatives are built. Broader economic development, cultural eco-systems, such as employer behaviour, innovation, levels of productive entrepreneurship, and the understanding of the limits to active labour market policies, are other key factors.[25]

The OECD's first international adult skills survey sheds further light on the changing profile of employment and skills.[26] At the level of individual competencies, there are simply fewer roles in most advanced economies that require routine manual work, such as production line operatives. In the United States, for example, Figure 1.1 shows the steady decline of 'routine cognitive' and 'routine manual' work, the former being a job role like a data entry clerk and the latter packing goods in a warehouse. Interestingly, the skilled trades, such as plumbers and hairdressers – or, in the language of the OECD experts, 'non-routine manual' workers – have experienced a steady increase in recent years, as societies have rediscovered the value of jobs in the non-traded sector. To some extent, these jobs are shielded from global competition, although, in some European Union states, this apparent given in economics has been challenged by the rise of the 'Polish plumber'.[27]

What is perhaps most striking about the change in demand for skills since the 1980s is the growth of 'non-routine interpersonal' and so called 'analytic' jobs, striking because the growth of these occupations in the United States, for example, has more than offset the decline in traditional manual or low-skilled jobs. Moreover, Figure 1.2 lends empirical support to the notion of the rising knowledge intensity of jobs and the rise in demand for employees who can work in a range of hi-touch, hi-tech industries. The productivity enhancing effects of information technology fuel many of these jobs, in part. Not surprisingly then, since the opening up of China and other developing economies to manufacturing, the service sectors in advanced economies have grown rapidly.

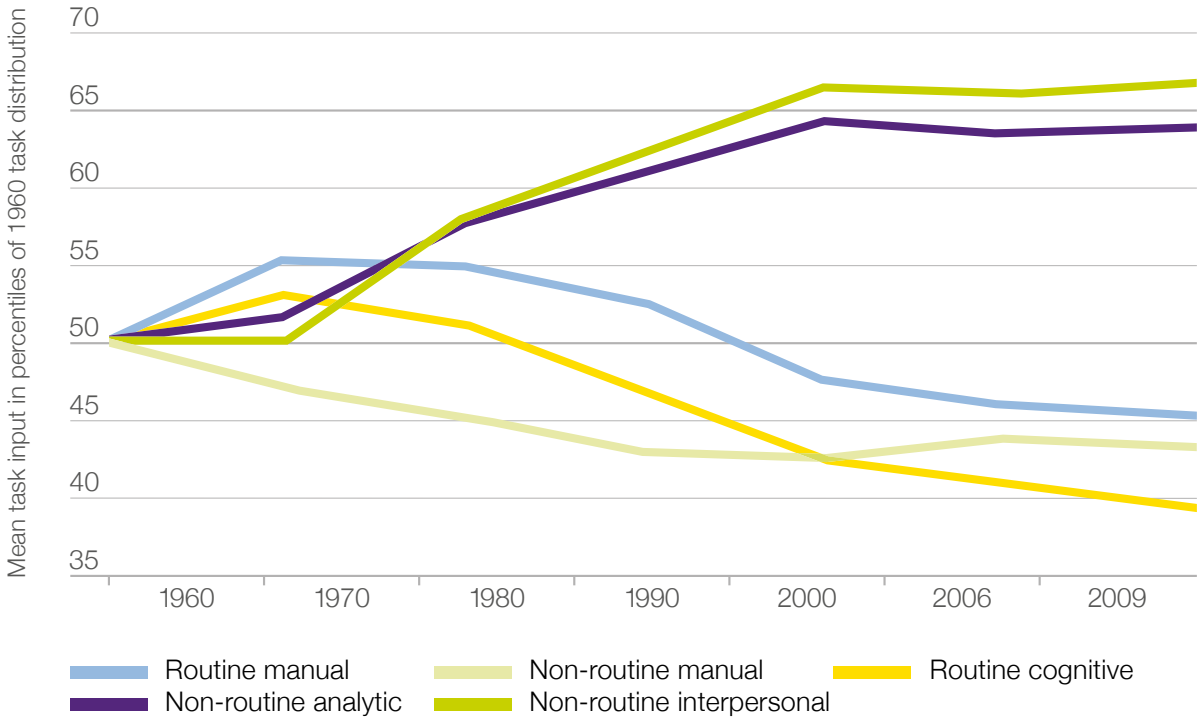
So, what does this mean for skills supply? And does it support the notion of a general collapse in entry-level jobs that might prevent growth in demand for apprentice occupations in future?

One way of looking at this conundrum is found in both Figure 1.1 and Figure 1.2. Clearly, the occupations most associated with traditional apprentice trades have been in steady decline over the past 40 years. The occupational areas that have seen the largest growth in the developed economies have been in services, specifically in sectors like finance, insurance, real estate, domestic, hospitality, and business services. Some of these sectors are already engaged in apprenticeships, or they are regulated by professional entry, while other sectors will have little experience of apprenticeship models, preferring instead to recruit recent college graduates.

To boost demand for apprenticeships in the 21st century, therefore, our analysis points to the service sectors and professional occupations in particular that need to open up more; developing new entry-level apprentice routes to the jobs on offer. Taking a more expansive approach to skills and employment interventions (discussed further in chapter 3) will not only be important for continued economic growth, but may also help arrest the tide of sliding social mobility observed in most of the G5 countries.

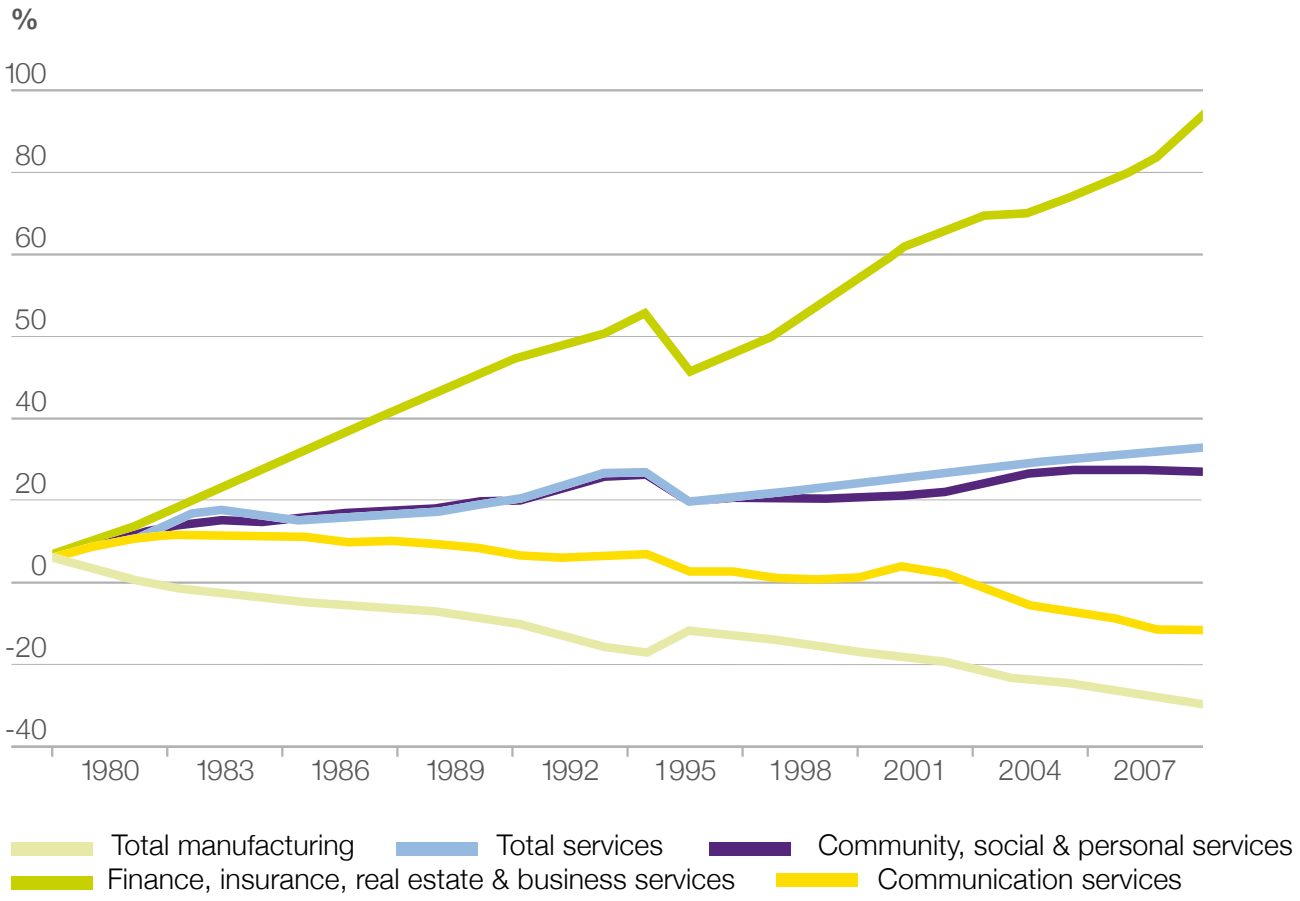
Declining mobility is a key factor in why England, Ireland, and the United States were ranked by the OECD towards the bottom of a table of 24 nations, following the skills testing of 157,000 adults in 2013.[28]

Figure 1.1 Change in the demand for skills



Source: Autor, D. and Price, B. 2013. The Changing Task Composition of the US Labor Market: An Update of Autor, Levy, and Murnane (2003). [report]. See Table A1.5.

Figure 1.2 Change in the share of employment in the OECD, by industry sector, relative to 1980



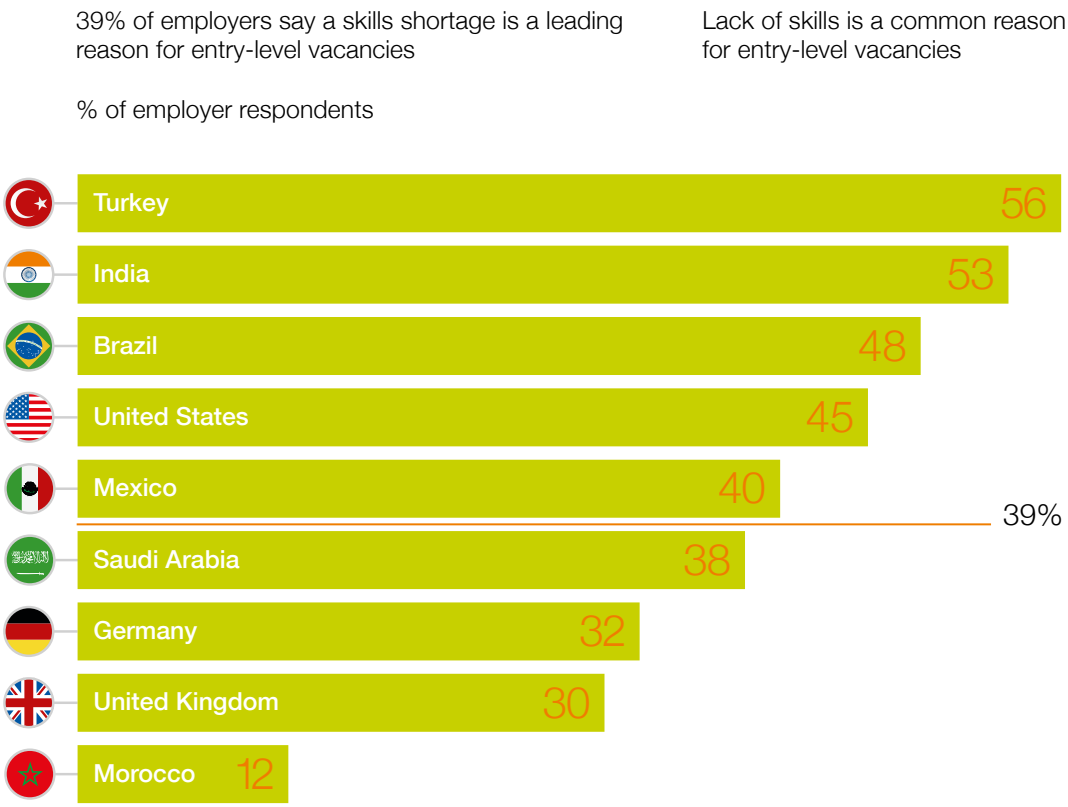
Source: OECD. 2010. STAN Indicators Rev. 3, 2009 - STAN: OECD Structural Analysis Statistics - OECD iLibrary. [online] Available at: http://dx.doi.org/10.1787/data-00031-en.

Skills mismatch

Another theory about rising youth unemployment is that there has been a widening of the gulf or a mismatch between the skills provided by education providers at the tertiary and technical levels and the skills increasingly required by employers. This is particularly evident in advanced economies where a premium is placed on productive knowledge. Much has been written about the need for so-called 'soft skills': teamwork, IT, and communication skills;[29] yet, international survey evidence suggests a more fundamental malaise today in terms of the school-to-work transitions that are taking place.

An international survey carried out by McKinsey, at around the same time the Richard Review reported, found that a significant skills shortage exists internationally amongst employers offering entry-level jobs (Figure 1.3).

Figure 1.3 Young people, skills shortages, and entry-level jobs by country



Source: McKinsey survey, Aug-Sept 2012

Interestingly, skills shortages were cited less by employers in the UK, who reported that 70% of young people possessed the required entry-level skills. On the supply side, however, the UK comes in bottom place, as only 40% of the UK student population answered the following question positively: *'My post-secondary studies improved my job prospects.'*

These findings hint at a significant mismatch in skills, including in attitudes towards the cause of the current 'youth jobs' crisis. As discussed earlier, it is a lot less clear whether this is due entirely to a collapse in entry-level jobs or a more complex array of forces. Skills mismatches, like frictional unemployment, can be a healthy sign of a dynamic, changing economy, but equally, where a chasm of expectations opens up in the labour market, it can also lead to crises.

Response of policymakers

Given the growing number of unskilled youth in developed countries, many governments are shifting their focus towards the restructuring of vocational courses and apprenticeships, after many years of promoting participation in higher education.

Countries with the lowest youth unemployment rates have a close relationship between education and work. Germany has a long tradition of high-quality vocational education and apprenticeships. This has helped it reduce youth unemployment in recent years, despite only modest economic growth. Countries that are short of such links tend to suffer from high youth unemployment. The level of youth unemployment in France is just above 26% with a failing school system from which 120,000 youths drop out each year with no qualifications.[30] Whilst the situation in the UK is not quite as severe, youth unemployment was 21%[31] for May to July 2013, in stark contrast to the levels observed in Germany (7.7%) and Austria (9.2%).[32] These Germanic countries are known for their successful apprenticeship systems.

Well designed

Well-designed vocational programmes combine learning in the workplace and classroom, helping to smooth the transition for youth from school to work. Workplace learning encourages the development of both 'hard' skills, such as operating machinery, and 'soft' skills, such as communication, teamwork, and negotiation. Changes in the occupational landscape and significant growth in the number of service-sector roles has increased the demand for soft skills, meaning that young people without them are at a serious disadvantage.

Apprenticeships can help alleviate the gaps in skills demanded by industry, as employers will readily offer opportunities in areas where there are shortages. This ensures that young workers are trained with the relevant skills demanded by industry, whilst also streamlining the recruitment process, as trainees establish working relationships with potential employers.

The efficacy of a strong apprenticeship system can be seen in several of the world's most successful economies, including those outside Europe. A large proportion of the youth in Singapore are guided annually into the Technical and Vocational Education and Training (TVET) system and the country benefits from low youth unemployment as a result. In 2011, the annual average unemployment rate for residents aged 15-24 was 6.7%, almost half of the global average of 12.6% that same year.[33]

Admittedly, a set of policies that has proved successful in one economy cannot simply be copied and applied to another, due to the cross-country differences, many of which are unobserved. In England, vocational courses and apprenticeships are undervalued, with a heavy bias towards the higher education sector. Apprenticeships are perceived as a selection-by-academic-failure option for those with a poor exam record. A cultural view like this in England is vastly different from countries with the most successful apprenticeships. In Germany, where vocational training is a common pathway for young people and well respected by employers and the wider society, there are almost four times as many apprentices as there are in England.[34]

> *'Action should be applied across a broad front to improve the provision of basic education and vocational training, and social services, and to tackle labour market barriers more generally that are preventing many youth from gaining a firm foothold in the labour market.'* [35]

The OECD Action Plan for Youth is a set of actions aimed at alleviating situations of high youth unemployment and underemployment by equipping them with relevant skills for the future and removing barriers to their employment.

Following the OECD's latest Meeting of the Council at Ministerial Level (29th - 30th May 2013), OECD countries have committed to key elements, including aims to encourage employers to continue or expand quality apprenticeship and internship programmes, strengthen the role and effectiveness of Vocational Education and Training, involve social partners to maintain relevance, and promote broader employability skills.

In a global race, how does the G5 measure up?

In recent times, profound changes have taken place in the global economy. Patterns of trade are exposing every nation to a 'global skills race'. There is currently no systematic process for ranking the apprenticeship and skills performance of different countries, including amongst the G5.

The tables below are indicative of where the G5 countries sit internationally, in comparison to the rest of the global skills system.

Table 1

Top 5 countries of medals awarded in the previous 3 WorldSkills competitions

	Leipzig 2013	London 2011	Calgary 2009
1	Korea	Korea	Korea
2	**Switzerland**	**Japan**	**Switzerland**
3	Chinese Taipei	Switzerland	Japan
4	**Japan**	**Brazil**	**Chinese Taipei**
5	Brazil	UK	Canada

Ranking of the remaining G5 countries (England listed as part of UK)

UK (10)	Australia (9)	Australia (6)
Australia (13)	**Canada (13)**	**UK (6)**
Canada (16)	Ireland (16)	Ireland (16)
Ireland (18)	**USA (27)**	**USA (21)**
USA (30)		

WorldSkills (originally called the Skills Olympics) is a bi-annual skills competition which provides a unique means of exchange and comparison of world-class competency standards in the industrial trades and service sectors of the global economy. With 67 active member countries, the most recent competition included over 1000 competitors from a total of 53 countries and regions, competing in over 40 different trades.[36]

Table 2

Top 5 countries according to the Global Competitive Index (GSI)		
	2013/14	**2012/13**
1	Switzerland	Switzerland
2	**Singapore**	**Singapore**
3	Finland	Finland
4	**Germany**	**Sweden**
5	USA	Netherlands
Ranking of the remaining G5 countries (England listed as part of UK)		
	UK (10)	UK (8)
	Canada (14)	**Canada (14)**
	Australia (21)	Australia (20)
	Ireland (28)	**Ireland (27)**

The Global Competitive Index (GSI) is produced by the World Economic Forum and assesses competitiveness of the global economy in terms of its productivity and prosperity. Competitiveness is determined according to a number of factors, including labour market efficiency, higher education and training, and technological readiness, amongst others.[37]

Table 3

Top 5 countries according to OECD Adult Skills Outlook 2013 for mean literacy proficiency	
1	Japan
2	**Finland**
3	The Netherlands
4	**Australia**
5	Sweden
Ranking of the remaining G5 countries (England listed as part of UK)	
	Canada (11)
	England (13)
	USA (17)
	Ireland (21)

In October 2013, the OECD published its first results of the Survey of Adult Skills (PIAAC). This evaluates the skills of adults in 22 OECD countries and two partner countries according to key skills, including literacy, numeracy, and problem solving, across the broader skills landscape of these countries.[38]

Chapter 2

Focus on English-speaking countries – our rationale

> *'Throughout this Review, many experts have told me that what we need is for our apprenticeships to look more like some of our European neighbours'; that my task was to prescribe a solution which involved us trying to become Germany or Switzerland. I cannot recommend we adopt a system built, over generations, upon a very different economy, labour market and social partnership.'* [39]

The research team selected five English-speaking countries, including England, because of the view expressed by Richard that there was a limit to what the country could import from continental models of apprenticeship. We call these English-speaking countries in our report the Group of Five, or G5 for short.

Over many years, a number of official reports and studies have examined the question of English apprenticeships from the perspective of Germanic models of vocational training (Wolf, 2011;[40] Fuller and Unwin, 2008;[41] Clarke and Winch, 2006, p. 255-269;[42] Steedman, 2005[43]). Indeed, official inquiries of this nature go back centuries.

More recently, the Sutton Trust published a report directly comparing the performance of the contemporary English apprenticeship system to those of Germany and Switzerland.[44] Perhaps unsurprisingly, when looked at through the lens of these systems, England performs badly on a number of important measures.

A common history

In England, fewer employers offer apprenticeships as a ratio of the overall workforce, youth unemployment is higher, and industry bodies like chambers of commerce and trade unions do not play quite the same pivotal role. Schooling is another key factor: because of the dual system of education in places like Germany, Switzerland, and the Netherlands, there is a greater cultural acceptance of dividing young people into separate vocational and academic tracks at an earlier age. There is also greater cultural pressure applied to employers to provide young people with work placements, and the value, generally, of technical and vocational education and career pathways is much higher: *Vorsrpung durch Technik,* as the saying goes.

The countries examined in this report, Australia, Canada, England, Ireland, and the United States, share a common history. Apprenticeships in these countries, to some extent, can be traced back to the medieval system of guilds, where an apprentice would be indentured to a master craftsperson or journeyperson for the duration of instruction. Many of these traditions, customs, and practices transferred to the New World, particularly after European settlement of North America and Australasia in the seventeenth and eighteenth centuries. Indeed, in Canada's system of apprenticeships today, a formally identified journeyperson still plays a critical role in terms of mentoring and passing on a craft skill or trade to the apprentice.

At the societal level, all five countries share a common heritage and contemporary economic anchor points. In the language of the World Economic Forum, in its annual *World Competitiveness*

Report, our selected G5 countries are mainly 'innovation-led economies'. As liberal democracies, these countries also share a belief in free markets, minimal regulation on business, flexible labour markets, social protection, and the importance of free trade and open markets to export goods and services around the globe.

These obvious comparisons do not mean that significant differences do not exist between the five countries. England and Ireland operate 'unitary' systems of apprenticeship delivery, where funding, planning, and regulation are centralised. Australia, Canada, and the United States operate federal systems, where a key feature is the need to work across multiple government jurisdictions. Decision-making and delivery of apprenticeship policy is a balancing act of national interest and influence, on funding investment and priorities of the state and local jurisdictions. Still, from a benchmarking perspective, the general rule holds true that these countries are near cousins to each other and therefore can be compared more tightly than a comparison between, for example, England's and the Germanic systems.

The focus on English-speaking countries is to frame our analysis in terms of: what can we learn from training cultures and workforce apprenticeship systems that share a similar heritage and contemporary economic climate to England? And, crucially, how do these systems measure up to the Richard Review principles?

Chapter 3

Apprenticeship definition, governance, and accountability

In the G5 countries, both the public and policymakers widely use the language of apprenticeship. Detailed awareness of them, however, varies markedly. A recent survey by the Canadian Apprenticeship Forum found that, while awareness levels had grown since the last survey was carried out in 2006, the vast majority of young people and the public had limited awareness of the apprenticeship trades on offer.[45]

Examples of expansive apprenticeships

Expansive apprenticeships are termed as such because they deviate from the traditional definition that restricts apprenticeships to entry-level occupations within the traditional skilled trades and crafts, such as construction or engineering. In England, the most popular frameworks studied in 2011/12 were 'Health and Social Care', 'Customer Service' and 'Management'.[46] Clearly, these apprenticeship frameworks do not fit into the category of traditional skilled trades, and what is interesting about this list is that two out of three, i.e., customer service and management, are not strictly occupations at all, but pan-sectoral skills that can be applied in any sector and any occupation.

In addition, in England we see available apprenticeships beyond those at entry-level. In development at the moment by Skills for Justice, the Sector Skills Council for the justice and security sector, is a higher-level apprenticeship, the equivalent of under-graduate level, in Legal Services. Current costs for qualifying with a law degree by way of a university degree average around £40,000, which makes the new, higher-level apprenticeship in Legal Services a very attractive option for individuals seeking to progress in the legal sector without going through the traditional, more expensive university route.[47]

In the G5 countries, apprenticeship systems all benefit from some kind of legislative underpinning, with deep roots in history, notably the medieval system of guilds. We detected very little sense, during our expert interviews, that all entry-level or workplace training opportunities should be defined as apprenticeship. Instead, these experts viewed the main purpose of apprenticeship as offering a route to the skilled crafts or trades, and the programme of training requiring up to four years to complete.

There are exceptions to this: for example, in England and, to a lesser extent, Australia, access to a professional career or occupation, one not necessarily associated with skilled crafts or trades, is also seen as desirable. In Australia, the term 'traineeship' is used to differentiate these programmes. In England, traineeships have just recently been launched, offering pre-Apprenticeship opportunities at Qualification Levels 1 & 2 (i.e., the standard expected of a high-school leaver).

Richard made the obvious point that 'not everything is an apprenticeship', arguing that, in recent years, too many areas of training policy in England had come under the apprenticeship umbrella – incorrectly, in his view.

We observed, internationally, strong accordance with this view, ranging on a continuum of what could be termed 'traditional definitions' of apprenticeship

to a more ‘expansive view’. Generally speaking, amongst the G5, those countries with a more traditional view tended to restrict the definition of apprenticeship to someone newly entering the trades, or in occupations and roles that were manual, male-dominated, and mainly technical in scope (e.g., plumber, CNC machine operative, and power-line technician).

Figure 3.1 shows where each country is broadly positioned along this continuum. Ireland, for example, is at the furthest end of a traditional definition of apprenticeship because a breakdown of its 25 occupations covered by formal apprenticeship reveals a distinct orientation towards the male-dominated trades, principally in the construction sector.[48] Construction apprenticeships in Ireland account for 43.2%[49] of the total number of apprentices, whereas, in England, construction apprenticeships account for just 4.6%[50] of the total number of apprentices and frameworks available across 207 occupational sectors.[51]

England has been described as having the most expansive apprenticeship system of the G5, in most part because new occupational areas, like digital media, IT, financial services, cultural venue operations, social care, hospitality, public administration, and legal services, are now covered by apprenticeship-level entry. In most other countries, these sectors are seen as graduate- or degree only-level entry. In Australia, these occupations are usually categorised as *Traineeships.*

England also has the largest percentage of women in apprenticeships, over 1400 job roles or apprentice pathways – more than any other country in this study.

Traditional or Expansive?

There remain mixed views internationally about the extent to which apprenticeships are only there for the ‘trades’ or whether a more expansive, 21st century view of developing non-graduate entry-level routes to occupations, including the traditional professions, should be adopted.

In England, over the past two decades, a distinctly English model of apprenticeships has emerged, where occupations as diverse as lighting technician, business administrator, social care assistant, and community arts practitioner have become available at apprenticeship level. With the exception of Australia, no other country offers this range of occupations.

Looked at comparatively, it suggests that Richard was right about the need to restrict apprenticeship definition to the area of entry-level occupations, with a significant time-served element on the job. Australia with its similar expansive profile is also exploring how to better differentiate between the types of programmes available and improve brand recognition for the more traditional apprenticeship and what it offers. Arguably, Richard was being less progressive in proposing that England should develop an apprenticeship model similar to Canada’s in scope, one with a clearer orientation towards the time-served, technical, and manual-skill trades. While the Richard Review did in fact recognise the general merits of a more expansive approach, the review also stated that roles like customer service were not apprenticeships.

Figure 3.1 Traditional to expansive forms of apprenticeship[52]

Ireland

Top occupations
1. Construction
2. Electrical
3. Motor mechanics

Gender balance
98% male
2% female

USA

Top occupations
1. Electrical
2. Plumbing
3. Machinists

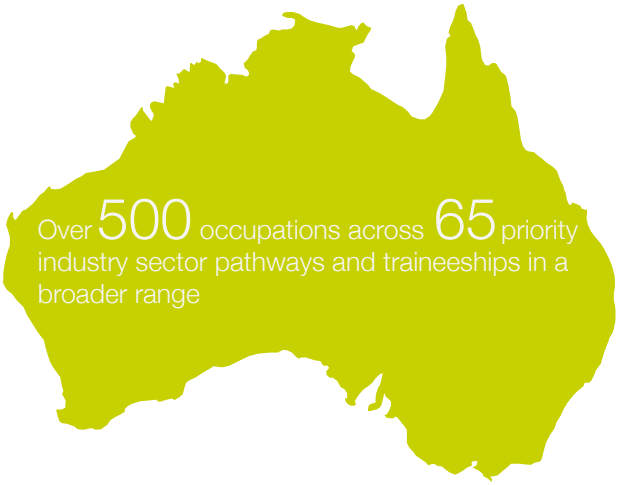
Gender balance
91% male
9% female

Canada

Top occupations
1. Construction electrician
2. Automotive service technician
3. Carpenter

Gender balance
86% male
14% female

Australia



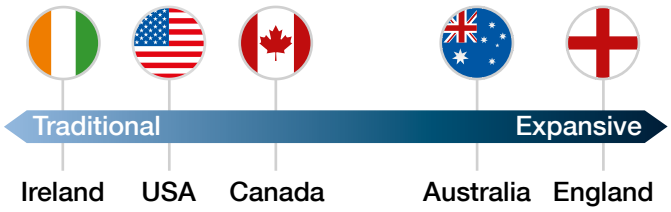
Top sectors
1. Business services
2. Construction, plumbing & services
3. Tourism, hospitality & events

Gender balance
66% male
34% female

England

Top sectors
1. Health & social care
2. Customer service
3. Management

Gender balance
46% male
54% female



Australian apprenticeships

The Australian apprenticeship definition details a system of training regulated by law or custom, which combines on-the-job training and work experience while in paid employment with formal (usually off-the-job) training, which leads to an industry-recognised qualification. The Apprentice enters into a contract of training with an employer, which imposes mutual obligations on both parties. A code of good practice articulates the responsibilities and accountabilities of each of the parties to the agreement.

The main tenets of the Code of Practice are:

For the Employer: The provision of a safe working environment with support for structured training, understanding that many Apprentices are minors and the provision of supervision and support may require advice on their rights and responsibilities and how to take an active role in achieving the outcomes of the contract.

For the Apprentice: Being aware of and making a commitment to fulfil work role and training responsibilities.

The code of practice acts as a guide to the parties entering into a training contract agreement and is expected to be retained and understood by both parties.

In chapter 9, we examine the projected decline in English apprenticeship volumes that would occur were Richard's definition of apprenticeships strictly applied. Most experts would argue that the function of a modern apprenticeship system is to be forward looking; it does not just exist to protect traditional, entry-level jobs of male manual workers. Instead, apprenticeships can be a positive means to improve career progression, women's labour force participation, and, ultimately, social mobility in an advanced economy. Indeed, just expansion of college education since the 1960s has been about the knowledge economy and equality of opportunity for all, in both advanced and developing countries.

Clearly, it is for each nation to answer the issues, but in our benchmarking exercise of the English system, compared to the other countries examined in detail, we have concluded that the expansive model of apprenticeships is a major strength of the English model and something to be nurtured and built on in future. Moreover, we detected a strong desire amongst some experts in Australia, Canada, Ireland, and the United States to have more apprenticeship opportunities in 'non-traditional' occupations, i.e. those that are not classified as 'traditional skilled trades', made available to their citizens in future, not least to combat the growing spectre of long-term youth unemployment, welfare dependency, and under-employment amongst graduates. The predominant cultural and political view of the G5 countries, however, remains one of promoting the academic and university routes.

Governance and accountability

When public funding is at stake, some form of governance and accountability is unavoidable. What is most apparent about the G5 countries is how much their structures vary, how nearly all are complex interactions of different stakeholders, and how the ultimate guiding hand of government is never far away. Governance is further shaped by the extent to which the apprenticeship system operates in either a 'unitary' or a 'federal' model of governance and accountability.

Doug Richard made the point that too many bodies are involved in the apprenticeship system in England, making it overly bureaucratic and crowded. However, in our investigations, we found that this issue was not only confined to England. Similar levels of complexity in governance and accountability structures regarding numbers of stakeholders involved and the processes in place for apprenticeship funding, design, and delivery were present in each of the countries examined.

For the public to have confidence in apprenticeships, there need to be some governance structures in place. Employers, too, have to feel engaged to the point where they are content to sign off on the training required to get each apprentice up to a level of competency and then qualified. Apprentices want to know that they will not be exploited and that the training will make them fully productive with an existing employer, as well as give them a broader currency in the marketplace to seek employment elsewhere. Reconciling these competing claims is ultimately the role of effective governance and accountability in *any* apprenticeship system.

In the United States, most states have established an Apprenticeship Board that works at arm's length from government and the US Department of Labor. The exact composition of these boards differs but they nearly all involve employers, unions, and education experts in setting the standards for apprenticeships – a tripartite model. They are often highly collaborative, consensus-building institutions. In South Carolina, for example, the state has set up, in recent years, an agency called Apprenticeship Carolina to work with 16 technical colleges and local employers.

Key features of Apprenticeship Carolina USA

- Works independently but within the guidelines of the US Department of Labor
- Acts as an intermediary body between the government, employer, and training provider and provides its services for free
- Is funded by the state government and sits within the South Carolina Technical College System
- Delivers apprenticeships in South Carolina through 16 technical colleges
- Is viewed as a more accessible route to employers than going through the government apprenticeship system
- Develops a bespoke competency-based apprenticeship programme within government guidelines and with the input of the employer
- Hands over the responsibility of signing off an apprentice's achievement to the employer
- Offers a tax credit of $1000 per year for up to 4 years to employers, depending on the occupation
- Promotes a diverse range of apprenticeships; only 10% of apprentices are learning a traditional trade
- Offers a unique model in which they are co-located within the technical college system and acts as the education provider
- Never cold-calls employers, but relies on word of mouth for employers to get in touch

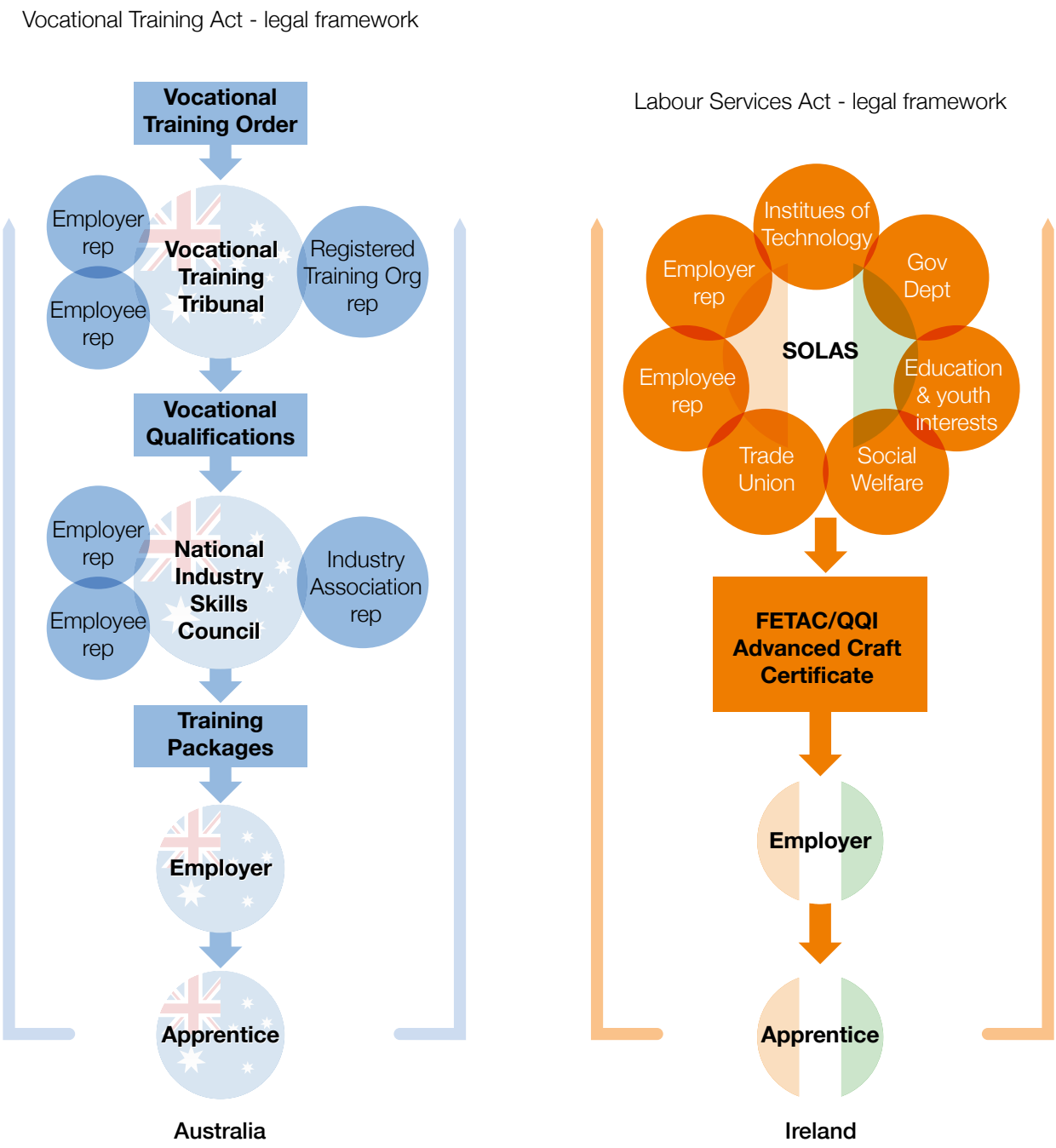
Acting as an ‘intermediary sales organisation’, Apprenticeship Carolina has seen a five-fold increase in employers offering apprenticeships since 2007. (The introduction of South Carolina’s tax-credit system is something discussed in more detail in chapter 7).

Figure 3.2 looks at the governance system for apprenticeships from the perspective of Ireland and Australia. Both systems operate within a legal framework, even if they differ in terms of how these statutory responsibilities are carried out: via a unitary closed system, like Ireland, or a federal open-system, like Australia.

Almost regardless of the type of system, they both exhibit:

- Ministerial or political accountability for public funding of the system
- Statutory underpinning of the definition of apprenticeship, including the regulation of terms and conditions (e.g., apprentice wages)
- The establishment of arms-length bodies to execute the funding, design, development, and delivery of apprenticeships
- The engagement of employer or existing groups to input to the process of apprenticeships, including standards development
- Formal structures of accountability for on- and off-the-job training, with industry representatives boards, either at the geographical or industry-sector level (or at both levels).

Figure 3.2 Comparison of governance systems in Australia and Ireland



Employer contract ensures apprentices acquire qualification specified in Vocational Training Order

Employer contract ensures apprentices acquire qualification specified by SOLAS

In fact, in applying these five criteria to the countries in our study, we found that all five systems share these sorts of characteristics. It sheds some light on whether the complexity of the governance systems of apprenticeship, or the lack of quality and performance in parts of them, is about more than just clarity of purpose and accountability in the overall system.

England's lack of clarity and accountability in the system

Looking at the governance system of English apprenticeships from the perspective of other countries, the current system in England appears perhaps no more complex. The real issue is not whether some kind of governance structure should exist, but whether there is clarity about its purpose and whether an appropriate level of resources has been assigned to it in order for the system as a whole to carry out its remit effectively. In other words, to be accountable, an organisation should also be responsible. And, to be responsible, a governance structure needs a clear remit and resources to carry out its mandate. The Richard Review was largely silent on this point.

At present, in England, there is no clear line of accountability for the quality assurance and standards of apprenticeships. In theory, the efficacy of the entire model falls on the shoulders of Ministers reporting to Parliament. In practice, many different bodies involved in the funding, design, development, awarding of qualifications, and delivery of apprenticeships are tasked to some degree or other with maintaining quality and standards in the system.

Of course, when things go wrong, or when public confidence is tested, it is difficult to pin down exactly who or what is responsible. Despite this fact, in a report written by the Boston Consulting Group for the Sutton Trust, the authors stated that Sector Skills Councils were the bodies accountable for quality assurance of English apprenticeships. As UK-wide bodies, SSCs have never, in fact, been given such a role. Instead, they are the issuing authority for the current Apprenticeship Frameworks, over which, in practice – in terms of delivery – SSCs have very limited control.

The Sutton Trust pointed out that, when comparisons are made with Germany, SSCs do not have anything like the same resources to carry out an effective quality assurance role, citing the German equivalent body, the IHK, being given nearly £300 million per year to carry out a similar role to that which the SSCs are asked to perform for ten times less.

One of the key challenges in terms of implementing Richard in future will be to right this sort of anomaly. In a publicly funded apprenticeships system, Ministers will ultimately be accountable to Parliament. But, at the operational level, where it matters most, there is no easy set of answers to this question.

A streamlined system?

At present, in England, a panoply of organisations play a role: employers, through 18 Sector Skills Councils and other approved sector bodies, develop the apprenticeship frameworks based on National Occupational Standards (NOS). Awarding bodies develop the qualifications, which can include some responsibility for quality assurance and assessment.

The Specifications of Apprenticeship Standards for England (SASE) has a statutory remit to approve the standards, and Ofqual has the role to regulate the qualifications, including a growing number of awarding organisations. The funding of the apprenticeships for employers and providers, including compliance issues, is currently the job of the Skills Funding Agency, and the inspection of learning providers or workplace training is carried out by Ofsted. The National Apprenticeships Service, part of the Skills Funding Agency, works with large national employers and takes the lead in marketing the apprenticeship brand. That's already 23 separate bodies that have a role in quality assuring apprenticeships.

Since April 2013, the Federation has been developing its role as the National Certification and Quality Assurance body for apprenticeships (see Figure 3.3). In short, no fewer than 24 organisations are currently engaged in the design, development, and quality assurance of apprenticeships, which rises to significantly more when over 120 awarding bodies are taken into consideration.

Simplifying the English system

Experience from other countries shows that all systems of governance have some complexity to them. England is no different. But how might the model in England be simplified, taking into account the international experience?

The comparative evidence, including best practices from the G5 countries, would suggest:

- Establishing a single Apprenticeship Board to be responsible for the quality of apprenticeship design, end testing, and delivery, *de facto* acting as the regulator

- A national or centralised registration and certification scheme to record formal apprentices and track their progress through the system to completion (and potentially beyond, in terms of wage or career progression)

- Formal engagement with industry groups, with government effectively licensing each group, to develop the competency standards, training packages, and / or qualifications for each apprenticeship

- Establishing an independent role, either through competitive tendering or via a public body, to oversee the holistic competency and end testing of apprentices.

In applying these principles to England, in future, it might suggest that there is some efficacy in:

- Establishing a single apprenticeship board, or **Office of the Commissioner for Apprenticeship Standards England (OCASE),** to be accountable overall, reporting annually to Ministers and Parliament, for the integrity of the apprenticeship system, including regulation and inspection

- Outsourcing the role of registration, certification, and end testing to approved, competent third-party contractors

- Licensing employers and / or industry groups to write and develop apprenticeship standards as part of a Richard compliant quality approval scheme.

If such a model were implemented, the number of bodies in England currently engaged in the direct governance and quality assurance of apprenticeships could be reduced from 24 organisations to just three. (See Figure 3.4.)

Figure 3.3 Federation for Industry Sector Skills & Standards

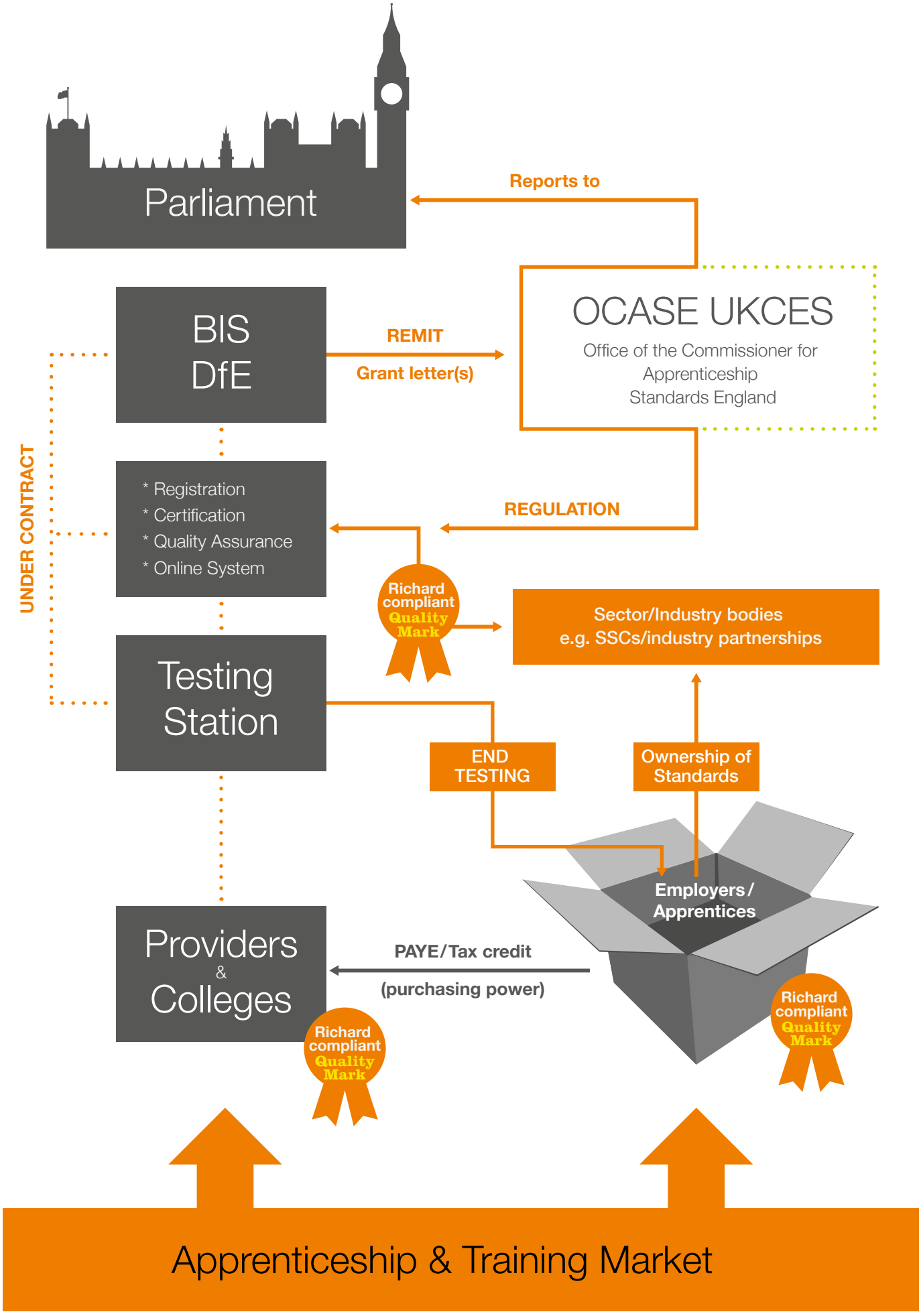
Since April 2013, the organisation has pursued three key objectives:

- Developing its role as the National Certification and Quality Assurance body
- Promoting professional practice for setting skills standards that employers in all sectors drive and require
- Promoting the case for skills development through apprenticeships and traineeships to enhance productivity.

In two years, the Federation has

- Certified over 390,000 apprentices
- Reduced costs by 25%, saving £3 million
- Simplified the system and provided greater clarity, including introducing a central payment system for providers
- Increased quality through a supportive, but tough audit regime, reducing error rate by 50%
- Piloted paperless certification.

Figure 3.4 More simplified governance structure for English apprenticeships



How would a Richard Compliant apprenticeship work?

Acting as a recognised 'Kitemark', the Richard Compliant apprenticeships would become the new universally accepted badge of quality.

With employers freed up to define the new standards, leading to an independent end-testing regime, the Richard Compliant would provide apprentices, employers, and stakeholders in the marketplace with the confidence that the apprentice training being provided at all parts of the supply chain is of the highest quality.

To attain the Richard Compliant apprenticeship approval:

- Developers of standards would be required to be accredited as Richard Compliant assessors

- Employers developing apprenticeship standards would sign up to industry-wide and government-approved criteria as a condition of accessing tax credits or public funding

- Employers could apply the Richard Compliant mark to outstanding training providers, empowering them to seek out the best quality

- Apprentices would favour those employers and learning providers bearing a Richard Compliant approval mark.

Chapter 4

The role of industry and stakeholders

Around the world, there is growing interest in finding better ways to engage employers, industry, and stakeholders in the skills and workforce challenge. The issue of effective industry and employer engagement was put at the centre of UNESCO's 10-year congress in Shanghai, where a consensus was reached amongst member nations about its growing importance.[53]

Bridging the gap between the skills that employers say they need and the availability of apprenticeship opportunities is a key tenet of a demand-led system. Fundamentally, apprenticeships are a contract between an individual employer and an apprentice. So, why do industry, government, and other stakeholders need to be involved at all?

The short answer is that, where individual employers themselves bear all the cost of apprentice training, as well as all the risk (in terms of qualifying apprentices), there is nothing to prevent employers from operating their own apprenticeship programmes in the G5 countries. In England they account for 5% of all current apprenticeships. Indeed, many multinational firms would operate on this basis, perhaps supplanting the term 'apprenticeship' for 'internship'.

The issue only really arises where employers are looking to supplement their apprenticeship programmes with *public subsidy* or wider industry recognition, or a combination of both these factors. That's why, in essence, formal, publicly supported apprenticeships demand some kind of enabling infrastructure and regulation in order to function properly.

The international evidence bears this observation out. Relying simply on a contract between an individual and employer, like the old indenture system, is unlikely to work. A further consideration here is that, while individual companies may have a programme that is directly targeting their unique skills needs, it provides no capacity to address whole country, region, or cross-industry needs for the workforce and can lead to training and work silos. When there is a downturn in the economy and employees are made redundant, the one-employer approach may limit worker opportunity for future employment because their skills may not be fully portable.

The international evidence suggests that there is real benefit in engaging employers (and broader stakeholders) across the whole of industry to share ideas of best practice and future need. A multitude of different models of employer engagement and industry recognition of publicly funded apprenticeships has emerged. In Canada, for example, there are sector councils that operate at the federal level, but it is unusual for them to be closely involved in apprenticeship design and development. Instead, Canada's provinces and territories take a lead role in bringing employers and other stakeholders to the table.

In New Brunswick, four regional offices of the provincial apprenticeship board are responsible to meet with employers offering apprenticeship, ensuring eligibility in line with both federal and provincial guidelines. The curricula, competency standards, and Red Seal exams for Red Seal trades are developed using Program Advisory Committees (PACs) for each of the trades. As will be explained further in chapters 5 and 6, these committees, for example, use the National Occupational Analysis (NOA), drawn up at the federal level via Employment and

Social Development Canada's support for the Canadian Council of Directors of Apprenticeship (CCDA) and Red Seal Program.

The common feature we found amongst the G5 countries was that all of them take active steps to engage employers directly in shaping and developing apprenticeships. At the operational level, the methods by which employers are actually engaged can still vary markedly.

There appears to be at least three different approaches:

1. Government-led stakeholder engagement (Canada, Ireland)

In Canada and Ireland, we evidenced an approach in which government takes a direct role in ensuring effective stakeholder and employer engagement. The emphasis here is in using existing public institutions, like SOLAS or the CCDA, to reach out and consult with affected employer and stakeholder groups. This can take a number of forms, ranging from the establishment of temporary task and finish groups, as we witnessed in Canada, relating to the revision of occupational competency standards, to, in Ireland, plans to establish new regional Education and Training Boards (ETBs) to ensure effective employer and stakeholder input.

The main point is that government plays an active role in supporting effective industry and stakeholder engagement. But employers directly are quite far removed themselves from owning or influencing the system.

2. Industry-led stakeholder engagement (Australia, England)

One step removed from direct government control, Sector Skills Councils (SSCs) in the UK and Industry Skills Councils (ISCs) in Australia play a pivotal role in apprenticeship development and promotion. Although often funded by government, these non-profit, independent organisations act as the lead bodies for engaging employers around the development of competency standards and apprenticeship frameworks. Figure 4.1 shows how Australia is engaged in the process of apprenticeship development and delivery in terms of the role of ISCs.

Figure 4.1 Flow of stakeholder communication in the Australian system led by the ISCs

Links to industry

All ISCs have business associations, employers and unions as a feature of their governance structure. However, this can only ever represent a small sample of all the stakeholders with an interest in workforce development.

Environmental Scans established in 2008 have emerged as a formative and critical component of the link between Industry – and ISCs – in the gathering and interpretation of workforce data and the development and endorsement of National Occupational Standards. The diagram to the left highlights the flow of information in between the various stakeholders in the system.

The defining feature of this model of stakeholder engagement is that it is essentially consultative and representative. Across large geographical areas – or in large sectors – it might simply be impracticable to engage with 100% of employers and stakeholders potentially affected by apprenticeship development. Instead, the focus might be put on the quality of employer leadership and the skills council's ability to deploy modern marketing and administrative techniques to reach out to a representative sample of employers. The case for endorsement places the burden of proof on the ISC to demonstrate engagement and support for occupational standards development or change and includes the opportunity for state jurisdictions that may have undertaken their own employer consultation to influence the final standard.

3. Firm-specific level employer engagement (South Carolina, US)

South Carolina is considered a trailblazer state in terms of its record on apprenticeship. Employer engagement takes place at the firm-specific level. Apprenticeship Carolina is a public agency co-located with the state's 16 technical colleges.

Because of the federal system in the United States, individual states have a lot of freedom to experiment with different models of apprenticeship delivery. Indeed, it would be wrong to make sweeping generalisations about the US system as a whole, except that all formal apprenticeships have to comply with the federal legislation discussed earlier.

In our research, we found that Apprenticeship Carolina operates a firm-specific employer engagement model. There are no intermediary structures between the public agency responsible for employer engagement and the firms themselves. Instead, the model depends on bottom-up engagement of employers.

Apprenticeship Carolina responds to individual companies in the state. Once a firm notifies the agency that it is interested in providing apprenticeships, the following process is put in place:

- A business consultant from Apprenticeship Carolina visits the employer's premises (issues such as employer eligibility are checked at this point)
- Eligible companies sign the US Department of Labor document (see Figure 4.2)
- Companies are offered a bespoke training solution
- Where competency standards exist for the apprentice occupation, these will be offered to the employer. If not, the employer may use their own standards, provided they are in line with the US Department of Labor document
- The technical colleges play the key role in delivering off-the-job training, which is agreed separately with each employer. (There is a minimum requirement of 144 guided learning hours off the job, per annum)
- Apprentice proficiency and competence is decided by the employer. There is no end test or external assessment required

Figure 4.2 US Department of Labor Standards document

Company Logo

South Carolina Apprenticeship Standards

Sponsored By:

Company Name
Company Address

Registered as part of the National Apprenticeship Program in accordance with the basic Standards of Apprenticeship established by the Secretary of Labor

By:

Ronald M. Johnson
USDOL
Office of Apprenticeship
S. C. State Director

Provisional Registration Date:

Program Number:

Organization ID:

Garfield G. Garner
USDOL
Office of Apprenticeship
Region Three Director

Occupation(s)	O*Net Code	DOT Code	RAPIDS Code
Occupation Name	##.#### ##	### ### ###	####

APPRENTICESHIP CAROLINA™
SC TECHNICAL COLLEGE SYSTEM

DRAFT

US Department of Labor Standards form includes the following key sections:

- Definition of terms
- Purpose
- Equal opportunity pledge
- Duties and responsibilities of the apprentice, program sponsor and mentor / journeyworker
- Apprenticeship agreement
- Transfer of an apprentice
- Credit for previous experience
- Safety and health training
- Periodic evaluations
- Maintenance of records
- Completion certificate
- Identification of and notice to registration agency
- Program deregistration
- Conformance with federal laws and regulations
- Space for signature as official adoption of apprenticeship standards

Spontaneous employer involvement?

Richard made the point that employers in England are not really in the driving seat when it comes to the design and development of standards for apprenticeship. He showed an ambivalent attitude towards Sector Skills Councils, perhaps coloured by stakeholders that had been affected by them. He recommended a competitive process for establishing employer groupings in future and, ultimately, the development of the standards themselves.

One key challenge in terms of implementing Doug Richard's vision is in creating a better system of employer involvement. Evidence of spontaneous employer engagement in the development of apprenticeship standards was hard to find. Indeed, if such a phenomenon were the natural by-product of how labour and product markets operate, then it begs the question why don't more countries have well-developed, 'employer-owned' apprenticeship systems?

The comparative evidence suggests that employer involvement (and incentivisation of employers) requires the active cultivation and coordination – usually by industry-led groups or public bodies – that have a specific remit to consult and involve employers. We could find no evidence of latent demand amongst employers internationally, who, left unguided, joined together to create their own industry-wide apprenticeship model using public funds.

Multinational and large employers have always been able to meet most of the opportunity costs of developing apprenticeships. For small and medium-sized employers to do this, including firms in the skilled trades, such an ambition appears unrealistic. Government and infrastructure bodies, however defined, nearly always play a key role, even if the 'hidden hand' of these organisations varies somewhat in the power of their touch.

Ireland is clearly more top-down than South Carolina. Yet, both systems rely on some kind of purposeful coordination and the guiding hand of non-governmental and public sector bodies. Indeed, the UK Commission for Employment and Skills has often talked of the need for 'employer ownership' of the skills system, without always acknowledging the fact that it has taken its own active involvement – as a public agency – to reform the system.

Unitary versus federal systems of apprenticeship

There are many economic similarities between the G5 countries. When it comes to models of apprenticeship delivery, each country differs, depending on whether the system of government is federal or unitary.

In federal systems like Australia, Canada, and the United States, apprenticeship delivery operates at two distinct levels. At the federal level, formal apprenticeship is defined in statute, registration systems may be centralised, or both these functions may operate at the federal and state levels, simultaneously. Specific rules, like licence to practice schemes, may also be introduced at both the federal and / or state levels, or in both jurisdictions.

For example, in Canada, the 55 skilled trades included in the Interprovincial Standards Red Seal Program are divided up into compulsory and voluntary trades. An example of a compulsory trade is electrician, where, to operate in the paid sector, the person must be a registered apprentice. A voluntary trade is one such as carpenter, where no mandatory requirement exists to be qualified via the apprenticeship route. The Red Seal trades are regulated in this way, although each province can still decide:

- which trade it regulates, and the scope and definition of each trade
- the jurisdictional trade name
- whether the trade will be designated as voluntary or compulsory
- whether the trade will participate in the Red Seal Program
- the specific training and certification requirements for each trade; and
- whether there will be a journeyperson-to-apprentice ratio

In Canada, this results in 13 systems for apprenticeship, all with considerable autonomy over how they operate the apprenticeship model. There is a similar set-up in Australia, where both the Commonwealth (federal) government and the eight state territories have jurisdiction over apprenticeships.

We detected very little concern in Canada about the obvious duplication that takes place. In fact, the relative autonomy of provinces and territories to decide education and training

programmes is seen as an important part of Canada's constitutional framework. The same is true in Australia, and while some may view strengths in competing policy agendas, many industry and expert groups have been vocal about the potential downsides of operating a model where complexity, confusion, competition, and duplication are seen as limiting the efficiency of the system:

> *'The Housing Industry Association in their submission to the Australian Apprentices Task Force stated that "there is actually no such thing as a national Australian Apprenticeship system". Each state and territory has its own system for the delivery of apprenticeships and traineeships with its own governing legal structure and administrative rules creating complexity and confusion for employers, especially those who operate nationally. The administrative complexity also hinders effective service delivery within the system.'*[54]

Unitary models avoid duplication

A key strength of both the Irish and English systems is the fact that both countries operate a unitary model of apprenticeship delivery. These systems may still be complex in terms of the number of stakeholders involved, as discussed earlier, but they have the greatest potential to limit the possibility of duplication of effort and resources for the key functions that are required to deliver an effective, publicly funded apprenticeship programme. If it is possible to deliver the Richard Review principles in full, then leveraging the unitary approach may actually help aid their effectiveness.

Chapter 5

How standards are defined, implemented, and maintained

Richard argued that the existing apprenticeship qualifications in England's system comprise 'overly detailed specifications' with 'extraordinarily detailed' underpinning occupational standards.

The result, he claimed, is a system focused on 'bureaucratic box-ticking', which 'constrains innovation and flexibility in teaching'. As a solution, he recommended that the existing, overly complex standards, be replaced with one clear and high-level standard per occupation. These would ultimately hold more relevance and meaning for employers, which is something that was determined to be lacking in England at present.

To consider this solution carefully, our starting point has been to look more broadly at the role that occupational standards play in devising robust apprenticeship systems and to review the experiences of the G5 countries in order to inform any rewriting of the existing standards in England, for example, to be carried forward by the Trailblazers.

The value and purpose of occupational standards

Standards are implicit in our understanding of how work is performed, whether as a customer being served a meal in a restaurant or a homeowner coming back to a renovation to find the doors don't close: everyone has a view about what it looks like when work is done 'properly'.

The development of occupational standards in a country seeks to build a shared language to describe the common understanding of what it means to be competent in a job role from the perspective of employers, usually with input from unions, training providers, government departments, and learners. This language can be shared exclusively within one business, throughout a whole industry sector, or across all industries. This level of exclusivity and application of the standard will determine the flexibility and portability of skills from one occupation to another. Getting this balance right seems to be at the heart of the current challenge of reforming occupational standards in England.

Nomenclature of standards systems in other countries

- Assessment Standards (e.g., New Zealand)
- Competency Standards (e.g., Asia-Pacific Region, China
- National Occupational Standards (e.g., India, UK)
- Occupational Standards (e.g., India)
- Professional Standards (e.g., Quebec)
- Qualifications Standards (e.g., Australia)
- Skills Standards (e.g., Texas)
- Units of Competence (e.g., UK and Australia)
- Unit Standards (e.g., New Zealand, Republic of South Africa)
- Interim Standards (embedded in curriculum in Ireland)

Figure 5.1: Components of standards from selected countries

	Australia	Canada	India	Ireland	New Zealand	South Africa	UK	USA
* Reference Number	✓	✓	✓	✗	✓	✓	✓	✗
* Title	✓	✓	✓	✗	✓	✓	✓	✓
* Descriptor * Description * Purpose	✓	✓	✓	✓	✓	✓	✓	✓
* Elements * Outcomes * Specific Outcomes	✓	✓	✗	✗	✓	✓	✗	✓
* Performance Criteria * Assessment Criteria * Evidence Requirements	✓	✓	✓	✓	✓	✓	✓	✓
* Knowledge	✓	✓	✓	✓	✗	✓	✓	✓
* Skills * Understanding how to	✓	✓	✓	✓	✗	✓	✓	✓
* Range * Scope * Explanatory Notes	✓	✓	✓	✗	✓	✓	✗	✓

Source: INSSO team analysis

We broadened the scope of our research of standards beyond the G5 countries to capture the diversity of approaches, and identified a high level of consensus about the components of occupational standards in these countries, as demonstrated in Figure 5.1 above.[iv]

In each of these countries, standards are used to underpin the technical and vocational education and training systems by providing benchmarks for education, training, and qualifications.

[iv] Currently, in Ireland, apprenticeships are underpinned by what is referred to as Interim Standards, which are embedded into the curriculum for the Trades occupations. This makes them difficult to compare to other countries, which all have stand-alone occupational standards that are quite distinct from training programmes. They are presently undertaking a review of their current approach in response to many of the challenges shared by other countries, as discussed in this report, and are moving to common awards where each craft / trade will have stand-alone standards from which future courses will be derived. The standards in Ireland are still endorsed by industry, but are articulated as modular learning objectives, unit activity statements, and key learning points.

Some common features of standards

- **Reference Number** – often delineating the place of the standard within a broader framework of standards
- **Title** – a succinct summary of the outcome to be achieved by those carrying out the function
- **Descriptor / Description / Purpose** – a brief description of what the standard is about and for whom it is intended
- **Performance Criteria / Assessment Criteria / Evidence Requirements** – the key behaviours that can be observed when a worker is carrying out the function competently, which are used for assessment purposes
- **Elements, Outcomes or Specific Outcomes** – breaking the function down into a number of sub-titles; describing sub-functions of the main function defined by the title of the standard
- **Knowledge** and **Skills** – a definition of what is required for competent performance, specifically "Understanding How to"
- **Range, Scope** or **Explanatory Notes** – a definition of the context and range of variables workers must cope with
- **Employability** or **Core Skills** – seeking to embed personal skills, such as adaptability, teamwork, initiative, planning, and information gathering.

Standards are written in such a way as they can be used to assess candidates' knowledge, skills, and on-the-job performance, and include job functions that form part of a worker's job role. Individual standards can be grouped together to form an occupational profile or qualification that reflects a complete job role.

In England (and UK-wide) many of these standards have already been developed in consultation with employers. The reform of apprenticeships in England through the Trailblazers is set to address what combination of these standards (if any) are agreed as an apprenticeship outcome, and which occupations should be prioritised for the development of new apprenticeship frameworks. Trailblazers are being required to develop a simple A4 paper-sized statement of occupational standards with the ability to incorporate existing standards or qualifications that will meet industry requirements in future.[55]

What a simplified standard might look

Based on the G5 analysis, consistency with global best practice would suggest that summary statements for occupational standards might include all or a combination of the following:

Occupation Title, or, as some countries term it, an Occupational Profile or Qualification. This articulates the standard of performance that learners / workers are expected to achieve and the skills they need to perform effectively in a specific job. The standards could include:

- Details about the occupation (title and summary may correspond with the same / similar title and overview used in for example the ISCO[v])
- Activities / tasks (this could also be provided as a list of the unit standards required to make up the occupation, allowing for core or essential requirements and any electives to accommodate job role diversity)
- Knowledge and skills required
- Any qualifications / education requirements
- Information on industry sector / sub-sector

Annexes could include details of the Unit standards and assessment requirements.

Such an approach might enable far greater clarity of the apprenticeship outcome required in one summary page and provide the opportunity for inclusion of only those unit standards that are core or compulsory. Any electives would help ensure job flexibility and comparisons internationally. This is important because occupational standards are applied and compared globally with many countries benchmarking from each other's standards, so similar features can assist in global workforce migration.

Standards also have applications in workplaces beyond formal training. Standards can be used to help plan the workforce needed to deliver an organisation's broader HR and strategic objectives. Job roles can be designed which take account of both strategic objectives and individual competencies. Standards that identify the knowledge and skills that workers need to do the job provide a good basis for developing person or job role specifications.

Achieving consensus in a complex landscape

In achieving consensus with respect to occupational standards that are set to be applicable across a whole country, the diversity of stakeholder views and complexity of relationships means this process may require some specified light-touch rules and accountabilities.

However, who will agree that consensus has been reached? How can the language be codified across disparate industries that appear to have little in common? What level is the work that is being described in comparison to the level of other work? How much should a government department, employer, or learner pay to produce the outcome required? How best do the standards build pathways between school and work standards achievement?

These are complex and challenging questions.

[v] International Standard Classification of Occupations

The OECD told us that despite the difficulty in developing this common language, a strategic approach to skills acquisition and utilisation with occupational standards as the building blocks is central to a country's economic prosperity.[56]

As with any language, however, there can be confusion and misunderstanding about meaning and interpretation and, because occupational standards sit at the fulcrum of training and employment policy and practice, the process to develop and endorse them can be highly 'political' in the sense that occupational standards can only really be widely adopted if there is consensus amongst employers and other stakeholders about their ultimate efficacy.

How do occupational standards benefit workforce productivity?

- Increase employee awareness of the requirements of their role
- Provide effective benchmarks to be used for similar functions across large geographical areas
- Provide a benchmark for optimal performance in any occupation
- Provide robust underpinning of curricula and training materials
- Inform human resource processes, such as evaluation of pay and awards

For example, a country may see an increase in employer demand for plasterers due to a rapid growth in high-rise buildings. What follows is a flurry of accelerated training in a set of specialised skills; resulting in a trade we might call 'high-rise plasterers'. In reducing the focus of the job outcome in the short term, i.e., to complete half a trade, where do the individuals who have completed these apprenticeships get jobs if their skills are neither recognised nor needed by the rest of the construction industry when a recession hits and the high-rise building demand reduces? Indeed, this is what happened in Ireland after the severe property crash of 2008. The government was forced to step in to help thousands of redundant workers complete their apprenticeships.

An effective and robust set of occupational standards developed through a coordinated approach can help address this challenge. The Trailblazer projects getting underway in England have been requested to develop and agree a set of standards that meet current labour market requirements as well as look to longer-term employment opportunities responsive to future economic needs.

The necessity for industry and government input

With so much riding on these descriptions of competence, a development and approvals process is usually essential. In Australia, the approval process for what is an agreed standard is designed and monitored by Industry Skills Councils (ISCs), which are industry-directed advisory bodies.

The agreed standards are submitted to the National Skills Standards Council for national endorsement. From our fieldwork interviews in Australia, we discovered strong industry and stakeholder support for the ISCs to undertake this role, as evidenced by the signing in June

2013 of an Industry Compact affirming industry support for the centrality of Industry Training Packages as the currency of the Australian vocational training system.[vi]

Other countries examined in this study adopted similar approaches to ensure industry support for the standards was clearly demonstrated, including during the development and final approvals process. Ensuring stakeholder input and employer debate about the needs of the modern workplace are at the heart of occupational standards process. Large employers and multinational firms will always have the financial resources and political influence to demand and develop their own standards, leading to bespoke apprenticeships. Richard correctly held these current models up as best practice, from BAE Systems to McDonald's restaurants, but equally, as we have found in all countries, the challenge of small organisations remain a key concern.

How do you find a way to bring together disparate employer groups around a common industry agenda to develop standards? In the G5 countries currently, the answer is for government or industry to create widely supported employer validation groups.

The Trailblazers approach adopted in England, to achieve the Richard Review's recommended levels of simplicity may need to bring together these disparate stakeholders ensuring final approvals of the standards can be verified via the proposed government led industry groups.

An approach may also need to be deployed to ensure the standards can be reviewed in order to respond to market demand and workplace change. Similarly, we would propose final sign-off of the new standards to rest with the Office for the Commissioner of Apprenticeships Standards England.

[vi] In Australia, at the ISC Skills for Productivity conference, signed between Peter Anderson, Chief Executive, Australian Chamber of Commerce, Innes Willox, Chief Executive, Australian Industry Group and Ged Kearny, President, Australian Council of Trade Unions.

Chapter 6

The training process and end testing

The Richard Review said that apprenticeships should not be overly prescriptive in terms of what form the training process takes. There will be many valid approaches by which an individual can become competent in an occupation.

Indeed, such approaches will vary across employers and learners as to what method works best for them on both a personal and organisational level. Rather, the focus, the Richard Review argued, should be on the outcome of the training process, i.e., when an individual becomes competent in the role, as this is ultimately what matters most.

The current system in England uses a competency-based training and assessment approach. One of the perceived strengths of this approach is the ability to directly link workplace performance requirements with the underpinning knowledge and skills (competence) of the worker / learner. This is evidenced in Australia through changes to the Workplace Relations Act, which now enables apprentice pay and progression, including early completion of the apprenticeship, to be tied to competence-based assessment.[vii]

Competency frameworks in each of the countries we studied emphasised the outcome of the training, and not the process by which the learning takes place. It may be necessary to look more deeply into the system in England to ensure the breakdown in the current application of standards is not merely transferred across to the new Trailblazers' approach.

Competency-based training and assessment

Conducting a competency-based assessment has long been described in the education literature as a qualitative judgement process. Competence is attributed to an individual based on the evidence that performance and underpinning knowledge (and sometimes values and attitudes) meet the specified standard. At its simplest level, this involves an expert assessor (industry expert) observing the performance of the worker / learner in a range of workplace contexts, asking some clarifying questions, and making a judgement or inference about the individual's competence.

Competency-based training and assessment process

- Competence is attributed to an individual based on evidence that they meet the standard
- An assessor (industry expert) observes the performance of the learner and judges the competence of the individual

[vii] Fairwork.gov.au. 2013. Apprentices & trainees - Employment - Fair Work Ombudsman. [online] Available at: http://www.fairwork.gov.au/employment/apprentices-and-trainees/Pages/default.aspx. On 22 August, the Fair Work Commission made a decision to increase apprentice pay rates under a number of modern awards, including adding competency-based wage progression to some awards, adding school-based apprentice provisions to some awards, adding wage protections for adult apprentices who have worked for their employer before starting an apprenticeship, and adjustments to award conditions concerning travel costs, training time, training fees, and attendance at training.

The assessor in this scenario usually has access to the standard statement and any specific advice from others to enable a reliable judgement to be made. The biggest potential drawback in the system is that the assessor's individual judgement, even as an industry expert, may be based on subjectivity that others would not necessarily agree with.

End testing – what can we learn from the UK's driving test system?

The Richard Review draws on the analogy of learning to drive as an example of competence assessment that we should apply to the apprenticeship system. The driving-test system in England focuses on an end test, which assesses an individual's ability to drive to the required standard, regardless of how they learned to drive or how long it took.

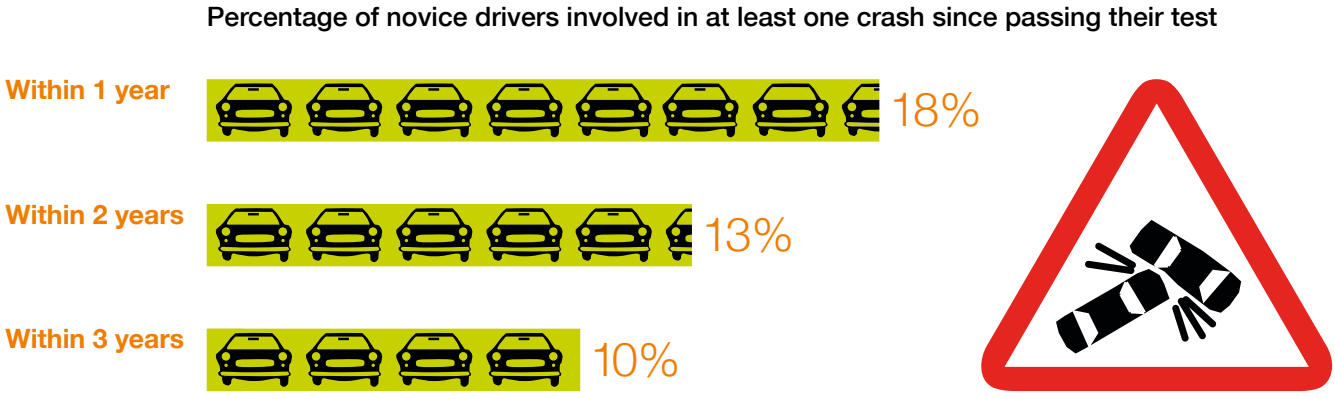
As a competency-based approach, this model can easily be transferred across to an apprenticeship system. Indeed, similar to the process of developing occupational standards as outlined in chapter 5, the development of the driving test requires a formal approach to establish the standard as a nationally recognised qualification.

Given the legal and safety implications of driving a car in the UK, development of the standard would require consultation with a wide range of stakeholders (e.g., the police). Once the standard is agreed, a process for assessment is constructed that clarifies the 'pre-entry requirements', including who is eligible to sit the test, the minimum age they must be, and whether a written component must be passed in advance, to name a few examples.

All these parameters are put in place to ensure the test is conducted in conditions that enable the assessment questions to be answered. Is there sufficient evidence to make a judgement of competence, and would others agree with the assessment? Are they safe enough? In the case of the UK driving test, there is on-going public debate about its efficacy.

Crash statistics dating back to 1992, for example, confirm that newly qualified drivers are particularly vulnerable to crashing within the first year of passing their test. These statistics are still used in current debates.

Figure 6.1 Percentage of novice drivers involved in crashes within 1, 2, and 3 years of passing their test [57]



What these figures show is that nearly one in five 'competent' drivers will crash within the first year of passing the test. In terms of risk mitigation and management, this may be acceptable in the case of driving, but applying this to a graduating electrical apprentice where one in five houses will be wired incorrectly, the potential for getting apprenticeship training wrong seems obvious.

Apprenticeship training and assessment in Ireland

In Ireland, apprenticeships combine workplace and classroom training for employed people. All apprenticeships are standards based and time constrained with training occurring at an Education and Training Board (ETB) centre for the first phase, followed by an Institute of Technology for the subsequent two phases. Assessment is carried out on a structured on-going basis, including course work, standardised practical assessments, and theoretical assessments. The employer assesses the apprentice's competence on the job to pre-specified standards.[58] The curriculum for each apprenticeship programme is based on uniform, pre-specified standards, which are agreed and determined by industry.[59] On successful completion of an apprenticeship, a FETAC/ Quality and Qualifications Ireland (QQI) Advanced Craft Certificate is awarded; this is recognised internationally as the requirement for craftsperson status.[60]

From an apprenticeship perspective, therefore, a prerequisite for sitting any final test might be an ability to meet certain requirements (work placement, context, and experience) and demonstration of success along the way that may include proven knowledge acquisition where mastery of knowledge requires a specific sequence of learning.

The point here is that all assessment has limitations and, as alluded to in chapter 5, any failings of the English apprenticeship system in relation to training and assessment may be driven by process expectations, governance, and a lack of clarity about which standard is to be measured against, and who is ultimately accountable for its implementation.

What the international experience with competency-based assessment models tells us is that, when there is confusion about the required standard, if the assessor is less experienced, if the employer is not providing the appropriate workplace learning context, or if the funding bodies are not trusting of the judgements being made, it is likely the risk will be mitigated by over-assessment and measurement.

Apprenticeship training and assessment in the United States

In the US, there are three different designs of Registered Apprenticeship programmes, including time-based, competency-based, and hybrid, depending on the occupation. Competency-based programmes are assessed on attainment of demonstrated, observable, and measureable competencies that are agreed to in advance. Apprenticeships can last up to six years, but the majority are four years, depending on the complexity of the occupation and the programme design. Each programme features structured on-the-job learning and related classroom instruction.[61]

It could be these specific pressures that are contributing to a 'tick-box' approach to assessment that the Richard Review was concerned about in England.

Across the G5 countries, we observed different approaches to answering these same questions of apprenticeship training and assessment quality. Sharing this best practice, and ensuring it is a feature of all apprenticeship systems, seems to be key to future successful reform in all countries.

Key comparative features of apprenticeship systems

Apprenticeship design in terms of the method of training and assessment differed markedly across the G5. In Ireland, the structure of study is consistent across each occupation, with training taking place at an Education and Training Board for the first phase, followed by an Institute of Technology for the subsequent two phases. For all other countries, we found that the design and delivery of the apprenticeship differed according to the complexity of the qualification, the industry sector, and whether the apprentice had prior experience. For example, in the United States, there are three different types of Registered Apprenticeship programmes, including time-based, competency-based, and hybrid.

In terms of duration of study, we found that these average up to four years in total, depending on prior experience, the complexity of the qualification, and industry sector.

Apprenticeship training and assessment in Australia

In Australia, apprenticeships and traineeships combine time at work with structured training and can be full-time, part-time, or school-based, and it is possible for an individual to start an apprenticeship while still at school. Apprenticeships and traineeships can take between one and four years to complete, depending on occupation, level of previous experience, and pace of learning.[62] These programmes are 'competency-based', meaning that training is completed when the learner / worker is able to demonstrate competence. All apprenticeship qualifications require study in general areas, such as mathematics and communication. Assessment is a combination of practical and written assignments, on and off the job, with workplace observations.[63] *A shared responsibility - Apprenticeships for the 21st Century Report of the Expert Panel (Commonwealth of Australia, 2011),*[64] like Richard, highlighted challenges for the quality and consistency of training and assessment delivery. Recommendations from this report suggest that a focus for reform in England should also ensure effective pathways for entry into the system, creating opportunities for career development through transferability of skills, high-quality employment relationships, including high-quality training both on and off the job, strong induction processes, and effective pastoral care.

The G5 have adopted a variety of approaches, including on-going course work and end testing, both theoretical and practical. In Ireland, assessment methods incorporate all three of these methods, whereas, in Canada, assessment to achieve Red Seal approval is carried out by a multiple choice test that the apprentice sits at the end of their formal training. In none of the countries in this study did we find 'graded' apprenticeships of the kind proposed for England.

We also discovered that, where written tests featured in the assessment methods, they varied according to whether they incorporated testing of basic skills, including English and maths. In Australia, employability or core skills are included in the qualifications, whereas, in Canada, the end test does not currently incorporate 'essential skills', although research is currently underway to pilot this approach.

Case Study: The Interprovincial Standards Red Seal Program in Canada, an example of an end-testing method

Consistent with the Richard recommendation for end testing, we focused our training and assessment case study research on the Interprovincial Standards Red Seal Program in Canada. This was the only programme in the G5 that relied on this specific form of assessment.

Canada's approach has many of the features referred to in the Richard Review.

The Red Seal Program features include:

- One industry standard – the Red Seal – recognised by industry and interprovincial governments
- An end-testing method, consisting of a multiple choice exam
- Having been developed as a result of collaborative arrangements

What is the Red Seal Program?

The apprenticeship system in Canada is designed and regulated differently across each province and territory. Levels of apprenticeship training are not linked to a national framework (like the National Qualifications Framework in the UK) so training is not automatically recognised from one province to the next.

It is only when the individual gains the Red Seal, the national standard of excellence, that their skills are recognised across the country. The programme aims to aid labour mobility and ensure that employers across Canada have a shared understanding of the standard they can expect of workers they employ who bear the Red Seal endorsement. There are currently 55 trades included in the Red Seal Program, which make up 80% of apprenticeships available in Canada. There are no other competing standards.

Figure 6.2 List of the 55 Red Seal trades [65]

Agricultural Equipment Technician	Ironworker (Structural/Ornamental)
Appliance Service Technician	Landscape-Horticulturist
Automotive Painter	Lather (Interior Systems Mechanic)
Automotive Service Technician	Machinist
Baker	Metal Fabricator (Fitter)
Boilermaker	Mobile Crane Operator
Bricklayer	Mobile Crane Operator (Hydraulic)
Cabinetmaker	Motor Vehicle Body Repairer (Metal and Paint)
Carpenter	Motorcycle Mechanic
Concrete Finisher	Oil Heat System Technician
Construction Craft Worker	Painter and Decorator
Construction Electrician	Parts person
Cook	Plumber
Dry Finisher and Plasterer	Power line Technician
Electric Motor System Technician	Recreation Vehicle Service Technician
Floorcovering Installer	Refrigeration and Air Conditioning Mechanic
Gasfitter (Class A and B count as separate trades)	Rig Technician
Glazier	Roofer
Hairstylist	Sheet Metal Worker
Heavy Duty Equipment Technician	Sprinkler System Installer
Heavy Equipment Operator	Steamfitter/Pipe fitter
Industrial Electrician	Tile setter
Industrial Mechanic (Millwright)	Tool and Die Maker
Instrumentation and Control Technician	Tower Crane Operator
Insulator (Heat and Frost)	Transport Trailer Technician
Ironworker (Generalist)	Truck and Transport Mechanic
Ironworker (Reinforcing)	Welder

Source: www.red-seal.ca

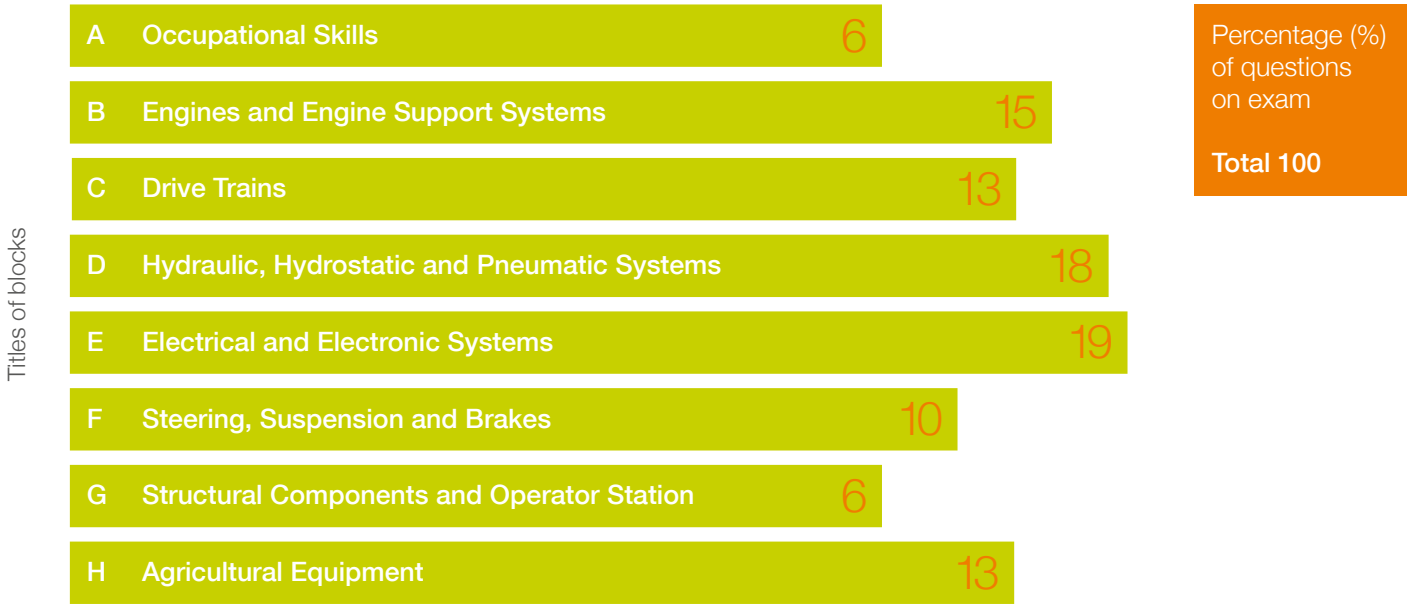
The Red Seal in Canada is the only standard that is recognised across the country as the industry standard. Figure 6.2 outlines the number of trades available in the Red Seal Program. Other apprenticeable trades are available outside of the Red Seal trades, and are now recognised by the regulatory authorities across the country following changes to the Labour Mobility Chapter of the Canadian Agreement on Internal Trade. Based on these changes, all trade certificates are recognized across the country, with or without a Red Seal endorsement, however, the Red Seal Program still plays an important role in facilitating mobility.

Red Seal assessment

A Red Seal exam is based on the National Occupational Analysis (NOA) for the trade. The Red Seal National Occupational Analysis (NOA) is a document that lists all the tasks performed in the occupation and describes the knowledge, skills, and abilities required to demonstrate competence in the trade. Each NOA consists of blocks (main subject areas), and each block is divided into tasks, which are then divided into sub-tasks.

Each of the 55 listed trades has an exam descriptor, which explains the structure of the exam for each trade. Figure 6.3 below outlines the breakdown of the exam for an Agricultural Equipment Technician.

Figure 6.3 Average percentage of the total number of questions in each area of the exam [66]



The percentages in Figure 6.3 above show the average percentage of the total number of questions that appear in the exam in each area of the program.

This differs according to trade and, as in the case of a Concrete Finisher, for example, the percentage for block A, Occupational Skills, is 20%, much higher than that in the Agricultural Equipment Technician exam. These are derived from collective input from employees and firms within the occupation from all areas of Canada.

Features of the multiple choice test

- Each exam has between 100 and 150 multiple-choice questions.
- Each question has four responses (A, B, C, and D), only one of which is correct. The three incorrect responses are called distracters and are intended to look like plausible answers. This tests a candidate's confidence to choose the correct answer.
- All questions are of equal value.
- The pass mark is 70%.
- Red Seal exams are bilingual. Questions in French appear on the left-hand pages and the questions in English are on the right-hand pages of the examination booklet.

Registration and certification

In order to register for the Red Seal exam, an individual contacts their provincial or territorial authority responsible for apprenticeship training, which could be within a government department or an arms-length agency. The province or territory verifies an apprentice's eligibility to register for the exam. The verification process can differ between provinces and territories. For example, in Ontario, the apprenticeship authority responsible is the Ontario College of Trades, and it has a responsibility to use Red Seal exams where available in Red Seal designated trades for the Certification of the Qualifications process.

In order to be certified with the Red Seal standard for a trade, in addition to passing the interprovincial standards Red Seal exam, individuals must meet one of the following requirements:

- graduated from a recognised provincial or territorial apprenticeship training program; or
- met the requirements established by the provincial or territorial apprenticeship authority; or
- have the time and experience working in a Red Seal trade assessed to qualify to write the Red Seal examination.

Sample Questions: Carpenter

1. How far apart are trammel points set at on a piece of wood to lay out an 8-ft. diameter circle?
   A. 2 ft.
   B. 4 ft. – correct answer
   C. 6 ft.
   D. 8 ft.

2. What is the minimum safety factor when a rope is used for hoisting materials?
   A. 5:1 – correct answer
   B. 10:1
   C. 15:1
   D. 20:1

3. A wood sill is installed on top of a foundation wall. At what height above the ground is damp-proofing not required?
   A. 75 mm
   B. 100 mm
   C. 125 mm
   D. 150 mm – correct answer

All information on the Red Seal Standard Interprovincial Program sourced from www.red-seal.ca.

Strengths and challenges of the Canadian apprenticeship system

The Canadian Red Seal system mirrors some aspects of what Richard recommends for England. The key feature of the Red Seal Program is that it focuses on an end test as a measure of an individual's competence in the role. In addition to the test, there are in place further measures to ensure that an individual meets the requirements of the standard, including graduating from a training programme, meeting the requirements of an apprenticeship authority, or having prior experience in the trade.

Overall, the Red Seal standard is in place to support labour mobility across Canada, as qualified individuals are able to demonstrate an underpinning knowledge of a specific occupation based on an interprovincial standards, which is recognised across the country and developed with input from industry.

We found a number of issues within the system linked to our previous discussion about competency-based assessment methodology that challenge the robustness of this system. These are summarised below:

- With a pass rate of 70% via a multiple-choice exam and limited assessment of knowledge application in the format of tick-box evaluation, individuals passing the exam may still lack the essential skills required to be considered competent in the occupation and, with a 70% pass mark, some of the vital underpinning knowledge could also be missing. Some testing regimes in Australia, for example, for electrical work, will only accept a 100% pass mark.

- While a cost-effective form of testing, the multiple-choice exam provides limited evidence from which to infer workplace competence and relies on unsubstantiated third-party evidence that practical application of learning has taken place, i.e., the requirement for successful completion of a training programme elsewhere.

- The Canadian Apprenticeship Forum is anecdotally aware of employers who have taken on individuals with the Red Seal endorsement who were subsequently not judged by industry to be competent in the role. For example, it is possible for anyone, including immigrants, to challenge the exam as long as they have some proof that they have experience of working in the trades, and then turn up at the workplace certified but not necessarily competent. The approach has some advantages in that an experienced tradesperson can challenge the Red Seal exam and become certified. Traditionally, this has helped aid inter-provincial labour market mobility.

- Although some provinces, such as New Brunswick, incorporate testing of 'essential skills', i.e. literacy and numeracy as part of the apprenticeship registration process, currently, there is no formal assessment for essential skills at an interprovincial level which research suggests is a major contributing factor to why some individuals may not complete their apprenticeship. The Canadian Apprenticeship Forum are currently undergoing a research project to identify the extent to which employers are investing in essential skills and what the return on investment is. This may lead to the inclusion of essential skills screening as part of the Red Seal Program in future.

- The coverage of the scheme raises questions about Canada's future capability to address its multi-faceted workforce challenges. Data gathered by Robbie Brydon and Benjamin Dachis identifies only 55 trades covered by the Red Seal Program, which accounts for around 1.6 million workers. There are an estimated 540,000 workers who have worked in a non-Red Seal trade.[67]

- The Red Seal Program is underpinned by an assumption that interprovincial mobility takes place as workers recognise opportunity elsewhere, and the programme provides a credential that supports such mobility. However, the research shows that the relationship between labour mobility and skills needs is often more complex, and it has been found that labour mobility will not necessarily fill labour shortages, as witnessed by the need to regularly import skilled migrants.

- Canada's First Ministers decided in the summer of 2008 to amend Chapter 7 of the Agreement on Internal Trade (AIT) to grant all Canadian workers who have credentials in a province or territory the kind of labour mobility Red Seal holders have enjoyed since 1958. To some degree, this could negate the need for the Red Seal in future, depending of course on how the overall Canadian apprenticeship system decides to evolve.

As part of its efforts to continuously improve the Red Seal Program and respond to labour market needs, the Canadian Council of Directors of Apprenticeship (CCDA) launched the Strengthening the Red Seal initiative in 2009 and a report has since been released that explores enhancing the current standards and other forms of assessment.[68]

What can we apply to the English system?

In the adoption of an end-testing method, England, like Canada, may need to ensure it meets the basic requirements for competence assessment and collection of sufficient evidence to infer competence to undertake the occupational role, as opposed to overreliance on a single test.

The Trailblazers in England, part of the government's Implementation Plan, are now being charged with adopting some sort of end-testing concept, although they will not be required to adopt any particular assessment methodology. In contrast to the Red Seal approach of a multi-choice exam, Trailblazers are being asked to consider a range of assessment approaches that: *'enable the Apprentice at the completion of their programme to identify and use effectively, in an integrated way, an appropriate selection of skills, techniques, concepts theories and knowledge from across their training.'*[69]

Such an approach provides the opportunity to incorporate the best of what is currently being undertaken in England to achieve, for example, success in World Skills competitions, and to ensure assessment and training delivery processes are genuinely world class and meet the test of time.

Bringing industry together in a formal process to re-confirm which occupations and what groupings of occupational standards best describe those apprenticeship occupations that are a priority to the country will assist building future confidence in the English system. Moreover, ensuring innovation, which the Richard Review identified as being constrained, could be incorporated as a feature of the Trailblazer initiative, providing the opportunity for promoting best teaching practice and innovation.

Assessment quality could be further enhanced if the UK end-testing and interim-testing programme demanded high levels of expert assessor competence, removed any over-prescription or

assessment practices, and ensured regulatory requirements of any role are embedded in the apprenticeship assessment outcomes.

Addressing the rigour of the apprenticeship standards and assessment approach is a very positive first step. It may require continued focus, as our research has identified, if other major challenges to apprenticeship commencements and completions are to be addressed.

In Australia, for example, the introduction of third-party validation to ensure assessment of competence is now required to be as rigorous as it needs to be. The approach includes mentorship of apprentices to provide additional support during their training programme, improving the capacity of employers to employ apprentices, and creating the learning environment demanded by this special relationship; similarly, changes to industrial awards to enable competency-based progression for apprentices is also underway.

The Trailblazers' evaluation provides a good opportunity to explore these wider issues and their impact as the English apprenticeship reform process gets underway. Indeed, the experience of the other countries in this study may be helpful in understanding the scale of some of the challenges ahead.

Chapter 7

Funding and Incentives

Public funding is made available to formal apprenticeships in all G5 countries. It is difficult to directly compare public spending on apprenticeships by country over time. Comparative statistics are unavailable.

Spending on English apprenticeships

From 1998 to 2009, England's average annual increase in spending on further education colleges was 7.7%. This was the second-highest increase in the overall education budget spend for England, after schools' capital spending.[70] The commitment to further education was equally matched with increased spending on apprenticeships, especially after the creation of the National Apprenticeship Service in 2004.

Since 2010, the adult skills budget has fallen in England from £2.7 billion per annum in 2012/13 to £2.5 billion per annum in 2013/14, while spending on apprenticeships has actually increased from £715 million to £764 million over the same period. Next year, funding for apprentices over 19 years old will rise to £770 million.[71]

In such fiscally restrained times, these figures show a considerable political commitment to investment in English apprenticeships, a trend that began under previous governments, involving all the main political parties. Indeed, compared to other G5 countries, apprenticeships in the UK enjoy a much higher political profile. Both the Prime Minister, David Cameron, and Leader of the Opposition, Ed Milliband, regularly make speeches about the importance of apprenticeships.

Justifying public investment

A number of countries, including the G5, spend public money on formal apprenticeship training. But what is the economic justification for it?

Apprenticeship, as Richard acknowledged, is a form of education. The key difference is that learning takes place mainly in the workplace instead of in the classroom. The state, therefore, is justified in making an investment in apprenticeship, particularly in off-the-job training, for the same reason it invests in other forms of human capital, including higher education. The National Audit Office (UK) found that, for every £1 spent on apprenticeships, £18 is generated for the wider economy.[72]

Apprenticeships equip individuals with employability skills and they benefit society more generally by ensuring a supply of qualified people in productive sectors of the economy. For employers, the productivity gains of apprentices are not immediately apparent, because the apprentice is, by definition, not yet at a level where they are fully competent.

However, a number of studies have shown significant net gains for employers from taking on apprentices shortly after they have been recruited.[73] As with any exchange market, the 'deficit' in productivity of apprentices initially is accounted for by the price mechanism, i.e., the wage levels that are set.

In England, apprentice wages are regulated at £2.65 per hour, much less than the National Minimum Wage of £6.31 for adults. In Australia, Canada, USA, and Ireland, an apprentice's wage tends to be set as a ratio to the qualified person's wage. In skilled trades and with large employers, trades unions will often negotiate the rate of apprentice wages.

The key point is that funding of apprenticeship is a shared responsibility. In many countries, including the G5, there is a broad consensus that:

- The employer makes the recruitment decision, hires the apprentice, and pays them at the going rate (whether legally enforced or by custom)

- The state pays towards the off-the job training element and may also grant certain incentives to encourage completion and progression

- The apprentice accepts lower wages for the period they are less productive, until they qualify.

Unlike many other areas of government investment in education and training, apprenticeship is possibly the area that is the most straightforward in terms of who pays and who benefits. The key challenge, as we shall see, is how to use public funding to drive up employer take-up, secure improvements in quality, and deliver better apprenticeship progression and completion rates.

Redirecting purchasing power

A major proposal of the Richard Review was to turn the current funding model in England on its head. Employers have always been responsible for paying the wages of English apprentices, but, since publicly funded workplace training was introduced in the 1980s, after the abolition of the majority of the Industrial Training Boards (ITBs), the government has funded the off-the-job and block-training elements directly. This is done by disbursing funds to colleges and specialist training providers via various arm's length funding councils.[viii]

Such an approach to public spending has been called by business groups like the Confederation of British Industry (CBI) a 'supplier-driven' model, where the incentive lies mainly with providers to fill seats and maximise the draw down of taxpayer funds. For business, this can lead to sub-optimal investment returns, because the employer cannot directly shape the curricula on offer through the price-exchange mechanism. Another perceived weakness is 'provider capture', where colleges essentially act as agents delivering government policy, rather than delivering what employers say they need.

[viii] Since 1979, apprenticeship-style programs have been funded by a succession of public funding bodies or QUANGOs in England, each lasting no more than a decade. These include the Manpower Services Commission, Further Education Funding Council, Training and Enterprise Councils, Learning and Skills Councils, Skills Funding Agency, Young Peoples' Learning Agency, and the Education Funding Agency. One of the rationales for moving to a PAYE tax credit-based approach to apprentice funding is to secure a more stable funding system over the longer term. Most employers understand the tax system.

Richard agreed with this view arguing that: *'To become real consumers of training, employers should have control of Government funding and, also, contribute themselves to the cost of training.'*

Richard's preferred method of 'control' was to redirect the 'purchasing power' of public spend on apprentice training from government to providers to a new system where the money would flow directly from government to employers via the tax system. In the UK, all firms that pay their employees must do so via a method known as Pay As You Earn (PAYE). Since April 2013, the system has operated via an additional enhancement called Real Time Information (RTI).

What both these systems deliver, in practice, is a powerful database managed by HM Revenue & Customs (HMRC). The system captures every paid employee, including apprentices, in real time, meaning that government could now target tax credits (and collect taxes) in a very precise way, since each employer has a Unique Taxpayer Reference (UTR) number and each employee a unique National Insurance (NI) number.

The technology and systems, therefore, already exist to deliver the Richard ambition, now that Ministers have made the decision to implement an HMRC-led system of apprenticeship funding in future:

> *'The government will reform apprenticeship funding to ensure that employers are at the heart of the system and it delivers skills that meet the demands of UK businesses. The government will put business at the centre of the apprenticeship system by enabling employers to receive funding for the training costs of apprentices directly through an HMRC-led system and ensuring that employers contribute. This change will raise apprenticeship standards and ensure they align with the needs of business.'*[74]

Tax credits as incentives: the international evidence

In our research, specifically amongst the countries we studied, we did not detect strong support for the idea to give employers the purchasing power or, directly, the public money for apprentices. That could be because our primary research interviews focused mainly on talking to policy experts working in the publicly funded apprenticeship systems, and our exposure to employers, therefore, was limited.

A view from one of the Germanic systems of apprenticeship, in a response to FE Week's analysis of the government's funding consultation, reported a Swiss expert on apprenticeship as saying:

> *'I find a PAYE tax dedicated to apprenticeship funding rather strange. Apprenticeships reduce the rate of unemployment of young professionals and increase the quality of vocational work and with it the quality of services and products within a country. The country benefits from such a system on a macro-economic level, just as much as a country benefits from national security. Would it not seem strange if someone came up with the idea to fund the armed forces or police force through a PAYE tax system dedicated to these specific causes? I think this must reflect certain cultural differences between our countries over our different approaches to vocational training.'* [75]

On the subject of apprentice tax credits, our discussions with the World Bank and the OECD raised similar levels of interest and curiosity.

It suggests that the Richard funding model requires further consideration. Moreover, although we found no direct comparisons to the PAYE tax credit model, the fact is that several countries (or sectors within countries) have experimented with a range of fiscal measures to drive up employer investment in skills, and many are considered successful.[76]

Such measures range from Training Levy arrangements, as exists in countries as diverse as Switzerland and Singapore, to fiscal incentives and tax credit schemes that we found operating in Canada and the United States.

There is currently no systematic evaluation evidence internationally, or reliable data available from any of the countries that we studied, that looks specifically at the efficacy of using fiscal incentives to drive up apprenticeship take-up and quality. There is some anecdotal evidence, however, that, where targeted carefully, they are having some effect.

Five-fold increase in employer take-up: South Carolina

The recent progress on apprenticeships in South Carolina has made it the poster child of efforts to support young people and firms in America. It has even attracted the attention of the White House.

Since 2007, when Apprenticeship Carolina was established, the state has gone from just 90 companies offering apprenticeship to 620 today, with a goal of 2000 by 2020. Considering there are well over 300,000 companies in South Carolina, why is this significant?

One of the main reasons for interest across the country and internationally is the fact that South Carolina's model has been ranked first out of ten national workforce development best practice initiatives. Since formation a few years ago – co-located with 16 technical colleges – the organisation, which offers a free service to employers, has seen a 491% increase in the number of registered apprentices. Compared to the rest of the United States, this is a remarkable achievement.[77]

In our interview with the Director of Apprenticeship Carolina, we were interested to know what were the key factors of its success and why, in particular, had employer take-up been so strong?

Some of the key reasons attributed to the state's success were put down to the 'sales approach' of the organisation and the professionalism of the business consultants who go out to meet with employers. Another reason cited was the availability of a tax credit of $1000 per year for up to four years for each apprentice.

Apprenticeship Carolina does not currently track or evaluate data relating to the tax credit model. However, the Director of Apprenticeship Carolina described the offer of an employer tax credit as more of a 'door opener with firms' than an overriding factor for fully explaining the marked increase in apprentice starts.

Anecdotally, the Director of Apprenticeship Carolina felt that it was more likely to be the presence of some flagship employers talking about the benefits of apprenticeship than purely the offer of a tax credit. Similarly, the co-location with technical colleges has meant that off-the-job and block-release training can be designed in a highly bespoke way. Furthermore, although a sales approach is adopted, cold calling on employers is not allowed, supporting the suggestion that employers themselves help spread the word.

Despite the fact that Apprenticeship Carolina actively promotes the tax credit on its website's homepage (see below), one of the other main reasons for South Carolina's five-fold increase in apprenticeships is because colleges give employers exactly what they want. Still, without an empirical evaluation of the $1000 tax credit model and the reasons for such rapid take-up, it is quite difficult to say with certainty. In that regard, we advise caution in looking too much into these figures.

Flat completion rates: use of tax credits in Canada

Since 2006, the Canadian Government has offered a taxable cash grant to apprentices registered in one of the Red Seal Programs. There is a 'start-up' payment of $1000 per year, up to a maximum of $2000 for progression of the apprentice's training, in addition to a taxable cash grant of $2000 when the individual completes his or her apprenticeship. An individual can therefore expect to receive a maximum tax credit of $4,000 for successfully qualifying.[78]

Employers can also receive a non-refundable Apprenticeship Job Creation Tax Credit equal to 10% of the wages of the apprentices up to a maximum of $2000 a year. So, if the maximum tax credits are claimed for both apprentices and employers, the Canadian government is essentially subsidising a three-year apprenticeship programme to the tune of $10,000, in addition to paying the community colleges directly for providing the off-the-job or block-release training.

In addition, Employment Insurance (EI) is a key source of income support for apprentices during their technical training. In 2011-12, 40,110 claims for apprenticeship were established with a total of $167.8 million in benefits paid to apprenticeship claimants. The EI benefit rate is 55% of average

weekly insurance earnings up to the maximum insurable earning of $47,400 in 2013. This translates into a maximum weekly benefit of $501 in 2013.[79]

Given that some Red Seal apprenticeships can last up to five years, this amounts to one of the most generous publicly funded apprenticeship models of the G5.

Different incentives are also offered across the provinces, with Ontario, for example, offering a refundable tax credit to employers that hire and train apprentices in certain trades – mainly construction and manufacturing – of up to $40,000 over the first 48 months of an apprenticeship.[80]

In our interview with experts responsible for the New Brunswick apprenticeship system, we found not only the Red Seal incentives in place, but also additional support, including a 100% grant towards training materials and a full tuition fee remission for apprentices who complete their training and pass the block exam. Nowhere in Canada is the money that is used to fund the community colleges for apprentice training redirected via the tax system from employers.

In Canada, the concern has been to use the federal tax credit system to boost apprentice completion rates. For many decades, apprentice completion rates remained static at around 50%, significantly below the completion rates of other G5 countries. While it may be too early to tell whether tax incentives are directly responsible for recent improvements in Canadian apprentice completion rates, it is certainly the case that, since the introduction of new federal and provincial funding systems, completion rates have improved significantly, particularly in the Red Seal trades:

> *'In 2011, completions increased by 14% or 5,100 more completions than in 2010, while new registrations rose by 4.5%, an increase of 3,800 over the same period. While the number of completions continued to rise in 2011, it is too early to tell how this will affect the completion rate, which has remained flat at approximately 50% in recent years.'*[81]

What other financial models could England adopt?

The key question in all these discussions about tax incentives and other fiscal approaches is: will they deliver – in the English context – increases in employer take-up and quality of apprenticeships? In terms of tax credits, the international evidence is mixed.

Since December 2011, the UK Commission for Employment and Skills (UKCES) has been undertaking the Employer Ownership of Skills Pilot, which seeks to 'lead new activities to improve skills and employment' in industrial sectors, supply chains, and localities. Applying for competitive public funding of £340 million in total (released in phases), the idea is that the employer pilots will attract additional private sector investment of at least double the public sector investment being made.

The UKCES are, in part, addressing the purchasing power principle by funding employers directly, rather than providers, to pay for industrial partnerships to take *'end to end responsibility for skills within a sector or locality by setting standards and defining quality and career pathways.'* [82]

As yet, there is no robust evaluation data available in respect of the impact of the pilots in terms of those approved to support apprenticeships. It is still early days. A baseline progress report is expected in January 2014, according to Parliamentary answers given by the responsible Minister. The final evaluation of the pilots is expected in 2017, about the same time the Richard Review will be implemented in full.

Australia's workforce development fund

Australia has pioneered a different approach to funding improvements in skills and apprenticeships. The National Workforce Development Fund (NWDF) was established to assist employers across all industries to train their staff, including support for traineeships and apprenticeships. Through the NWDF, which is managed by the Australian Workforce and Productivity Agency (AWPA) and coordinated centrally through the Industry Skills Councils (ISCs) network, the government is making an investment of $765 million up until 2017. The fund operates as a co-contribution scheme, meaning that business has to pay up to half of the grant they receive at source.

The NWDF has three key aims:

- Help businesses lift their productivity
- Provide Australian workers with opportunities to increase skills through formal training
- Assist in areas of the economy where skilled workers are needed the most

Initial evaluation data suggests a significant impact in respect to the fund's performance. An independent report [83] found that, after 12 months of operating the fund, firms had invested $18.9 million in training, compared to $36.9 million by the government, equating to a 50-cent contribution by employers for every dollar invested by the public purse. The NWDF can only be used by employers on Registered Training Organisations (RTOs); as a result, the evaluation data suggests that, with ISCs and employers now making the purchasing decisions, provider costs have been reduced to 'between 62-87 per cent of the average capped value'.

Putting co-investment in skills on a long-term footing

Both the UKCES and NWDF examples show the potential for innovation in how to disburse public funds for workplace training. The principle of co-payment or co-investment as a something-for-something mechanism to unlock public funds also potentially deals with the problem of deadweight: training that the employers would have provided anyway. What is less clear from these initiatives are their longevity, systemic impact, and whether they will really deliver on the Richard principle of handing control of the public funding available for apprenticeships to employers.

A comparative study by World Bank economists found that crude levy schemes are unlikely to work. However, levy-grant and fiscal approaches that are smarter in design can have a positive effect:

> *'If governments are mainly concerned with upgrading the skills of the workforce, an alternative levy-grant scheme that can be implemented is a system that is revenue neutral overall. All money collected by the government through a levy would be transferred back to firms – possibly after the government takes a small administration fee. Firms who train more would get back a larger proportion of funds. Under such a scheme, a firm would receive a grant not only on the basis of how much it trains, but also how much it trains relative to other firms in the economy – hence firms have an incentive to train more to keep pace with their competitors and get a larger grant.'* [84]

It is beyond the scope of this report to propose which model England should adopt in terms of future apprentice funding. However, the international experience suggests that governments have a number of tools at their disposal, all the product of cultural and political choices. For example, the tax system can be used in a revenue-neutral way to incentivise behaviour of employers to train, while ensuring those firms that poach – effectively free-riding off the investment made by other firms – are still made to make a contribution via general taxation.

In April 2014, every firm in England will benefit from a £2000 Employment Allowance. Regardless of size, location, or sector of employer, firms will be able to deduct £2000 off their employer National Insurance Contributions (NICs) bill, taking 450,000 companies out of the tax altogether, according to Treasury estimates.[85] It would allow, for example, firms in England to take on up to six apprentices and pay no Class 1 NICs at all. The cost to the Exchequer of the scheme is estimated to be £1.7 billion.

Given the decision to adopt the Richard-preferred option of PAYE tax credits, it is conceivable that the Employment Allowance could be increased for employers in future years, not least by linking the level of national insurance contributions that can be offset against employer NICs to the number of apprentices a firm takes on.

Chapter 8

Performance and outcomes of different apprenticeship systems

In this chapter, using internationally accepted methods and some comparable statistics, we examine the apprenticeship systems of the G5 countries.

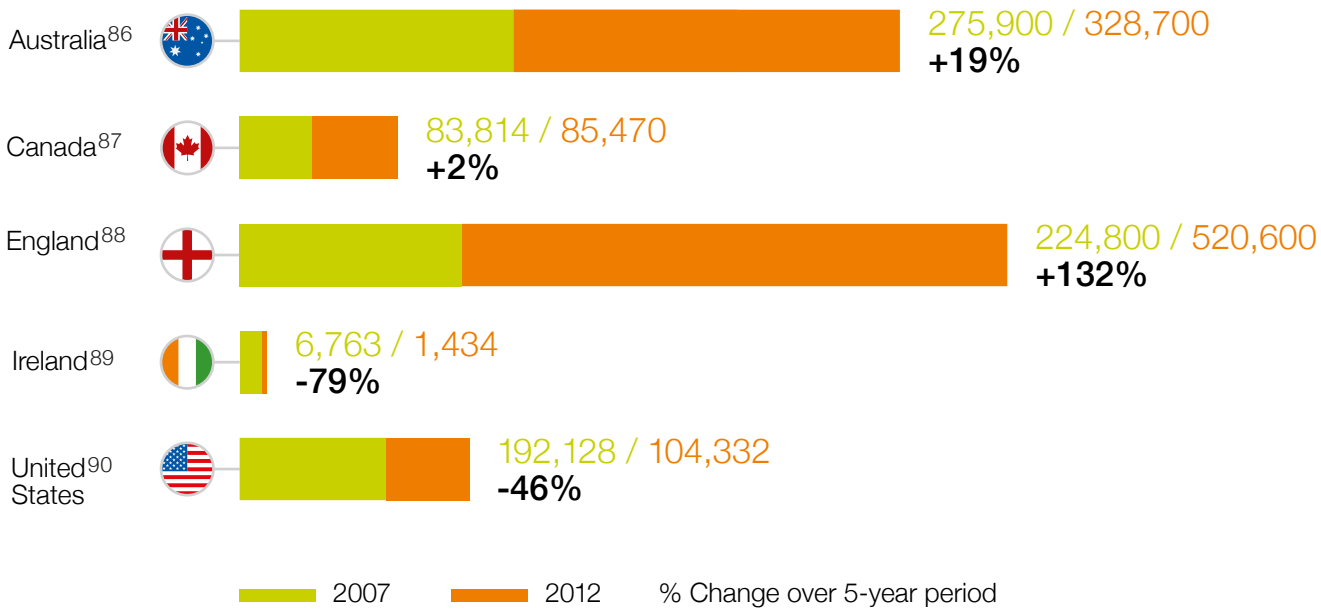
The key benchmark measures include:

- Number of apprenticeship starts and the change over five years
- Number of apprentices employed per 1000 workers
- Completion rates of apprentices
- Gender balance of apprentices

Registrations

Despite the recent financial crisis, apprenticeship numbers have increased over the past five years in Australia, Canada, and England. Decreases in registrations have been experienced in the United States and Ireland.

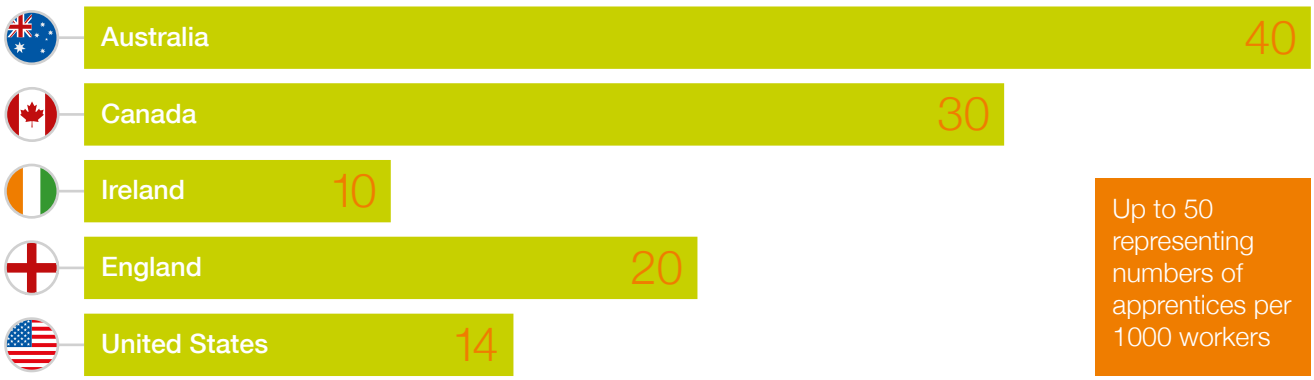
Figure 8.1 Apprenticeship commencements, 2011/12



Australia has the highest number of apprentices in its workforce, about the same rate as Germany, and twice that of England's current ratio of 20 per 1000 workers.

Ireland and the United States have the lowest rates. One factor driving Ireland's low rates is the employer-demand-driven nature of the system, including a limited number of apprentice occupations.

Figure 8.2 Apprentices per 1000 employed [91]

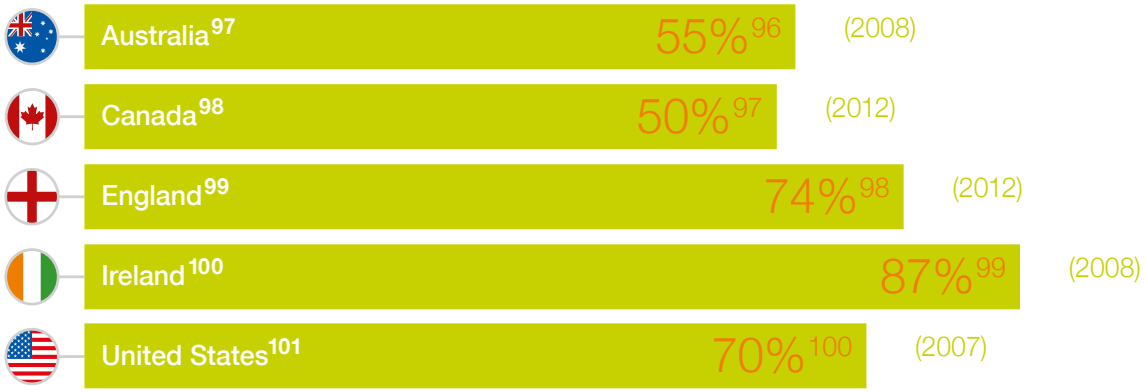


Looking at the prevalence of employers actively taking on apprentices and trainees, we found that the greatest proportion was in Australia, where 26.9% of employers take on apprentices and trainees.[92] In England, 8% of employers and less than a third of very large firms offer apprenticeships.[93] An employer survey taken in Ireland in 2007 found 11% of Irish companies claiming to have used the SOLAS Further Education and Training Authority (formerly FÁS) apprenticeship service.[94] In 2010, approximately 4% of firms were part of the American apprenticeship network offering training and employment.[95] In a survey on Canadian employers conducted in 2011, 19% were found to employ apprentices.[96]

The figures show that employment prospects for English apprentices are considerably lower than apprentices in other G5 countries.

Success rates

Figure 8.3 Apprenticeship completion rates



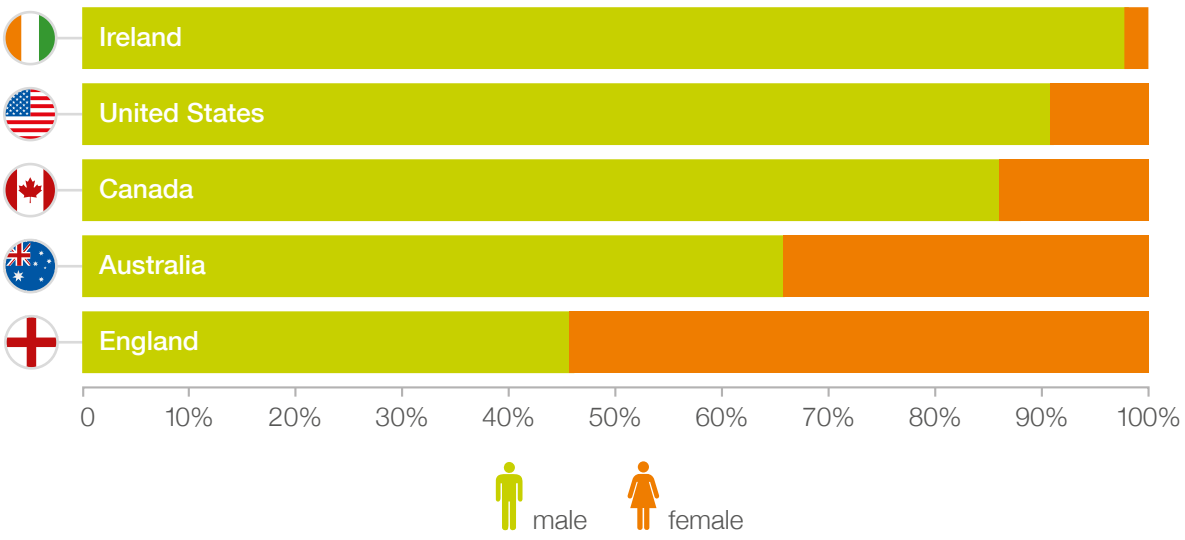
Sources: See Annexe C, Research methodology and sources

Completion rates are a useful measure for determining the overall effectiveness of an apprenticeship system. A low completion rate can be the result of several factors. Even so, these rates are a useful proxy for how effective an apprenticeship system is at progressing trainees from novices to competent workers.

Figure 8.3 shows that quite a lot of variation exists across the G5 countries. Indicatively, Australia and Canada have two of the lowest completion rates. By comparison, England, Ireland, and the United States all have relative high completion rates. Canada's completion rates have remained fairly static for decades – only half complete a Red Seal apprenticeship.

Gender balance

Figure 8.4 Comparison of male / female apprenticeship ratios across G5[102]



Sources: Data for United States sourced from Mathematica Policy Research; data for Ireland, England, and Australia sourced from International Labour Organization; data for Canada sourced from Registered Apprenticeship Information System. The data on completion rates is indicative and not directly comparable.

Figure 8.4 shows the gender balance amongst the different systems. England is way out in front in terms of offering women just as many apprenticeship opportunities as men.

Apprenticeships in Canada, Ireland, and the United States are found in the male-dominated skilled trades. In 2011, only 2% of apprentices in Ireland were female.

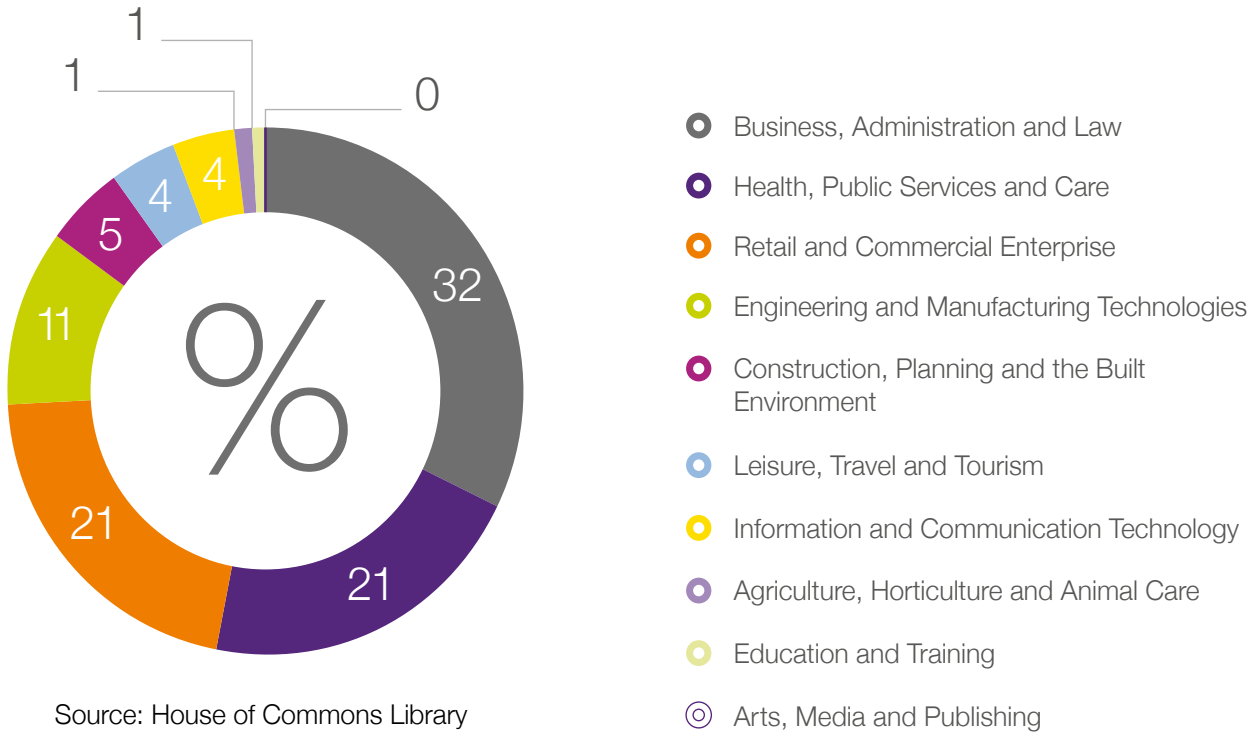
In 2010, less than 9% of those entering the Registered Apprenticeship system in the United States were female.[103]

Our analysis confirms that those countries offering a more expansive range of apprenticeships generally offer more apprentice opportunities for females.

Division among sectors

Figure 8.5 shows that apprentices in England are heavily concentrated in the service sectors. These non-trade occupations comprise a significantly large share of registrations, particularly Business, Administration & Law (32%), Health, Public Services and Care (21%), and Retail and Commercial Enterprise (21%). Combined, these three frameworks account for nearly 75% of commencements in the 2011/12 periods.[104]

Figure 8.5 Apprenticeship commencements in England by Framework, 2011/12 [105]

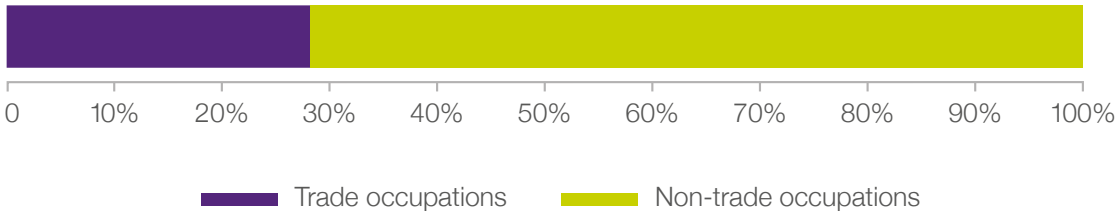


Source: House of Commons Library

Since 2009, some of the fastest growing sectors have been Education & Training; Business, Administration & Law; and Health, Public Services and Care, increasing by 728%, 115%, and 148% respectively.[106] (Figure 8.5)

The only sector to experience a decline in apprenticeship starts over this period was construction, most probably due to the recession. Construction apprentices in England experienced a 5% drop in registrations.

Figure 8.6 Balance between trade and non-trade occupations in Australia, 2012[107]



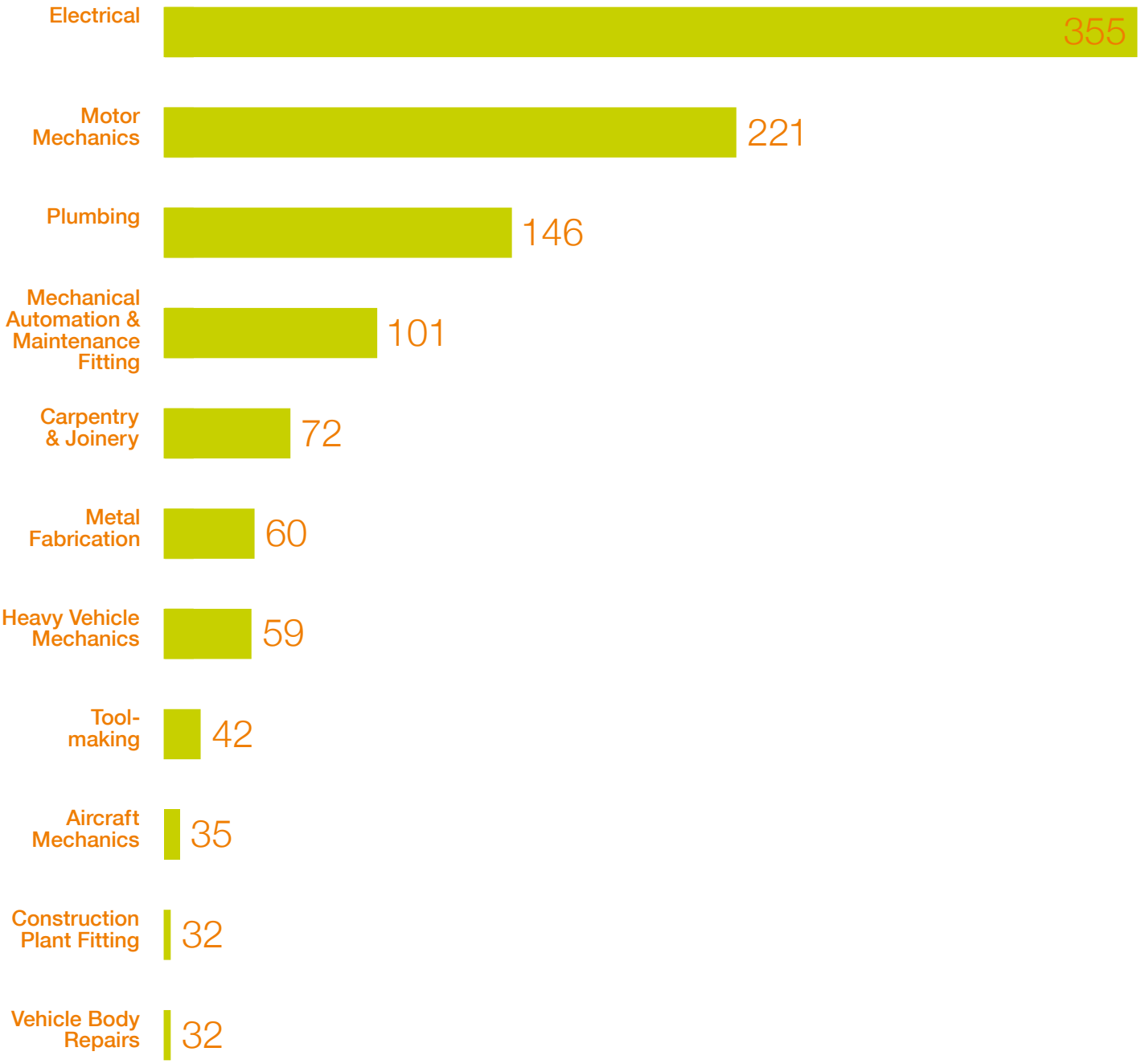
Source: NCVER

Apprenticeship starts in Australia, like England, are found predominantly in non-trade occupations, accounting for 71% of starts in 2012. (Figure 8.6)

The majority of non-trade roles are found in clerical and administrative work, community and personal service work, and in sales work associated with the retail sector. The most popular trade frameworks are in engineering and construction.

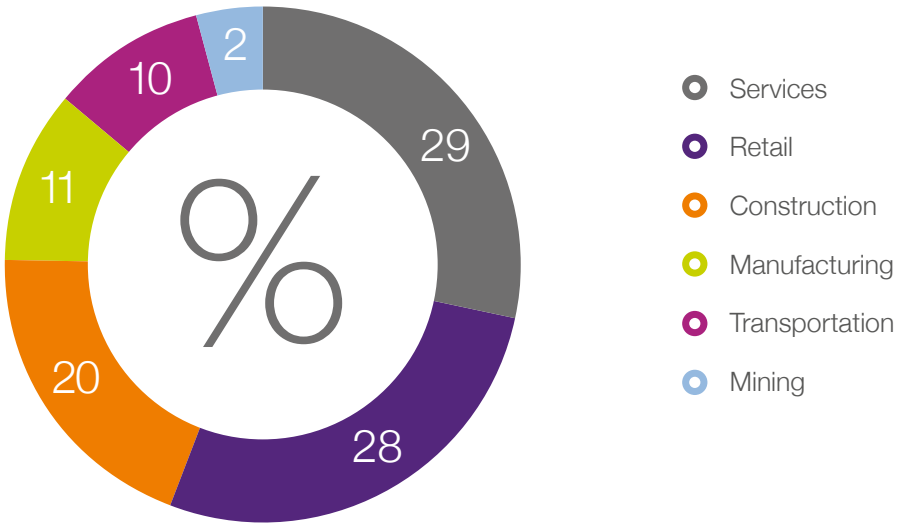
When comparing Australia and England with Canada and Ireland, we found marked differences in the types of apprenticeships on offer. Canada and Ireland's apprentices are heavily focused in the trade sector. (Figure 8.7)

Figure 8.7 Top 10 trades for new registrations in Ireland (2011) [108]



Source: SOLAS

Figure 8.8 Canadian apprenticeship starts by sector, 2011/12 [109]



Source: Canadian Apprenticeship Forum

Our research found a clear correlation between the type of apprentice roles on offer and female participation: the more non-trade apprenticeships, the greater the number of female apprentices.

Broadly speaking, females are underrepresented in traditional apprenticeship occupations. This could be for several reasons. Women are subject to discrimination in the labour market; similarly, the image of the trade and a lack of female role models in the field might also lead to discouragement, consciously or unconsciously, from parents and careers advisers. Recruitment in traditional male occupations is often largely practiced through word of mouth as opposed to open recruitment. As such, men are more likely to recruit their male colleagues, and the workforce, therefore, remains a self-perpetuating male-dominated world.[110]

One key finding from the examples of Australia and England is that, by providing apprenticeships in service sector roles, it is widening their appeal to young females. In order to effectively stimulate demand for young females and therefore effectively engage the entirety of young people, the evidence suggests that the expansion of service sector roles in apprenticeships should be encouraged.

Overall rankings: apprenticeship performance

1. Australia 2. Canada 3. England 4. United States 5. Ireland

- Australia tops the international rankings out of the five English-speaking countries.
- England ranks third overall for its performance on apprenticeships, and fourth in terms of its record on youth unemployment.
- Ireland has the highest apprentice completion rates of any country, due mainly to a more limited number of apprentice occupations.
- The United States has the second-highest completion rates.
- Canada has the worst completion rates overall, although its recent improvement in performance has been better than any other country.
- On a comparable measure, England has the worst rate of employers offering apprenticeship than any other country, except the United States.
- South Carolina, in the United States, has made the most rapid progress in recent times in terms of establishing apprenticeships, than any other country in our study.
- England has the best record on female participation in apprenticeships, due mainly to a more expansive approach taken.

Figure 8.9 shows the overall performance of each of the G5's apprenticeship systems. The metrics used are based on international classifications and accepted measures of a nation's performance. The Youth Unemployment rate is included in the metrics, because it gives a strong indication of the extent to which each country's apprenticeship system is working in an active way to match unemployed young people, through a skills-based approach, to entry-level and new occupations in the labour market. Indeed, regression analysis shows a strong correlation between the number of apprentices per 1000 workers and the overall youth unemployment rate.

Figure 8.9 Performance of the G5 countries in apprenticeship – overall rankings

	 Australia	 Canada	 England	 USA	 Ireland
Apprentices per 1000 Workers	40 (1)	30 (2)	20 (3)	14 (4)	10 (5)
Youth Unemployment Rate (2013)	12.1% (1)	12.9% (2)	21.1% (4)	16.3% (3)	28.5% (5)
Completion Rate	55% (4)	50% (5)	74% (3)	80% (2)	87% (1)
Employers Hiring Apprentices	26.9% (1)	19% (2)	8% (4)	4% (5)	11% (3)
Female Apprentices	34% (2)	14% (3)	54% (1)	9% (4)	2% (5)
Total Score	9	14	15	18	19
Overall Ranking	**1**	**2**	**3**	**4**	**5**

Sources: See Annexe C, Research methodology and sources

Chapter 9

Issues and challenges for apprenticeship reform in England

The Richard Review of Apprenticeships presented several major challenges to the current English system. For Doug Richard, an entrepreneur by background, the challenge was stark:

> *'Currently, too few young people, and too few of their parents, friends, teachers and those they look to for advice, see apprenticeships as a credible, valuable option. An Apprenticeship needs to be seen as a career path, not just a job, and as a positive choice rather than an option of last resort.'* [111]

These comments came at the end of a 143-page report, a concluding viewpoint that in many ways goes to the heart of the challenge ahead.

How does a new model of apprenticeship delivery in England simultaneously deliver a gold standard on par with academic A-levels while also boosting employer take-up and demand? Crucially, how is quality improved in a system that is perceived to have lost its way in recent years, as the brand definition of apprenticeship has been more and more stretched? What effect will the new traineeships have on the apprenticeship brand?

If implemented in full, the new Richard apprenticeships and the system supporting them will look very different from how English apprenticeships appear today. There could be a variety of employer groups developing standards, issuing perhaps fewer qualifications. The meaning of apprenticeships may move away from England's current expansive approach, to a definition more aligned with how Canada views apprenticeships: predominantly as a means to qualify for the skilled trades.

On-going assessment of competency may be replaced by a single test at the end, arguably reducing the reliance on awarding bodies. And, perhaps most radical of all, public funding for apprenticeships in future will end up being routed directly via the employer, rather than to colleges and training providers.

It's very difficult to forecast exactly what the immediate outcomes will be, even if the longer-term direction of travel of Richard's and the coalition government's ambition for apprenticeships is perhaps clearer, namely:

- More 'real apprenticeships' at technician level (Level 3)
- Increased higher-level apprenticeships, providing better progression routes to university, as well as the opening up of non-graduate entry routes to the professions
- A streamlined system of delivery, perhaps much less reliant on top-down bureaucracies and intermediaries; and
- A funding model in which the consumer of apprentice training will be more empowered

What does this agenda mean for implementation of Richard? And what does the international experience tell us about the possible road ahead?

Demand is likely to fall in the short to medium term

Following recent controversy surrounding 36-week apprenticeships and the rapid growth in places for the over 25s, Ministers have already taken steps to reduce so-called 'artificial demand' for apprentices in the short to medium term.[112]

What the precise reductions will be is hard to say, but, using a forecasting model that takes into account recent regulatory changes and assumes implementation of the Richard Review proposals in full, we estimate a moderate fall in apprenticeship volumes of up to 110,000 between now and 2017, as the impact of recent regulatory changes works through the system, and potentially a steep fall of around 190,000 in 2017, (assuming the Richard model of apprenticeships is implemented in full). Depending on the outcomes of the Trailblazers' exercise, we would expect volumes to recover to about the level they were in 2010 by the year 2020. The analysis points to the adoption of a counter-cyclical approach being needed to avoid apprenticeship starts from plummeting (see Figure 9.1).

The key factors causing the decline are:

- A new definition of a "Richard Apprenticeship" being applied, where only entry-level occupations at Level 3 and above, in more traditional sectors, will be considered a "real" apprenticeship

- The introduction of traineeships, resulting in a number of current apprenticeships, particularly those below Level 2, being reclassified

- The extension of income-contingent loans for those pursuing apprenticeships over the age of 25, where an employer will not cover the whole cost

- The potential reduction in off-the-job training subsidies, once the new funding model for apprenticeships is introduced

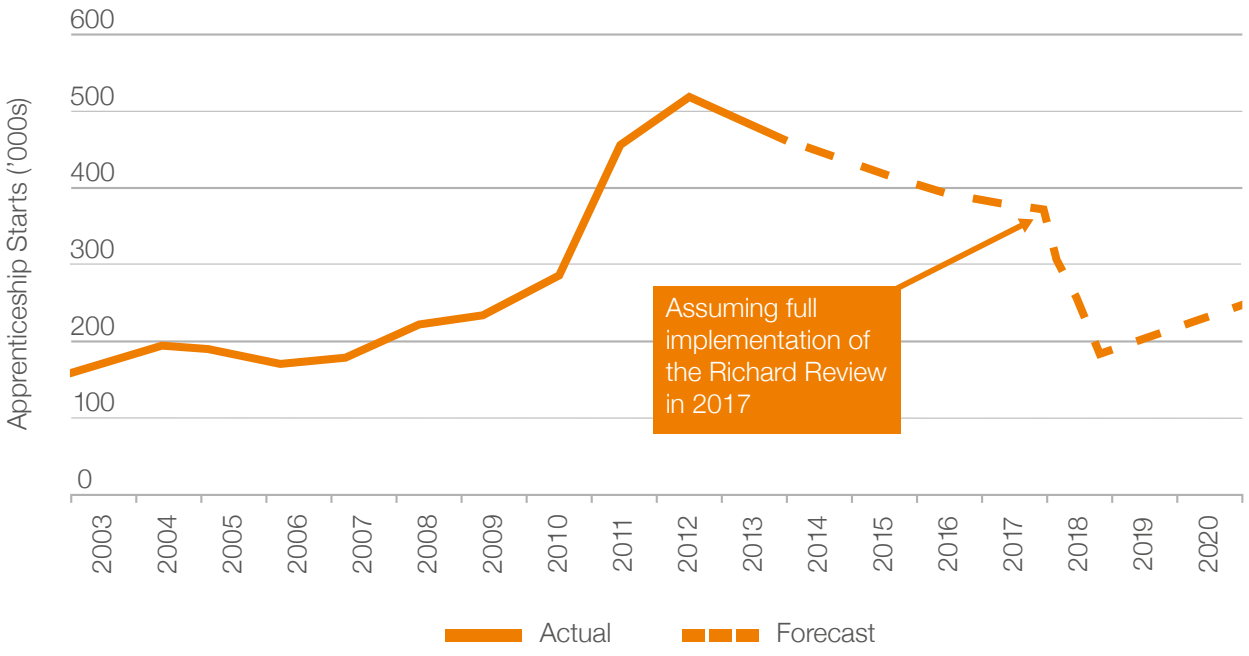
It is quite possible that traineeships will take up some of the slack left behind by a decline in the current model of English apprenticeships. Furthermore, Richard was clear that government, through bodies like the National Apprenticeship Service, should resist adopting a 'sales approach' to increasing apprentice numbers, suggesting that more natural employer demand should be allowed to determine volume. Again, this may reduce apprenticeships in the short term. The key lesson from South Carolina's model, however, is that the sales approach works, so long as no cold-calling takes place and flagship employers are mobilised to spread the word.

This approach is similar to the model currently followed in Ireland, albeit for a limited number of occupations. The main problem, as Ireland discovered after 2008, is that demand for apprentices plummeted. Many were made redundant halfway through their apprenticeships. A truly demand-led

system means that volumes can swing wildly in both directions when they are cyclical, as opposed to counter-cyclical, which is how English apprenticeships have been operating to date.

This issue goes to the heart of government policy and what the objective of apprenticeship really should be. Most experts would argue that simply meeting current demand – essentially servicing the stock of firms that already take advantage of publicly funded apprenticeships – is a missed opportunity. The experience of other countries would suggest apprenticeship systems work best when they are *counter-cyclical,* providing incentives to employers to take on apprentices, even in times of slack, so that the same companies are not hit by skills shortages when the economy picks up again. Currently, there are 11 people chasing every apprentice vacancy in England, and considerably more in occupations, like plumbing, which offer a solid wage return to those who qualify.[113]

Figure 9.1 Forecast Impact of the Richard Review on Apprenticeship Starts in England up to 2020



Source: INSSO team analysis. Based on statistics gathered from BIS, DfE, Skills Funding Agency and House of Commons Library, Standard Note: SN/EP/6113

The key issue in demand-led apprenticeships is creating demand in the first place. Simply mirroring what the market is currently able to support will not, in the short term, deliver an employer-owned skills revolution, whereas it might in the long run. This suggests that, during the transition, a counter-cyclical approach is probably required, where incentives are put in place to stimulate demand for high-quality apprenticeships.

Both regulation and market forces have a part to play

Around the world, there is no such thing as a publicly supported apprenticeship system that is not regulated to some degree or other. The issue is not so much the need for regulation, but the balance of regulation. All G5 countries regulate the definition of apprenticeship and the way apprentices are paid, categorised, and treated during the training process.

Recent controversies in English apprenticeships may have called into doubt the quality of existing regulation. Several high-profile training providers have been involved in fraud. The brand has been challenged on grounds of quality, not least by programmes purporting to be apprenticeships, even when they have lasted for less than one year. There has been a significant rise in awarding bodies offering apprenticeship qualifications (sometimes in the same occupation), as well as government-funded studies showing that up to 40% of employers may not have been paying apprentices the legal minimum wage.[114] All these issues point to the need for more intelligent regulation.

Richard argued that government should strip back unnecessary regulation and bureaucracy in the system, injecting more market discipline in the process. However, the evidence gathered in this report suggests that there is a limit to which market forces alone can work in a system that is partly reliant on public funds, and, therefore, one requiring public accountability for how these funds are spent. Moreover, as the United States has shown, effective regulation of how the market works in the interests of both producers and consumers is an important consideration when striking the right balance. Ultimately, this is a matter of governance, clarity, and better accountability in the system. In chapter 3, we suggested a reformed system architecture for apprenticeships: the Office of the Commissioner for Apprenticeship Standards England (OCASE). The commissioner's role, reporting to Ministers and Parliament, would be to simplify the system, approve the new apprenticeship standards, and, overall, ensure the integrity and value of the apprenticeship brand.

A quality 'Kitemark' or Richard Compliant approval scheme may be required in order secure greater trust in the brand

England's apprenticeship brand has been damaged in recent years. The need to meet politically driven targets is possibly one factor, as is the lack of any central body tasked with quality assurance of the whole system. In purely market-based systems, consumers look for impartial signs of value and credibility: Trip Advisor and Checkatrade.com are just two obvious examples. As Richard himself recognised, young people, their peers, and parents are not yet convinced about the value of apprenticeships. It may be time to implement a quality assurance mark – or Richard Compliant approval scheme – that clearly identifies those apprenticeships that are on a par with the perceived Gold Standard of A-Levels. Only then, perhaps, will young people believe there is a credible career pathway other than university.

An employer-driven support infrastructure that will require sustained investment

The policy hyperactivity of skills development under successive governments in recent decades has led to institutions that support the apprentice training process being frequently changed, abolished, or side-lined.[115] Of the institutional reforms enacted following the Learning and Skills

Act (1999), only UK-wide Sector Skills Councils remain, although they're no longer core-funded by government.

The evolution of industry partnerships recognises the need for deeper and wider employer engagement and ownership. In some sectors, this may be large employers working closing with their supply chains, or, the Sector Skills Council, National Skills Academies, or the many Apprenticeship Training Agencies that help small and micro-employers access apprenticeships. Meeting both individual employer and wider industry needs will be key.

Other countries examined in this study have engaged in far less institutional reforms over the years, yet they have still managed to incrementally reform the system and deliver better performance in some aspects of apprenticeships than is the case in England. Developing employer ownership requires either sustained government investment or an attitude that, in some sectors, there will be no apprenticeships if employers have neither the time nor the inclination to develop them.

Simpler occupational standards that remain world class

All the G5 countries have developed occupational competency standards. Methodologies are similar, even if their complexity can vary. Other countries respect England's approach to National Occupational Standards (NOS). However, all G5 countries recognised the issue of keeping the standards up to date with changing employment and technological trends, including the growing need for international standards that may be required by some sectors. Sectors that make use of skilled migration and global supply chains are particularly likely to want skills standards that are more international in approach. All G5 countries are striving to produce simpler standards. This is critically important in an era when national standards are increasingly being replaced by transnational ones.[116]

A combination of end-testing and competency assessment is likely to work best

A key pillar of the Richard reforms is the shift from the current occupational competency standards and apprenticeship frameworks to a new end-testing regime. There are many merits in a final exam, not least giving the apprentice a very clear benchmark of their accomplishment. We found that Canada has one of the most advanced apprentice end-testing regimes in the world. The model has been in existence since 1958 and is mostly valued by employers. Some anecdotal feedback from industry representatives, however, has suggested loopholes exist in Canada's current testing methodology, including some foreign migrant workers passing the test while still being judged incompetent by employers and the wider industry.

Pilots are currently underway in three sectors in Canada to rewrite the occupational competency standards, to simplify them and to look at the introduction of essential skills in literacy and numeracy as part of pre-screening for apprenticeship trades, and, in future, to corroborate the end-test exam results with some additional practical assessments in relevant occupations. Canada's development supports the approach that is being taken by the eight Trailblazers, announced as part of the Richard Review Implementation Plan, where employers are encouraged to experiment with different approaches while ensuring rigour and efficacy.

Giving individual purchasing power to employers is important, as is enabling collective means of investment to flourish

Redirecting the purchasing power for apprentice training from providers to employers is a bold step. The most radical of the proposals on which the government has consulted relates to financing the off-the-job training element via a partial subsidy or cash-based tax credit. The tax credit potentially would be offset against employers' payroll tax liability, a preferred option of the UK Commission for Employment and Skills.[117]

The international evidence about tax credits and other incentives, of which some were reviewed in this report, is mixed. The prima facie evidence would suggest that Canada has been able to boost apprentice completion rates using tax credits as a targeted incentive mechanism. Similarly, South Carolina has recorded a five-fold increase in apprenticeship since a $1000 tax credit per annum, per apprentice for up to four years, was introduced. However, we advise caution in reading too much into these assumptions, as no independent or empirical evaluations have yet been commissioned that look at the impact of these systems.

Our research found that well-functioning skills systems also require a collective system of employers purchasing training. Industry levies are one traditional example, as are group-purchasing consortia, a model put forward by the Federation to the government's funding consultation on apprenticeships.

These consortia would work by pooling the tax credits due to employers into a collective fund, managed by an industry-owned representative body. Similarly, the government's own £2000 Employment Allowance scheme could be used more imaginatively in future by extending the allowance as a condition of firms taking on apprentices. This would act as a clear incentive, particularly to small firms, to take on apprentices.

Providing the right balance of incentives and rewards

Apprenticeship reform is ultimately about effecting change in human and societal behaviour amongst employers, parents, and young people themselves. More effective processes and administrative changes are only part of the answer. In the end, a successful apprenticeship system is the combination of a number of different factors working together to form a unique 'eco-system', one governed by culture, customs, and practices, and often formed over many decades.

England has a unique opportunity to look afresh at the balance of incentives and rewards in the apprentice system. As Richard pointed out in his review, there are many players in the English landscape. It can be difficult to delineate exactly what motivates the different parts the system to work collaboratively. Competition needs to be defined as being the pursuit of quality improvement and take-up of more and better apprentice opportunities, and not as some zero-sum game in which different parts of the architecture fight it out over limited public funding, often to expand their own remit and resources.

Rewarding employers through the tax system for taking on apprentices and using the government's procurement processes to link public contracts to wider opportunities for young people are just two of the possibilities that the implementation of the Richard reforms opens up for English apprenticeships.

Conclusion

The availability of high-quality apprenticeship opportunities really matters. It matters to employers, who may be looking to grow talent from the ground up and take advantage of the skills that a new generation brings. It matters to young people because, where structured in the right way, apprenticeships can be a passport to a fulfilling career. And it matters to society more broadly because, without them, most economies would be deprived of a key part of their productive capacity.

The fact remains, however, that no one country has developed the perfect system of apprenticeships, be they the famed Germanic models with their emphasis on dual systems of training and employer engagement, or the ones in English-speaking countries (similar to the ones examined in this report) which operate alongside culturally pervasive attitudes that place a lot more value on academic routes to success. It is fair to say that every apprenticeship model has their respective strengths and weaknesses.

Real and high-quality apprenticeships of the kind Richard envisaged are just one part of a nation's path to prosperity; levels of innovation and entrepreneurship are just as important. The challenge for England, as it recovers from one of its deepest recessions, is to combine all these best practices to genuinely create a system of world-class skills that will last for decades to come.

The comparative information contained in this report and case studies of what other countries are doing will be useful to policymakers, including the Trailblazers in England: i.e., the companies and industry groups that have been appointed to trial and test out Implementation of Richard's approach to apprenticeship reform in future.

About INSSO

The International Skills Standards Organisation is an independent workforce development consultancy and standards setting body. Our vision is of a highly skilled global workforce that delivers prosperity and inclusive growth for all. Our mission is: shaping the global workforce™. We achieve our aims by working in a number of innovative ways to meet the needs of our clients. We provide expert strategic consultancy, carry out research, and develop and approve skills standards, as well as help our customers develop international opportunities to collaborate on ground-breaking projects.

Acknowledgements

INSSO would like to thank Mark Froud, Managing Director of Federation for Industry Sector Skills & Standards for commissioning the research and Chris Cherry, Gerry Baker and Colin Brentwood, the consultancy team developing the Richard compliant quality assurance mark, for their assistance and collaboration on the project.

Authors

Tom Bewick, director and chief economist of INSSO Ltd. wrote the main report and led the project. Diane Lawson, director, and Emma Evans, project manager, were responsible for writing chapters 5 and 6 of the report. Fieldwork and expert interviews were conducted in Australia by Diane Lawson, and in Canada, Ireland, and the United States by Tom Bewick and Emma Evans. The team was supported by Yenni Van and Tom Curran of INSSO Ltd. The fieldwork, including desk research, was conducted during August and September 2013.

Disclaimer

The views expressed in this report are those of the authors and are not necessarily those of the Federation or interview participants, unless otherwise stated.

Annexes

A. Acknowledgements

We would like to thank all of the interview respondents and experts in Australia, Canada, England, Ireland, and the United States for giving their time and expertise to provide essential information on apprenticeship systems. The associated training and policy challenges, together with reference to a number of key research data and secondary sources, have helped underpin this report. In particular, we would like to thank all the people listed in Annexe B.

B. List of interview respondents

Australia:

Australian Chamber of Commerce and Industry
Stephen Bolton, Senior Advisor Employment Education and Training

Australian Workforce and Productivity Agency (AWPA)
Robin Shreeve, CEO
Marie Persson, Director (Panel Member 21st Century Apprenticeships Expert Panel)

Department Further Education Employment, Science and Technology (DEFEEST)
Ray Garrand, CEO

Department of Industry, Innovation, Climate Change, Science Research and Tertiary Education, Australian Apprenticeships Branch
Andrew Lalor, General Manager
Brett Hall, Participation & Engagement Team

Energy Skills Australia
Bob Taylor, CEO
Peter Tighe, Chairman

Enterprise RTO Association (ERTOA)
Chris Butler, CEO

Group Training Australia (GTA)
Jim Barron, CEO
Jeff Priday, National Policy and Projects Manager

MEGT Australian Apprenticeships Centre (AAC) - Skype interview
Ashley Langdon, GM and Director, Impact Apprenticeships

National Centre for Vocational Education Research (NCVER)
Tom Karmel, CEO

TAFE Directors Australia
Martin Riordan, CEO

Transport and Logistics Industry Skills Council (TLISC)
Robert Adams, CEO

Australian Manufacturing Workers Union
Skills Training and Apprenticeships
Ian Curry, National Coordinator

Canada:

Canadian Apprenticeship Forum
Sarah Watts-Rynard, Executive Director

Canadian Tourism Human Resource Council (CTHRC)
Wendy Swedlove, President
Philip Mondor, Senior Vice-President

Employment and Social Development Canada (ESDC)
Josée Landry, Manager, Trades and Apprenticeship Division
Trent Craddock, Senior Research Advisor, Trades and Apprenticeship Division
Jessica Gibbs, Manager, Trades and Apprenticeship Division
Samuel A Laryea, Manager, Policy Research Analysis Division

Post-Secondary Education, Training and Labour Apprenticeship and Occupational Certification (Branch), New Brunswick
Dr. Lori Leach PhD
Wendy Maher

England:

UK Commission for Employment and Skills (UKCES)
Judith Compton, Assistant Director

Ireland:

City & Guilds
Michael Goeden, Solutions Development Manager
Rónán Haughey, Development Manager – Europe
Philip Sheridan, Accreditation and Recognition Manager – Europe

SOLAS
Brian Head, Project Manager, Curriculum and Assessment Development Unit

United States:

Apprenticeship Carolina
Brad Neese, Director of Apprenticeship Carolina at South Carolina Technical College System

Urban Institute, Research of Record
Robert I. Lerman, Institute Fellow, Center on Labor, Human Services & Population

US Chamber of Commerce
Jodi Hanson Bond, Vice President
Shelley Hymes, Advisor

US Department of Labor (DOL)
Michael R. Qualter, Division Chief
John V. Ladd, Administrator
James Foti, Deputy Administrator, and Zachary Boren, Executive Assistant
Zachary Boren, Executive Assistant

World Bank
Jee-Peng Tan, Education Advisor
Alexandria Valeria, Senior Economist
Amit Dar, Senior Economist
Cristian Aedo, Senior Economist

C. Research methodology and sources for country ranking system

In order to rank each system, we first compared data on a selection of performance indicators. Scores ranging from 1 (best) to 5 were assigned to each country according to their relative performance against the other group members. The scores were then totalled and each system ranked. Countries that consistently ranked highly under each indicator will accrue a lower total score, therefore resulting in a better overall rank. Conversely, countries performing badly relative to the group will have higher total scores and, thus, rank lower.

Rationale for Indicators of Performance

Apprentices per 1000 Workers

This indicator can be used as a proxy for determining the prevalence of apprentices in the labour force. A lower number of apprentices relative to other workers will show an underutilisation of the apprenticeship system.

Source: International Labour Organization, 2012, *Overview of Apprenticeship Systems and Issues, ILO contribution to the G20 Task Force on Employment* [report].

Youth Unemployment Rate

A high youth unemployment rate can potentially highlight a high level of mismatch between the skills young people possess and those in demand from industry. It could also indicate a weakness in a system's ability to absorb those who do not have the required skills and train them appropriately.

Sources: data for Ireland, United Kingdom, United States, and Canada sourced from www5.statcan.gc.ca. 2013. *CANSIM - Canadian socioeconomic database from Statistics Canada* [online]. Available at: http://www5.statcan.gc.ca/cansim/home-accueil?lang=eng. Data for Australia sourced from Abs.gov.au, 2013, *Australian Bureau of Statistics* [online], available at: http://www.abs.gov.au.

Completion Rate

Training apprentices, both on and off the job, requires large amounts of time and resources from both industry and government. This poses a significant economic cost if apprentices do not complete the courses, as it implies a waste of resources (e.g., resources that could have been allocated to revenue-generating activities). It also delays the time when a young apprentice is able to contribute productively to the economy.

Sources: data for Australia sourced from Australian Industry Group, 2013, *Apprenticeships: Achieving Excellence* [report]. Data for Canada PowerPoint presentation to INSSO research team, presented by officials at Employment and Social Development (ESCD), Canada, Ottawa, 24 August 2013. Data for Ireland sourced from Foras Åiseanna Saothair (FÁS), 2008 and 2012, *Annual Report* [report]. Data for England sourced from Thedataservice.org.uk, 2013. *The Data Service* [online], available at: http://www.thedataservice.org.uk. Data for United States sourced from R. Lerman, L. Eyster, and K. Chambers, The Urban Institute Center on Labor, Human Services, and Population, 2009, *The Benefits and Challenges of Registered Apprenticeship: The Sponsors' Perspective* [report]. Note here that 65% of employers reported completion rates of 70%.

Employers Hiring Apprentices

To encourage young people to take on apprenticeships, it is necessary to perceive them as having economic value. If few employers actively hire apprentices, then the anticipated career prospects of such courses will be low. Therefore, a higher proportion of employers taking on apprentices is favoured over a lower proportion.

Sources: Data for Australia sourced from Ncver.edu.au, 2013, *NCVER - Apprentices and trainees,* [online], available at: http://www.ncver.edu.au/statistic/21049.html. Data for England sourced from Labour's Policy Review, 2013, *A revolution in apprenticeships: a something-for-something deal with employers, The Husbands Review of Vocational Education and Training,* [report]. Data for Ireland sourced from Foras Åiseanna Saothair (FÅS). 2007. *Survey of Employers' Usage of FÁS Services – 2007,* [report]. Data for the United States sourced from Doleta.gov, 2013, *Registered Apprenticeship - Earn. Learn. Succeed., Employment & Training Administration (ETA) - U.S. Department of Labor,* [online], available at: http://www.doleta.gov/oa/employer.cfm and L. Bowan, 2013, *Statistics of U.S. Businesses Main-Tabulations by Geography, Industry, and Enterprise, Employment Size-Business & Industry-US Census Bureau,* [online], available at: http://www.census.gov/econ/susb/. Data for Canada sourced from Canadian Apprenticeship Forum, 2011, *Employers and Apprenticeship in Canada,* [report].

Female Apprentices

There are more women than men populating all of the G5 countries currently under study.[118] Acquiring trade skills and enrolling in apprenticeships have been historically male-dominated routes to employment; however, changes in social norms, as well as shifts in the structure of industry, demand a system that can accommodate both genders. A low number of female apprentices relative to males highlight issues of supply and demand of labour. Clearly, a system that lacks female apprentices does not offer programmes attractive or suitable to females. To fully engage the unskilled youth, it is imperative that programmes be designed in such a way that they are accessible to all.

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F. Secondary sources and further reading

Australia

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Australian Government – www.australianapprenticeships.gov.au

Australian Apprenticeships and Traineeships Pathways career information – www.aajobpathways.com.au

Apprenticeship LMI and IAG – www.future.edu.au

Australian Apprenticeships and Traineeships Information Service – www.aatinfo.com.au

MEGT Australian Apprenticeships Centre, government-contracted provider of support services to employers of apprentices and trainees in Australia – www.megt.com.au

VERTO – matching service – www.verto.org.au

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Canada

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Employment and Social Development Canada – http://www.hrsdc.gc.ca/eng/jobs/trades/index.shtml

Canadian Apprenticeship Forum – www.caf-fca.org

Interprovincial Standards Red Seal Program – www.red-seal.ca

Careers In Trades – information, advice, and guidance – www.careersintrades.org

Career Cruising – career exploration software and matching service – www.careercruising.com

Services for Youth Canada – http://www.youth.gc.ca/eng/topics/jobs/apprenticeship.shtml

Employer and apprentice matching service in Ontario – www.apprenticesearch.com

Research and reports:

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England

Key websites:

National Apprenticeship Service – http://www.apprenticeships.org.uk

Government – https://www.gov.uk/apprenticeships-guide/applications-and-qualifications

Skills Funding Agency – http://skillsfundingagency.bis.gov.uk/providers/programmes/nas/

Federation for Industry Sector Skills & Standards – www.fisss.org

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Ireland

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Foras Åiseanna Saothair Training & Employment Authority (currently in dissolution and its functions being re-assigned) – www.fas.ie

SOLAS Further Education and Training Authority – http://www.solas.ie/fas.aspx

Expert Group on Future Skills Needs – http://www.skillsireland.ie

Department for Education and Skills – http://www.education.ie/en/

Further Education and Training Awards Council www.fetac.ie

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United States

Key websites:

United States Department of Labor, Employment & Training Administration – *www.doleta.gov/oa/*

The National Association of State and Territorial Apprenticeship Directors – *www.nastad.us*

Career OneStop Careers IAG – *www.careeronestop.org*

Workforce3one – government led communications and learning platform – *www.workforce3one.org*

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