THE FUTURE OF APPRENTICESHIPS AND WORK-BASED LEARNING

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Over the next 45 minutes…

- **Introductions**
  - What I do? Thematic work at the OECD
- **Engaging employers in education**
  - New evidence on impact and deployment
- **Work-based learning in the twenty-first century**
  - The character of change
- **Worked example: what change means for apprenticeship duration**
- **Conclusions: vicious and virtuous circles**
INTRODUCTIONS
Introductions: what do I do?

- The VET and Adult Learning Team works with dozens of OECD and non-OECD countries to help governments improve policy by learning from i) comparative international data; ii) country examples; iii) academic literature
- Country studies and thematic reviews.
  - Work-based learning within school-based VET
  - Unlocking the potential of migrants through VET
- Lots of travel...
- Over last twelve months: China; South Korea; Germany (x3); Switzerland (x2); England (x3); Sweden (x2); Bulgaria; Belgium – EC (x3); Ireland; Scotland (x2).
- By the end of 2018: Austria; England; Germany; Switzerland – ILO; New Zealand; Australia; Laos; Spain; Italy.
Multi-country insights into effective VET systems

Learning for Jobs

Upper-secondary level

Skills beyond School

Post-secondary level
Understanding work-based learning challenges better

- Work-based learning & productivity
- Costs and benefits of apprenticeships
- Work-based learning: incentives and implementation
- Recognising skills acquired through work-based learning
- Work-based learning & school-to-work transition for at-risk youth
- Career guidance & employer engagement
ENGAGING EMPLOYERS IN EDUCATION
Continuing work on employer engagement in education

https://www.educationandemployers.org/research-main/
Recent publications

- International literature review. 73 studies on economic, educational & social impacts of careers education. 2016.
- International literature review. 75 studies on economic & educational impacts of employer engagement. 2018.
A strategic approach to employer engagement in education

The deployment of employer engagement by schools to...

...boost young people’s understanding of jobs and careers

Broadening and raising career aspirations and supporting young people to make decisions on what to study, where to study, and how hard to study.

...provide knowledge and skills demanded by the contemporary labour market

Helping young people to build the skills that modern workplaces need, such as creative problem-solving and team-working.

...provide knowledge and skills demanded for successful school-to-work transitions

Giving young people relevant work experiences as well as practical insights into how recruitment processes work and contemporary workplaces operate.

...enrich education and underpin pupil attainment

Using employers to support teaching resources for the classroom and helping young people to see the connection between what they learn at school and employment outcomes.

Source: Mann et al. 2018. Employer engagement in Education. EEF.
How to optimise the impacts of employer engagement?

The literature suggests that employer engagement to **boost young people’s understanding of jobs and careers** employer engagement in education will be:

...**authentic**. It will enable first-hand encounters between children and young people and workplaces and individuals from the world of work.

...**commonplace**. Volume matters with a number of studies highlighting the importance of at least four memorable encounters across schooling.

...**valued**. Where young people themselves testify that episodes of employer engagement were of value to them, the evidence suggests that they were right and better outcomes follow.

...**varied**. While employer engagement activities can be remarkably versatile in enabling young people to secure outcomes of value, different activities can be associated with different outcomes and with improving outcomes for different types of pupil.

...**contextualised**. Where provision is undertaken within the context of effective career guidance, some studies highlight, and logic suggests, improved outcomes.

...**personalised**. Evidence suggests that deficit models should be applied and young people entering educational experiences with limited access to relevant work-related networks should be targeted with more intense interventions.

...**started young**. With benefits appearing to be more driven by changes in attitude and expectation than the growth of human capital, interventions should begin in primary schooling where identity formation can be supported through career learning activities within and outside of the classroom.

Source: Mann et al. 2018. Employer engagement in Education. EEF.
Research innovations in employer engagement

What impact can employer engagement have on student attitudes towards school and their academic achievement? An analysis of OECD PISA data

Elnaz Kashefpakdel, Jordan Rehill and Matteo Schleicher

Table 12.1 Students reporting participation in four career development activities by country

<table>
<thead>
<tr>
<th>Country</th>
<th>Internship</th>
<th>Job shadowing or work-site visit</th>
<th>Taken part in a job fair</th>
<th>Spoken to a careers adviser at my school</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>49%</td>
<td>30%</td>
<td>52%</td>
<td>66%</td>
</tr>
<tr>
<td>Belgium</td>
<td>11%</td>
<td>20%</td>
<td>15%</td>
<td>30%</td>
</tr>
<tr>
<td>Canada</td>
<td>9%</td>
<td>34%</td>
<td>40%</td>
<td>40%</td>
</tr>
<tr>
<td>Denmark</td>
<td>69%</td>
<td>52%</td>
<td>25%</td>
<td>94%</td>
</tr>
<tr>
<td>Finland</td>
<td>62%</td>
<td>43%</td>
<td>38%</td>
<td>84%</td>
</tr>
<tr>
<td>Ireland</td>
<td>7%</td>
<td>39%</td>
<td>11%</td>
<td>52%</td>
</tr>
</tbody>
</table>

Table 12.6 Summary of statistically significant positive responses to four attitudinal statements by career development activity and country

<table>
<thead>
<tr>
<th>School does little to prepare you for life</th>
<th>Australia</th>
<th>Belgium</th>
<th>Canada</th>
<th>Denmark</th>
<th>Finland</th>
<th>Ireland</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internship</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Job shadowing</td>
<td></td>
<td></td>
<td>x</td>
<td>x</td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Job fair</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Career advisor</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
</tbody>
</table>

| School is a waste of time                |           |         |         |         |         |         |
| Internship                               | NA        |         | x       | x       |         |         |
| Job shadowing                            |           |         | x       | x       |         |         |
| Job fair                                 | x         | x       | x       | x       | x       | x       |
| Career advisor                           | x         | x       | x       | x       | x       | x       |

| School useful for jobs                   |           |         |         |         |         |         |
| Internship                               | x         |         |         |         |         | x       |
| Job shadowing                            | x         | x       | x       | x       | x       | x       |
| Job fair                                 | x         | x       | x       | x       | x       | x       |
| Career advisor                           | x         | x       | x       | x       | x       | x       |

| School helps to get a job                |           |         |         |         |         |         |
| Internship                               | x         |         | x       | x       |         |         |
| Job shadowing                            | x         | x       | x       |         |         |         |
| Job fair                                 | x         | x       | x       | x       |         |         |
| Career advisor                           | x         | x       | x       | x       | x       | x       |

Table 12.7 Analysis: relationship between participation in internship and student achievement

<table>
<thead>
<tr>
<th>Activity</th>
<th>Country</th>
<th>Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internship</td>
<td>Finland</td>
<td>2.045*</td>
</tr>
<tr>
<td>Job shadowing</td>
<td>Finland</td>
<td>2.379*</td>
</tr>
<tr>
<td>Job fairs</td>
<td>Ireland</td>
<td>4.048*</td>
</tr>
<tr>
<td>Career advice</td>
<td>Belgium</td>
<td>3.035*</td>
</tr>
<tr>
<td></td>
<td>Denmark</td>
<td>12.188*</td>
</tr>
<tr>
<td></td>
<td>Finland</td>
<td>17.544*</td>
</tr>
<tr>
<td></td>
<td>Ireland</td>
<td>8.686*</td>
</tr>
</tbody>
</table>

* Statistically significant at 1%
### Average number of recalled employer engagements by geographic region, 2016

<table>
<thead>
<tr>
<th>Rank</th>
<th>Region</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>South East</td>
<td>1.77</td>
</tr>
<tr>
<td>2</td>
<td>East Midlands</td>
<td>1.76</td>
</tr>
<tr>
<td>2</td>
<td>West Midlands</td>
<td>1.76</td>
</tr>
<tr>
<td>4</td>
<td>London</td>
<td>1.62</td>
</tr>
<tr>
<td>5</td>
<td>Wales</td>
<td>1.58</td>
</tr>
<tr>
<td>6</td>
<td>Yorkshire and the Humber</td>
<td>1.57</td>
</tr>
<tr>
<td>7</td>
<td>East of England</td>
<td>1.56</td>
</tr>
<tr>
<td>7</td>
<td>North West</td>
<td>1.56</td>
</tr>
<tr>
<td>9</td>
<td>South West</td>
<td>1.52</td>
</tr>
<tr>
<td>10</td>
<td>North East</td>
<td>1.46</td>
</tr>
<tr>
<td>11</td>
<td>Scotland</td>
<td>1.45</td>
</tr>
</tbody>
</table>

Source: Contemporary transitions
BIG TRENDS SHAPING WORK-BASED LEARNING
Young people’s achievement has risen considerably
Young people’s aspirations have risen considerably.

The jobs that 15-years-olds expect to have by age 30: percentage expecting to have skilled jobs (ISCO 1-3)

Note: ISCO 1-3 categories include Managers, Professional and Technicians and associate professionals.

Source: PISA database
Classrooms have become more diverse

How many students have an immigrant background?

Percentage of students with an immigrant background, by group

- Second-generation immigrant students
- Native students of mixed heritage
- First-generation immigrant students
- Returning foreign-born students

On average across OECD countries:
- 5% of students were first-generation immigrant students
- 7% of students were second-generation immigrant students
- 2% of students were returning foreign-born students
- 9% of students were native students of mixed heritage
But career aspirations remain traditional

Top 10 career expectations of 15 year old in PISA 2015

- Medical doctors
- Teaching professionals
- Lawyers
- Police officers, detectives and inspectors
- Nursing professionals
- Psychologists
- Building architects
- Veterinarians
- Athletes and sports players
- General office clerks

% of students who expressed career expectations in the different occupational categories, for students who answered

Notes: category medical practitioner/doctors formed by combining together medical doctors, specialist medical practitioners and generalist medical practitioner. Teaching professionals category created by combining all ISCO 23 (all categories together). Police officers, detectives and inspectors created by combining 5412, 3355, 3411.

Source: PISA database
Teenagers are no longer working

UKCES (2015), Catch 16-24
Demand for skills is changing

Work has changed.

New processes or technologies are being introduced

Per cent of workers who report new processes or technologies introduced in their current workplace during the previous three years that has affected their immediate working environment

...and will change more.
Job security isn’t what it used to be

Non-standard forms of employment as a percentage of total employment

2013

Part-time temporary employees
Full-time temporary contract
Part-time permanent employees
Self-employment

Note: Sample restricted to paid and self-employed (own account) workers aged 15-64, excluding employers, student workers and apprentices. For Australia, 42.6% of full-time temporary contract are casual; and 85.2% of part-time temporary employees are casual.

Source: OECD (2015a)
And all the time inequality is growing
Big changes, big questions

How can we get enough employers involved?

What’s the right balance between technical skills & general education?

How can we ensure that VET is relevant in a dynamic labour market?

How can we ensure, in this changing world, that VET provides learners with sustainable skills that employers want?

How can we ensure that VET is attractive to all young learners?

How can we pay for it?

How to ensure that teaching and training is excellent?
WORKED EXAMPLE: WHAT CHANGE MEANS FOR APPRENTICESHIP DURATION
**Duration matters**

- **Employers**: provide training to apprentices and benefit from their work over time.

- **Apprentices**: accept lower wages while in training but expect higher wages on completion.

- **Governments**: commonly support school-based component of apprenticeships & often provide incentives to employers.
To make work-based learning an attractive option for both employers and trainees, regulations regarding the content, length and structure of work-based learning schemes need to allow firms to reap sufficient benefits to encourage them to provide enough work-based learning places, while also ensuring trainees develop sufficient skills and are not used as cheaper substitutes for skilled employees for an extended period.

Kis, V. (2016), "Work, train, win: work-based learning design and management for productivity gains", OECD Education Working Papers
The scheme ending at T1 is too short to yield short-term benefits to firms.

The scheme ending at T2 goes on too long, with few learning opportunities over a long period.

A stylised model of trainee productivity.
Relative productivity varies over apprenticeship duration


Kis, V. (2016), "Work, train, win: work-based learning design and management for productivity gains", OECD Education Working Papers
Apprenticeship design in Norway

National authorities define content and duration of apprenticeships in law with advice from, & in response to social partners.

National Council for VET advises on overarching level for VET policy.

Draft

Consultation

New curriculum initiated & drafted by one of eight Vocational Training Councils

employers, employees VET teachers, students union, regions & ministry
Adapting apprenticeships to meet needs of Youth at Risk

Source: OECD (2016), Society at a Glance 2016: OECD Social Indicators, DOI: [http://dx.doi.org/10.1787/9789264261488-en](http://dx.doi.org/10.1787/9789264261488-en)
Youth characteristics matter – NEETs tend to have weaker skills than their peers

Percentage of individuals with weak literacy or numeracy skills

Source: Calculations based on the OECD Survey of Adult Skills.
Note: Adults aged 16-29. Low-skilled adults include those with literacy or numeracy skills below Level 2.
Work-based learning for youth at risk: how to improve the cost-benefit balance for employers

1. Adapting the design of apprenticeships

2. Preparing youth for work-based learning

3. Providing support during work-based learning
Occupations with shorter apprenticeships can be better for youth at risk

- How long it takes to master a skill depends on the occupation
- Occupations where apprenticeships are shorter are better suited to youth at risk

Electrician apprentice with 50% relative productivity = take twice as long to install a branch circuit than a qualified electrician

Two-year apprenticeships for youth at risk in Switzerland

- Designed to serve youth who have dropped out of school or are at risk of doing so
- Offered in 60 occupations (where employer demand): healthcare assistant, retail assistant, hairdresser etc.
- Possibility to progress into 3-4 year apprenticeships (40% of graduates do so)
- It works for employers: on average firms break even by the end of the programme

The “transition system” in Germany
- Acts as a bridge between middle school and apprenticeship
- Each federal state defines its own provision – diverse mix of initiatives
- Large system: for 10 new apprentices there are 5 new entrants into the transition system

Traineeships in England (UK)
- Framework defining key elements: 100-240 hours of work experience, work preparation, English & math
- Targets youth aged 16-24
- Lasts between 6 weeks and 6 months
- Supported by public funding
- Could lead to a more significant pre-apprenticeship
My coach service – Scotland

- Targets youth at risk of disengaging from learning
- Tasks: initial evaluation, help through career guidance, help finding a work placement, liaising with college and employer throughout the training

Optional training for apprentice supervisors – Norway

- 2 day training free of charge to participants
- Delivered by schools, training offices (owned jointly by firms in the same sector) or counties
- Content: how to develop a training plan, deal with administration, how to manage apprentices etc
Adapting apprenticeships to meet the needs of adult workers

How old are apprentices?
Share of 25-year-olds and older among current apprentices

Source: Kuczera M. (2016), Striking the Right Balance: Costs and Benefits of Apprenticeship, OECD.
Recognising vocational skills acquired through WBL

Four tools

- Admission into training programme due to pre-existing skills
- Reduced programme duration
- Qualification without a required training programme
- Modular vocational programmes

Viktória Kis and Hendrickje Windisch (forthcoming), *Making skills transparent: recognising vocational skills acquired through work-based learning*. OECD Publishing
CONCLUSIONS
From vicious circles…

Source: Simon Field
…to virtuous circles.

Consistent high quality and the virtuous circle

Source: Simon Field
Future possible work – views welcome

- Engaging employers in VET
- Improving comparative data on the delivery and outcomes of VET
- Getting the workforce right (tutors and trainers)
- Making VET for adults work
- VET as a pathway to future learning
- The relative finances of VET
- VET and the changing character of work
Thank you

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How do countries with a strong apprenticeship system perform on basic skills?

Source: Kuczera (forthcoming) based on data from the OECD Survey of Adult Skills