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# Working it out: Career Guidance and Employer Engagement

**Pauline Musset,**

**Lucia Mytna Kurekova**

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# WORKING IT OUT: CAREER GUIDANCE AND EMPLOYER ENGAGEMENT

**OECD Education Working Paper No. 175**

By Pauline Musset, OECD and Lucia Mýtna Kureková, Slovak Governance Institute, Bratislava.

This working paper has been authorised by Andreas Schleicher, Director of the Directorate for Education and Skills, OECD.

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Pauline Musset, Analyst (pauline.musset@oecd.org) and Lucia Mýtna Kureková, Senior Researcher (kurekova@governance.sk).

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## *Abstract*

Career and education decisions are amongst the most important young people make. Gender, ethnicity and socio-economic factors all strongly affect these choices. Career guidance is both an individual and a social good: it helps individuals to progress in their learning and work, but it also helps the effective functioning of the labour and learning markets, and contributes to a range of social policy goals, including social mobility and equity. This justifies the public investment in career guidance activities. Empirical evidence point towards career guidance services – in school and outside – having a formative influence on young people's understanding of themselves and the world of work, and can often improve educational, social and economic outcomes. As young people stay in education and training longer and as the labour market becomes more complex, the case for career guidance grows. But what makes for effective provision? This paper looks at the features of good career guidance practice, including the need for schools to begin early and the essential role of exposure to the world of work.



## *Résumé*

Les choix d'orientation scolaire et professionnelle comptent parmi les plus importants que font les jeunes. Ces choix sont fortement influencés par l'appartenance sexuelle, l'origine ethnique et divers facteurs socioéconomiques. L'orientation professionnelle est un bien à la fois individuel et collectif : elle aide les individus à avancer dans leurs études et leur carrière, mais elle contribue aussi au fonctionnement efficace des marchés du travail et de l'éducation, et à la réalisation de divers objectifs de la politique sociale, notamment la mobilité sociale et l'équité. Cela justifie les investissements publics dans les activités d'orientation professionnelle. L'expérience montre que les services d'orientation professionnelle – au sein des établissements scolaires et en dehors – ont une influence formative sur la connaissance de soi et la compréhension du monde du travail, et qu'ils peuvent souvent améliorer les résultats scolaires des jeunes et les indicateurs sociaux et économiques. Compte tenu de l'allongement de la durée des études et de la formation des jeunes et de la complexité croissante du marché du travail, les arguments en faveur de l'orientation professionnelle se multiplient. Mais qu'est-ce qui caractérise une offre de services efficace ? Le présent rapport étudie les caractéristiques d'une bonne pratique en matière d'orientation professionnelle, notamment l'importance pour les écoles de commencer tôt, et le rôle essentiel que jouent les employeurs et les employés dans le processus.

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# *Summary*

## Introduction

This paper looks at the need for, and delivery of, career guidance in OECD countries. Young people have more decisions to make than before – many more students stay in education beyond the end of compulsory schooling – and they are making these choices in the context of a rapidly changing labour market. It is timely for countries to think afresh about how career guidance is delivered in schools. Research evidence, while still imperfect overall, has improved considerably over recent years. Evidence on the educational and economic returns related to career guidance is growing, providing valuable insights for policy and practice. Prominent amongst these is that effective career guidance includes extensive engagement from people in work (employers, employees, trade unions, professional bodies). At its best, such exposure to the world of work enriches career guidance by presenting young people with authentic and trusted insights into jobs and how it relates to decisions about education and training.

The paper follows established OECD practice by understanding career guidance as a connected family of activities including:

- *Career education* in which students learn about the world of work and develop career management skills through classroom teaching, and through other activities (OECD, 2010).
- *Career information* on courses and occupations, learning and career opportunities, progression routes and choices, as well as information on where to find help and advice, and how to access it (OECD, 2010).
- *Individual career counselling* on a one-to-one basis, providing specific advice on career decisions; either pro-actively (mandatory interviews for all) or reactively (on demand). Advice can be general or targeted (Watts, 2009).
- *Direct contact with the world of work* to give young people first-hand insights into, and experiences of, the labour market in order to raise, broaden and inform career aspirations (Hughes et al., 2016).

## The transition from education to work

### *Young people face difficulties transitioning from education into the labour market*

Young people have long faced challenges in entering the labour market. Across the OECD, overwhelmingly they experience unemployment at higher levels than adults aged over 25. Youth unemployment levels have been historically high over the last decade, exposing young people to the long-term scarring effects of young joblessness. When in work, young people are much more likely than their older peers to be found in less attractive "non-standard jobs", particularly temporary employment.

### *Changes in the labour market and concerns about skills imbalances*

Young people are entering a world of work which is undergoing rapid change. Technology is transforming jobs and the labour market is becoming more polarised by skills level with growth in high and certain low skill employment and a contraction of middle-skilled jobs. Connected to this, large numbers of workers – including more than a quarter of young people across the OECD – are over-qualified for the jobs they do. Vertical skills mismatch and horizontal (field-of-study) mismatch is experienced by up to 50% of workers. While long-term consequences remain to be seen, such mismatch is associated with lower than expected wages and job satisfaction.

### *Education decisions are important*

The growing marketisation of postsecondary education and training, in some countries, has introduced a new intermediary between young people and the workplace which responds to its own motivations and does not always offer quality programmes that add value for students in terms of labour market prospects. Young people, as they navigate education and training provisions, can be seen as making important investment decisions for their future lives. It is the role of career guidance to ensure that these decisions can be confidently taken.

## The case for career guidance

### *Young people may not have realistic labour market expectations*

There is a strong basis to believe that young people's career expectations are often unrealistic and poorly informed. Data from PISA (Programme for International Student Assessment) 2015 shows that most 15-year-olds have a clear view about what they want to do – and many of them are interested in just a small number of jobs. One-third of young people, quizzed in the PISA study, expected to work in just 10 different occupations. Research shows that young people's career aspirations are commonly poorly aligned with actual labour market demand – and where teenagers' ambitions are unrealistic, long-term labour market penalties are to be expected.

### *Some education and training options are poorly understood*

Over recent years, as young people have stayed in education longer, career ambitions have also risen. Interest in highly skilled employment (as accessed through higher education) has risen considerably while the percentage of young people expressing interest in manual employment, including skilled trades, has fallen to fewer than one in twenty in some countries. Analysis of PISA data aligns with recent large-scale polling by CEDEFOP (European Centre for the Development of Vocational Training) and suggests that vocational education and training (VET), and the occupations to which it is a gateway, are often poorly understood.

### *Social and personal circumstances shape career thinking*

Analysis of PISA data shows, moreover, that young people from families enjoying higher socio-economic status (SES) are significantly more likely to want to work as professionals, and young people from families experiencing lower SES are significantly more likely to want to be technicians – even after statistical controls are put in place for proficiency levels.

### *Other personal characteristics such as gender also matters*

Career ambitions are also heavily shaped by gender with some important national variations. In general, girls have higher career expectations than boys, but these are often narrowly focused, for example in the medical professions and teaching. Girls also often turn away from STEM (science, technology, engineering and mathematics) professions. While research suggests that gender stereotyping can deter both girls and boys from pursuing specific careers and that it can be countered by improved information, certain occupations appear so unfriendly to those not of the dominant gender that richer approaches based on first-hand experiences are called for.

The evidence also suggests that ethnicity and migrant status influences career aspirations and employment outcomes. PISA analysis, however, shows a wide heterogeneity across countries in terms of expectations about attendance in higher education, reflecting migration patterns and family SES.

### *Career guidance can help tackle inequities*

An important purpose of career guidance, therefore, is to provide young people from all backgrounds with relevant information and experiences in order to broaden and, potentially, to raise aspirations. This could help break intergenerational cycles of disadvantage. In this way, employers also win, by gaining access to a broader range of potential future employees. For schools, by implication, it is important to encourage young people to think critically about their future selves from a young age, as important attitudes towards working life are formed.

### *There are economic, education and social benefits to career guidance*

The research literature on the impact of career guidance is weak and fragmented. Career guidance covers a wide range of activities and comparatively few studies have sought to apply experimental and quasi-experimental methodologies. An important literature review of such studies published since 1996 (Hughes et al., 2016) has looked at the evidence of economic, educational and social impacts. The review found that of 27 studies exploring adult economic outcomes (in terms of better than expected employment and earnings) linked to participation in school-based career activities, two-thirds provided evidence of largely positive outcomes with the remainder finding evidence to be mixed with no distinct patterns of outcomes. Studies suggest that improvements in economic outcomes are better attributed to changes in career thinking and confidence in pathways pursued than in ‘employability’ skills. A similar proportion of 45 studies focused on educational outcomes also provided evidence of positive, if generally modest, benefits for young people. Studies suggest that improved outcomes are driven by increased student motivation linked to deeper understanding of the relationship between education and employment. While positive outcomes related to career guidance activities cannot be taken for granted, it is very difficult to find a reliable study that suggests interventions were a complete waste of time and had negative consequences for young people.

## Designing effective career guidance services

When career guidance services are effective, they can be expected to have a positive influence on the educational and employment outcomes of young people. But what makes for effective career guidance? This question has been considered by the OECD and other

researchers extensively over the last ten years. Some of the commonplace challenges facing countries include the risks that career guidance is marginalised within school life, that services are under-resourced and delivered by poorly trained staff whom may lack objectivity and/or knowledge of the labour market. PISA data show that often it is students who appear to have the greatest need of career guidance, whom have the least access to it. Girls, for example, and students from low SES backgrounds, often have engaged less frequently.

Effective provision of career guidance should take into account the growing body of research literature and:

- Provide regular opportunity for young people, from primary education onwards, to reflect on and discuss their prospective futures.
- Allow students to consider the breadth of the labour market and particularly occupations which are of strategic economic importance, newly emerging and/or likely to be misunderstood (such as the skilled trades).
- Undertake school-wide approaches, bringing on board career guidance specialists, but also teachers and school leaders, as well as parents, and people in work.
- Provide easy access to trustworthy labour market information and advice/guidance from well-trained, independent and impartial professionals in advance of key decision points.
- Recognise that the ways in which young people think about jobs and careers are shaped by parental influence, their social background and sense of identity, addressing information asymmetries about specific professions and challenge gender and ethnic stereotyping.
- Target young people from the most disadvantaged backgrounds for the greatest levels of intervention.
- Continue to develop evidence in this policy field, using robust methodologies, including longitudinal data, to provide better evidence for the outcomes of policy interventions.

## Why and how to involve people in work

To make decisions, students need to have a good picture of work and where they need to put their efforts in studying to be able to realise their dreams. For that, schools should encourage a first-hand understanding of the world of work from the earliest years. In many countries, schools have long engaged people in work in aspects of education: in careers fairs and talks, as job shadows and the hosts of work placements and visits, as enterprise champions and mentors. Recent evidence has highlighted the benefits that such engagements can have on young people and how schools can draw on employers and employees strategically to optimise positive outcomes.

Employers and workers volunteers are an information resource for young people whose own networks are inherently limited. Engagement of people who have first-hand knowledge of workplaces allows trusted insights into authentic expressions of working life, providing a young person with new and useful information about the labour market – and how it relates to their own individual sense of who they might become.

This engagement can be particularly effective in challenging negative assumptions about specific careers: who better than a woman who works in engineering or construction to speak to young women about what it is really like to work in a profession where their gender is in a minority?

While the research literature remains limited, a growing body of research has investigated and demonstrated significant links between school-mediated employer engagement and the employment outcomes of young people. Studies have shown adult earning premiums related to teenage employer engagement which can be considerable.

It is important, therefore, that young people have the opportunity to engage with people working across a wide range of occupations, each will bring their own perspective on what it means to work in a particular profession. It demands the participation of both the apprentice and the CEO (chief executive officer).

Available PISA data show significant variation between countries in the extent to which young people engage with employers within career guidance. On average, students are less likely to engage in activities involving employers than in wholly school-based activities: fewer than 30% of PISA respondents, on average, visited a careers fair by the age of 15. Participation levels tend to be greater when countries have strong programmes of vocational education, with VET students being much more likely to have completed an internship.

To expose students to the world of work successfully, schools need to reach out to people in work and employers need to engage with schools. This requires:

- Making the business case to employers and employees to demonstrate why they would benefit from participating – since the direct benefits may be limited (during short placements, students do not typically do productive work).
- Identifying barriers and obstacles for schools and for employers that may stand in the way and dismantle them.
- Employers and schools often face technical, legal or information barriers that might deter them from mutual co-operation.
- A key barrier for greater employer engagement is often not knowing what schools and education providers need and what employers can provide.
- Employers have enterprises to run and might not have sufficient motivation to engage in the provision of career guidance, and it is not always clear for the employers how they can benefit from participating in career guidance activities.
- In some countries, there might be legal constraints with respect to a greater involvement of employers in education, e.g. health and safety, or child safeguarding regulations related to work-based learning or other forms of workplace experience.
- Teachers and school leaders might be reluctant in accepting people in work in their classrooms and schools.
- Schools may lack resources to cover the costs linked to reaching out to people in work. Internships in particular include costs in administration.

Different types of activities come with different transactional costs. Internships and mentoring programmes are, for example, demanding on employers, volunteers and schools to administer. Careers talks and careers fairs are much less demanding and have been evidenced to provide young people with positive outcomes – and make an excellent starting point for countries and schools without a tradition of such engagement. For governments, the most important task is to make it easy for people in work to become involved, addressing barriers preventing engagement. Online platforms can facilitate high volume, low cost employer engagement in education. For schools, it is important that they are supported in the process of exposing students to the world of work.

Like career guidance, exposure to the world of work can serve to challenge or replicate patterns of disadvantage. Delivery is important. Research suggests that schools should focus on the quantity (numbers of interactions) and quality (as perceived by students) of provision – and target action particularly on students from families lacking strong social networks related to careers of interest.

Career guidance activities should fully integrate diverse members of the economic community into their career guidance services, ensuring multiple and authentic interactions with young people from an early age. Action should be taken to identify and address obstacles preventing engagement. Where countries are new to employer engagement, it is best to begin where logistics are easiest. In terms of delivery, countries and schools should consider that:

- Employer/employee talks and careers fairs are a relatively easy and effective tool.
- Information and communications technology (ICT) can provide many new ways of facilitating the interactions between schools and employers, lowering barriers.

# Chapter 1. Introduction

## What this paper aims to achieve

Over the last generation, across the OECD, the world of work has changed. Jobs, and the navigation between them, have become more complex. For young people, the decisions they make about what and where to study, both within and following periods of compulsory education, have become both more important and more difficult to make. The purpose of career guidance is to enable young people to make what are good education and career decisions for them now and in their future as well. In the absence of reliable and trustworthy information and support which good career guidance should provide, such decisions become more difficult, with personal and social costs often displayed in skills mismatches and unsatisfactory employment prospects.

Career guidance can help ensure that good use is made of both public and private expenditure on education and training. Over recent years, the significance of career guidance services has grown. Rapid economic and educational change has led to school-to-work transitions which are now longer and more complex. There are new education and training options – some of them vocational – which may not be well understood by students, teachers and parents. With young people staying in education in many countries longer than ever before, they need access to better information about the consequences of their decisions from an early age and to build effective decision-making skills for their work choices. Research has shown how easy it is for young people, especially from more disadvantaged backgrounds, to get caught out as they seek to move into work after education. Young people, their parents, teachers and other intermediaries often demonstrate insufficient information or poor understanding of some options, including those related to vocational education and training (VET), and their potential to support young people into ultimate employment.

Over recent years, the range and quality of evidence underpinning career guidance has improved significantly. While it remains an under-researched topic, being the subject of relatively few experimental or quasi-experimental studies, a significant body of literature does now exist of which policy makers should be aware. New research has highlighted, for example, the growing importance of career management skills as young people face a polarised labour market where employment growth is significantly due to increasing demand for temporary, part-time or self-employment. Research also offers new insights into the characteristics of effective practice in career guidance, notably the importance of employer engagement in education as a means to provide young people with career insights and practical experience of relevance to ultimate transitions into work. The way that young people think about their future does influence their later outcomes. The role of career guidance is to support young people, who each have distinct ambitions and experiences, to make well-informed decisions about their education and training. Within this, the paper highlights VET as a specific field in which young people often lack sufficient information. The paper does not explore the importance, or delivery, of career guidance to adults – individuals who have left first-chance education and who are fully

engaged in the labour market. Given the challenges of providing guidance to such a large population outside of facilitating institutions in the context of rapid changing workplaces and occupations, there is a strong case for future work to focus on this specific issue.

## Definition of career guidance

In this paper, the phrase "career guidance" is used to refer to services and activities intended to assist individuals to make educational, training and occupational choices and to manage their careers. It is worth stressing that career guidance struggles from difficulty and variation in descriptions and definitions. This paper chooses to follow previous OECD work, as well as recent analytical work, on this topic (such as Hughes et al., 2016). This means that "career guidance" is used in this context to describe a wide range of activities, and is understood to describe a connected family of activities. These would include the following four main elements:

- *Career education* in which students learn about the world of work and develop career management skills through classroom teaching, and through other activities (OECD, 2010).
- *Career information* on courses and occupations, learning and career opportunities, progression routes and choices, as well as information on where to find help and advice, and how to access it (OECD, 2010).
- *Individual career counselling* on a one-to-one basis, providing specific advice on career decisions; either pro-actively (mandatory interviews for all) or reactively (on demand). Advice can be general or targeted. Counselling includes activities that help young people to gather, understand and interpret information and apply it to their own situation, as well as impartial guidance and specialist support to help young people to understand themselves and their needs, confront barriers, resolve conflicts, develop new perspectives and make progress (Watts, 2009).
- *Direct contact with the world of work* to give young people first-hand insights into, and experiences of, the labour market in order to raise and broaden career aspirations (Hughes et al., 2016).

Career guidance activities may take place on an individual or group basis, and may be face-to-face or at a distance. They can be either pro-active or reactive. They include career information provision (in print, ICT-based and other forms), assessment and self-assessment tools, counselling interviews, career education programmes (to help individuals develop their self-awareness, opportunity awareness, and career management skills) and job shadowing, work experience tasters and short internships (to sample options before choosing to pursue them) (definition based on OECD, 2004).

## Structure of the paper

This paper explores how career guidance can best prepare young people for the transition from education into working life and argues that career guidance is ever more essential in this process. For these purposes, this paper reviews the available scientific literature on career guidance, and looks more specifically at the characteristics of effective and innovative policies and practices, and how employers can be involved to best effect. This paper also presents new analysis using PISA data. This paper is organised as follows. Chapter 1 describes the aims and structure of the paper. It sets out a definition of career guidance. Chapter 2 sets out the context within which career guidance activities take place: a world where the decisions young people make are becoming more difficult as

they stay in education longer and the labour market becomes more complex. Chapter 3 makes the case for career guidance as a policy tool that can facilitate young people's transitions into the labour market and improve social mobility and equity. The chapter presents, moreover, a general discussion of the contextual factors which affect the school-to-work transitions of young people. Chapter 4 explores the characteristics of effective career guidance, in terms of key design features. Chapter 5 looks more specifically at school-mediated activities which involve exposure to the world of work, and encourages such practices as an effective career guidance tool.

This paper contributes to a broader OECD project on work-based learning (see Box 1.1), in particular to its module on career guidance and work-based learning sponsored by Germany, Scotland (United Kingdom) and Switzerland.

**Box 1.1. Work-based Learning in Vocational Education and Training – the broader OECD project**

The OECD launched a study in 2015 on work-based learning in vocational education and training (VET) that aimed to deliver policy messages about how to use work-based learning to achieve better economic and social outcomes. The work focuses on six topics:

- The costs and benefits of apprenticeships
- Work-based learning: incentives and implementation
- Work-based learning and school-to-work transition for at-risk youth
- Work-based learning and productivity
- Recognising skills acquired through work-based learning
- Work-based learning and career guidance.

The study was initially desk-based, yielding discussion papers for each module to provide a foundation for country participation in a sequence of module-specific workshops. Workshops took place between February and September 2016. During the workshops countries were invited to share policy experience and research evidence on issues specific to each module. Policy reports on each module were prepared to integrate analysis from the technical reports and outcomes for workshops in order to distil policy messages. Finally, a synthesis report will bring together the conclusions and policy messages from all the modules and will be published in Q4 2018.

Australia, Canada, Germany, Norway, Scotland, Switzerland, the United Kingdom, the United States and the European Commission have provided voluntary contributions towards the work, either through sponsoring specific modules, or contributing to the project as a whole.

# Chapter 2. The transition from education to work

This chapter presents a discussion of the transition from education to work. Transitions from education to work are not always smooth. Young people face much higher unemployment rates than older workers and often these, like their comparative earnings, have worsened over recent years. Their jobs tend to be of lower quality. This is in spite of the fact that in many countries young people are more highly qualified on leaving education today than they were before. Demand for labour has changed, moreover, as a result of technological innovation with reduced demand for the types of employment using routine skills. These different elements are analysed in turn.

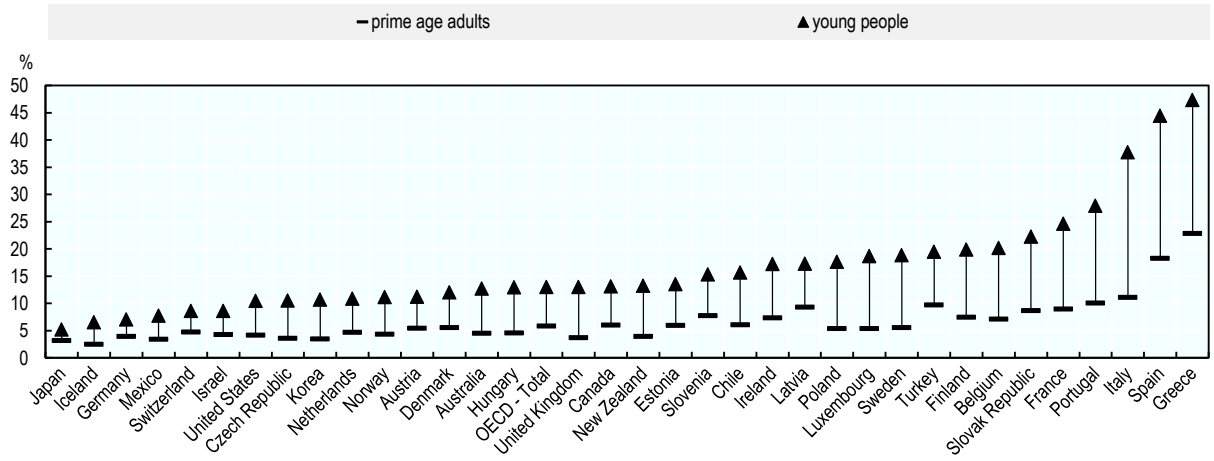
## Young people face difficulties transitioning from education into the labour market

### *Youth unemployment is high*

The global economic crisis has drawn into sharp focus the many problems young people face in the labour market around the world. Young people typically face much higher unemployment rates than prime-age workers. The unemployment rate of 15-24 year-olds in OECD countries stood at 13% in 2016 (OECD, 2017a, see Figure 2.1). In countries like France, Italy and Portugal, around one active young person in four is unemployed, while in Spain more than 40% are jobless. Unemployment impacts on almost one out of two young people in Greece. This means that there are nearly 15 million young unemployed in the OECD area, about four million more than before the 2008 economic crisis.

**Figure 2.1. Young people (15-24) face higher unemployment than prime-age adults (25-54) across the OECD**

Percentage of unemployment in the labour force, 2016




*Source*: OECD (2017a), "Unemployment Rates by Age Group", https://data.oecd.org/, (accessed on 8 August 2017).

### *The reasons why are multiple*

The reasons behind why young people typically face higher unemployment rates include many joining the labour market at the end of a long queue, having limited work experience, being often over-represented in low-skill sectors, and disadvantaged by being the last hired and the first fired (ILO, 2014). Often their earnings compared to older workers are also worsening (Grimshaw, 2014; Clarke and D'Arcy, 2016).

### *Unemployment has a major scarring effect on young people's future*

Those who go through unemployment at early stages tend to suffer from a "scarring effect", leading to higher chances of unemployment and lower earnings later on in life than their peers with similar backgrounds and abilities. This is mainly through effects associated with human capital (i.e. deterioration of skills and foregone work experience) or signalling effects (i.e. periods of unemployment convey a signal of low productivity to potential employers). The longer the unemployment spell lasts, the more individual productivity will be affected; and the lower the level of initial qualification, the longer the scarring effects are likely to last. If skills are not put to use they will degenerate fast after leaving school, and the experience of being unemployed may reduce the incentive to search for work, all leading to reduced long-term employment prospects (OECD, 2012).

### *Young people tend to have jobs of lesser quality*

When they do find jobs, many young people are more likely than prime-age adults to be working in jobs which are non-standard[1] (OECD, 2017b). Across the OECD in 2013, 40% of young people were employed on non-standard contracts, mostly on temporary contracts. Among all temporary workers, close to half were under the age of 30. Non-standard work can create job opportunities but also contributes to higher inequality. Many non-standard workers are worse off in many aspects of job quality, such as earnings, job security or access to training. In particular, low-skilled temporary workers face substantial wage penalties, earnings instability and slower wage growth. Non-standard work can be a "stepping stone" to more stable employment – but it depends on the type of work and the characteristics of workers and labour market institutions. In some countries, younger workers, especially those with only temporary work contracts, have a lower chance of moving on to a more stable career or job opening (OECD, 2015a). Within the "hollowing out" of the labour market, the erosion of middle-level jobs may make progression through the labour market from entry level even more challenging.

## Different trends have deeply changed the labour market

### *The demand for skills has changed*

The past decades have seen important shifts in the types of jobs that make up the economy. These shifts have been brought about by, among other factors: changes in the global division of labour and a growing dependence of domestic jobs on economic globalisation; economic cycles and shocks; changes in the way firms are organised; demographic change; and changes in consumption models (OECD, 2016a).

[1] i.e. jobs which are temporary, part-time or self-employed and/or of poor quality (a multi-dimensional concept that refers to those job attributes that contribute to the well-being of workers, mainly around three areas: earnings quality, labour market insecurity and the quality of working environment).

### *Technology is transforming jobs*

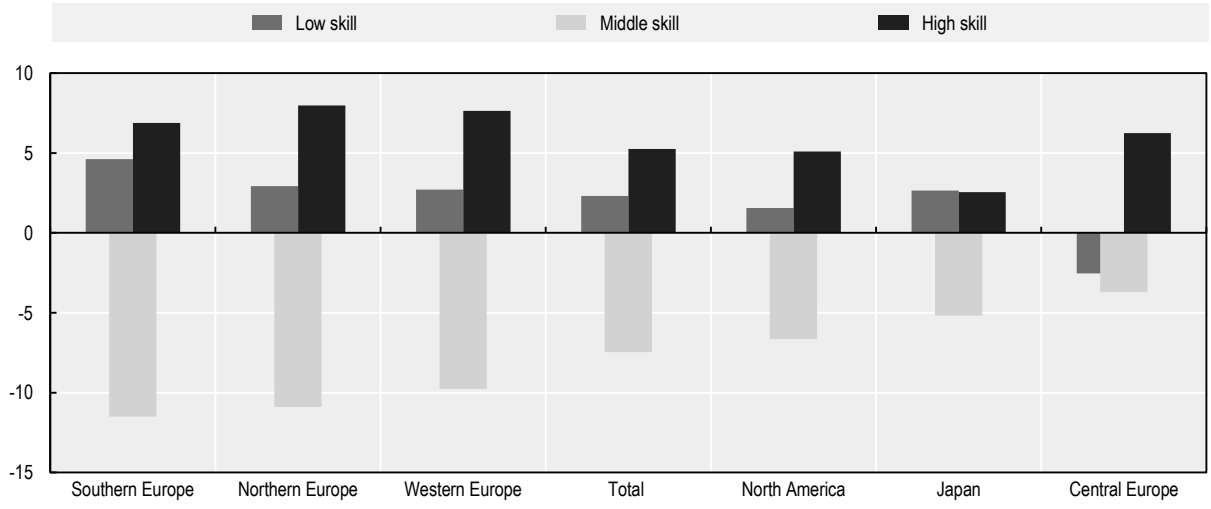
Rapid improvements in computer technology over the last few decades have provided employers with cheaper machines that can replace humans in many low- and middle-skilled activities such as bookkeeping, clerical work and repetitive production tasks. There is debate as to how far this replacement will go, and countries and industries have shown heterogeneous responses to this major shift (as in OECD, 2016a). Technological change has also led to new uncertainties about the future of employment. New jobs and opportunities will arise, but many jobs will be replaced or radically changed by the technological advancement. Young people are making decisions about entry into a fast changing labour market.

### *The labour market is becoming more polarised by level of skills*

The demand for workers in high-skilled, non-routine jobs has increased considerably in most advanced countries. These jobs often involve tasks such as working with new information, interpersonal skills and solving unstructured problems. Some increase has also occurred in the demand for workers in low-skilled, non-routine jobs in activities such as caring and personal services that are hard to automate (see Figure 1.2, OECD 2016b). In the case of the United States, for example, there has been an increase in demand for workers with cognitive, non-routine and high level of information technology skills, while the demand for workers with routine cognitive skills or manual skills has been deteriorating (Valletta, 2016). Analysis of millions of job advertisements in the United States between 1960 and 2000 illustrates that, while changing patterns are seen in the growth and reduction of demand for specific occupations, the greatest driver of change in skills demand has been change within specific occupations (Atalay et al., 2017). Deming (2017) illustrates, for example, the growing labour market demand for 'social skills' between the 1980s and 2000s in the United States – increasingly the complexity of labour market signalling. This may also mean that young people with low skills and education levels might find it extremely difficult to find a job because in most countries labour market opportunities for low-skilled workers are shrinking.

**Figure 2.2. The labour market continues to polarise**

Heterogeneity in polarisation, selected OECD countries by region, 1995 to 2015. Percentage point change in share of total employment.




*Source*: OECD (2017b), *OECD Employment Outlook 2017*, http://dx.doi.org/10.1787/empl_outlook-2017-en.

## Supply of skills is also changing

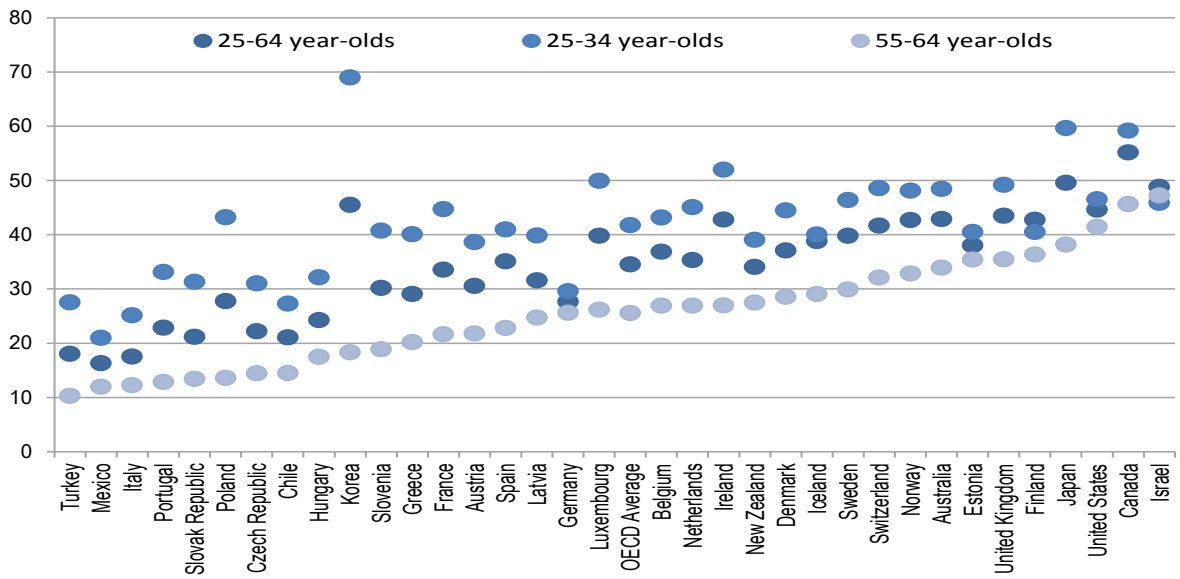
The supply of skills is equally dynamic and has changed as a result of the expansion of education.

### *Young people tend to be more educated that before*

Over the last generation in most OECD countries, the proportion of young people completing upper-secondary and tertiary education has grown significantly (see Figure 2.3). People with tertiary education account for the largest share of 25-34 year-olds in many OECD countries.

**Figure 2.3. Young adults (25-34 year-olds) are in most OECD countries more educated than their parents**

Percentage of adults who have attained tertiary education, by age group (2015)




*Source*: OECD (2017c), "Population with tertiary education (indicator)", http://dx.doi.org/10.1787/0b8f90e9-en (accessed on 21 August 2017).

On average across OECD countries, 35% of 25-64 year-olds are tertiary educated. As a result of the expansion in tertiary education, the share of 25-34 year-olds with tertiary education is 42% across OECD countries, very much higher than the share of 55-64 year-olds (26%). In a few countries, there has not been much change in the percentage of people completing tertiary education (e.g. Germany, Israel).

### *Other factors affect the supply of skills*

Other factors affecting the supply of skills include the increase in female labour force participation, migratory changes, demographic transitions and changes in retirement regulation. Increases in skill supply can also be brought about by changes in the intensity (hours) or efficiency of work (OECD, 2016b).

## There are concerns about skills imbalances across countries

### *Skills mismatches are hard to measure*

One difficulty is that in contrast to measures such as unemployment, which are usually measured according to international standards, a uniform typology or measurement framework regarding skills mismatch and related issues, such as skills shortages, is lacking[2] (ILO, 2014). Concerns about skills mismatch have been accentuated by the recent crisis, but they go back to at least the 1970s, when increases in the supply of graduates in the United States seemed to outstrip demand. The literature on such skills mismatch has expanded ever since, not least due to the skills intensive nature of much economic and technological change (ILO, 2014). If the growth of educated supply outstrips demand, this may be reflected in a surplus of skilled workers in terms of unemployment, but also in workers who are overeducated for the jobs they perform. The OECD is developing interesting new work on skills imbalances (see Box 2.1).

**Box 2.1. New OECD work on skills for jobs**

The OECD has developed a new OECD Skills for Jobs Database, providing information on skill imbalances (both skill shortages and qualification mismatch) that is comparable across countries and regularly updated. At the moment, the database covers Europe and South Africa but it is going to be extended to other OECD and developing countries. Three domains of competence are measured and presented – skills, knowledge and abilities – based on the occupational information from the US O*NET occupational database. The results of the database showed that technical and technology-intensive skills have become increasingly more important while more traditional and less technology-intensive skills are increasingly in surplus across most countries analysed. Abstract and soft skills are also more in demand than routine skills. Population ageing has resulted in stronger demands for healthcare services, as evidenced by shortages in care-related skills. The database also shows big differences in mismatch between countries, but also between workers with different socio-economic and job characteristics within countries.

*Source*: OECD (2017e), *Getting Skills Right: Skills for Jobs Indicators*, http://dx.doi.org/10.1787/9789264277878-en.

[2] There are challenges in estimating skills shortages, because recruitment difficulties that employers might say they face may in fact be due to their own reluctance to offer the necessary salary or working conditions to attract the relevant skills, or to the job location. This means that estimates of skills shortages based on employer reports can be over-estimated. The literature on skill shortages is typically based on employer surveys such as the Manpower Talent Shortage Survey. There are difficulties in disentangling genuine skills shortages from other recruitment difficulties such a low wage or poor working conditions. The European Commission (2015) has calculated the incidence of recruitment difficulties across the European Union using three different employer surveys and found inconsistencies in the estimates (McGuinness, Pouliakas and Redmond, 2017).

### *Many young people may be over-educated*

In the OECD on average, about one in four workers are over-qualified – i.e. they possess higher qualifications than those required by their job – and just over one in five are underqualified – i.e. they possess lower qualifications than those required by their job. In all, therefore, nearly half of people in work are employed at levels misaligned with their actual qualifications (Quintini, 2011). Caution should be taken since mismatch patterns depend strongly on the measure of mismatch that is adopted, but a study reviewing the evidence in EU countries found that over-education was increasing and under-education was decreasing on at least one measure in at least half of the countries. The incidence of over-education is consistently higher for women and youth (ILO, 2014). Over-qualification or over-skilling may represent a common phenomenon as increasingly larger shares of youth graduate from tertiary education. It is worth noting that while educational attainment may proxy skill levels, there is significant variance in skill levels within broad educational attainment categories as shown in The Survey of Adult Skills, a product of the Programme for the International Assessment of Adult Competencies (PIAAC). Also, some types of skills are not measurable in comparative surveys, as in the case for soft skills for example.

### *Over-education bears costs*

While long-term consequences remain to be seen, such mismatch is associated with poorer outcomes for individuals than might otherwise has been anticipated. Over-education, for example, imposes high penalties on workers in the form of lower wages and lower job satisfaction, relative to individuals with equivalent levels of education in matched employment. Kis and Windisch (forthcoming) using data from the Survey of Adult Skills and comparing individual who are in jobs that require a higher level qualification with individuals in similar jobs that do not have that "right" qualification found that those not holding the "right" qualification may face penalties in their job compared to those with the required qualification. Employers may also incur additional hiring and training costs, arising from surplus human capital, as a consequence of higher rates of turnover among overeducated, overskilled or horizontally mismatched workers. High rates of overskilling in economies may reflect an overall inefficiency of the labour reallocation process, as skilled workers remain employed in firms that fail to fully exploit their potential, leading to a less productive job market equilibrium (as in McGuinness, Pouliakas and Redmond, 2017). Moreover, the feeling of frustration resulting from the failure of individuals to gain employment at their qualification level has contributed to waves of young people's protests in several countries (ILO, 2014; UNDP, 2014).

### *Horizontal skills mismatches also impose penalties*

Montt (2015) looked at field-of-study or horizontal mismatch (workers educated in a particular field working in another sector). Using data from the Survey of Adult Skills (PIAAC), it shows all countries experience some level of field-of-study mismatch, with the highest levels observed in Korea, England/Northern Ireland (United Kingdom) and Italy – at around 50% of workers – and the lowest in Austria, Germany and Finland – at less than 30%.[3] It also entails lower wages, increased likelihood of unemployment and lower levels of job satisfaction when it is associated with over-qualification. As an

[3] A study found a lower incidence of horizontal mismatch among vocationally-trained individuals (Levels, van der Velden and Di Stasio, 2014).

illustration, Gardiner and Wilson (2012) compare the vocational skills of young people who completed programmes at further education colleges in the United Kingdom and local labour market demand for such skills, and found significant mismatches. In approximately one-third of the fields-of-study, there was a significant over-supply of skills, and in one-third of them, a significant under-supply. In the remainder of subjects considered, the match of supply and demand appeared reasonable.

If young people study at a level, or in a field, but after cannot use the skills gained, their skills might decay. Their unmet expectations and the inability of put all their skills at use in the workplace will be a source of frustration.

## Education decisions are important

### *Education choices bear consequences*

In general, career choices are closely tied in with educational choices which act as gateways to continuing study and often progression into careers of choice. Some students may not have the pre-requisites required to pursue the study programme that would lead to their preferred career either because they cannot achieve them or because they have closed off their options, for example, by dropping mathematics at an early stage.[4] In England for example, around 40 % of students in their last year of compulsory education do not achieve English and maths GCSE (at grades A*-C), and very few of them complete this qualification later on (Kuczera, Field and Windisch, 2016). Many argue that these are fundamental to young people's employment and education prospects.

### *Education attainment affects labour market outcomes*

Education attainment has always been an important driver of employment outcomes and of employment (see OECD, 2017d, for data on labour-force status and educational attainment). In most cases, a higher education qualification remains the safest ticket to a well-paying job. Data from the OECD Survey of Adult Skills shows that education attainment levels have an impact on labour market outcomes (OECD, 2013). Job satisfaction and personal fulfilment, of course, also need to be taken into account. Evidence from the U.S. National Bureau of Economic Research shows that wage gaps between workers with a college or graduate degree and those with only a high school degree rose rapidly in the United States during the 1980s. But since then, the rate of growth in these wage gaps has progressively slowed, and though the gaps remain large, they were essentially unchanged between 2010 and 2015. Returns to education have flattened (Valletta, 2016; US Census Bureau, 2017). The decision to go to university in many countries increasingly means a major financial commitment. Although participation in university education may still be advantageous on average, the flattening of returns and the rise of tuition fees in some countries, suggest that going to higher education may not be a favourable financial investment for all students (see Riegg Cellini and Turner, 2016, for some evidence from the U.S. for-profit colleges).

[4] Some study choices are also more likely to keep career options open than others, which can be important as students may well change their minds about what they want to do during their upper-secondary schooling. Some students also simply choose to pursue a different career pathway to the one that their studies prepared them for: for example, 2012 data from the United States showed that 74% of those who have a bachelor's degree in science, technology, engineering and maths — commonly referred to as STEM — are not employed in STEM occupations (US Census Bureau, 2014).

### *The field-of-study matters too*

Evidence shows that the earnings that young people can expect following the completion of educational and training courses vary considerably – by level, by field/sector, by subject/occupation and by place of study as well as within each of these categories. Regarding subject areas, there is a strong heterogeneity in returns across fields (Pfister, Tuor Sartore and Backes-Gellner, 2017; Chevalier, 2011). For example, data from Scotland showed that those who studied medicine and dentistry at Scottish higher education institutions (HEI) had median earnings of GBP 48 000 five years after graduation. In contrast, those who studied creative arts and design at Scottish HEIs had median earnings of GBP 19 700 five years after graduation (Scottish Government, 2017). While earnings will rarely be the sole driver of career interests, a well-informed student should have a reasonable understanding of the potential outcomes linked to subjects of study – both in terms of averages and the range of outcomes that might be anticipated. Learners should also be given opportunities to combine different approaches to learning at different points in their education path.

### *Apprenticeships smooth transitions to work*

It is important, moreover, to recognise diverse educational routes. There is evidence, for example, that graduate apprentices have better labour market chances in terms of duration of job search, unemployment spells and wages than those who choose another type of upper-secondary education (see Kuczera, 2017 for a review of the evidence). Overall, countries with a high share of young people in apprenticeships have lower rates of disconnected youth and youth experiencing a difficult transition to employment (Quintini and Manfredi, 2009[5]).

### *The marketisation of postsecondary education in some countries means more choices and decisions*

In many countries at the postsecondary level, private providers now play an increasing role in education and training provision. Institutions may have little incentive to focus on what happens to students after graduation.[6] The focus on recruitment and enrolment, in turn, provides incentives for institutions to offer programmes that are popular among students and/or inexpensive to deliver, but that may have only loose connections to the labour market. At an extreme, this has led to incidents of effective fraud where students are recruited by for-profit colleges onto publically-funded programmes of study with negligible market value (Holland and DeLuca, 2016). Research shows that students, after

[5] Quintini and Manfredi (2009) for example, note that in countries with regulated labour markets and strong apprenticeship systems, such as Germany, about 80% of school leavers succeed in integrating into the labour market, a marked contrast to countries without strong work-based training such as Italy and Spain. In the case of Germany, participation in the dual vocational education and training system improves early labour market attachment and shows a faster and more structured integration into the labour market compared with other options within the vocational schooling system. However, this advantage fades over time, as participants in other types of education establish a foothold in the labour market.

[6] If typically these institutions need permission from the Ministries or quality assurance agencies to enrol students and to offer particular programmes, they are not always held accountable for student outcomes, such as graduation rates or employment prospects. This means that often institutions are rewarded simply for their ability to attract students and fill their classrooms.

enrolling in associated degrees in for-profit colleges in the United States, experience a decline in their earnings relative to their own earnings in years prior to attendance[7] (Riegg Cellini and Turner, 2016). For education markets to work well, prospective students need to be informed and confident consumers who have high quality information on the breadth of study choice, including on the costs and the labour market returns, in order to make good ultimate investment decisions.[8]

## Conclusion

The dynamism of both skill demand and supply as mentioned above raises the question of how economies match the two. In a perfectly competitive labour market, supply and demand would jointly determine wages, firms would adapt production processes to the available stock of human capital, and people would seek the amount and type of education and training required or foreseen. This model relies on an assumption of perfect information. In a world of perfect information and complete certainty, individuals would be able to make their own decisions on investing in their own human capital, knowing all the opportunities available to them, knowing their own preferences and skills, and knowing what payoffs they would receive from different possible career choices. In such a world, career guidance would be unnecessary and of no value to them. The value of career guidance arises from the imperfect information which individuals initially possess concerning their own preferences, capabilities and opportunities for beneficial career moves. In reality, students, workers, employers and training institutions may not be well-informed about the skills required in the immediate-, medium- and long-term. In the presence of incomplete information, the time lag between the decision to enter education and that of entering the labour market may lead individuals to mismatches and/or shortages.

Changes in the labour market and different career perspectives – people will change jobs and even fields several times in their lives – requires greater levels of decision-making about educational and training provision (field, subject and level of study). Labour markets are unpredictable. The job for life is no longer a characteristic of the modern labour market. Rather young people can expect a sequence of jobs, demanding greater career management skills. Risks are high of being trapped in poor quality jobs and entering occupational areas in which jobs are few. If young people choose education programmes that do not lead them to the types of jobs they want, or that provide them with skills not in demand by employers, they may struggle to find relevant and rewarding employment in the job market, which can lead to unrealised potential, but also long unemployment spells, resulting in a “scarring effect” whereby employment prospects are damaged over a long-term. This calls for career guidance.

[7] Master’s degree students and students who complete their degrees appear to experience better outcomes, with positive earnings effects. Despite the much higher costs of attendance, earnings effects are smaller in the for-profit sector relative to the effects for comparable students in public community colleges - a result that holds for all but one of the top ten fields of study (Riegg Cellini and Turner, 2016).

[8] In this, it must be recognised that earnings maximisation is not the only criteria which young people will apply when considering their futures: the nature and type of work is of great importance as, potentially, its location and flexibility.

# Chapter 3. The case for career guidance

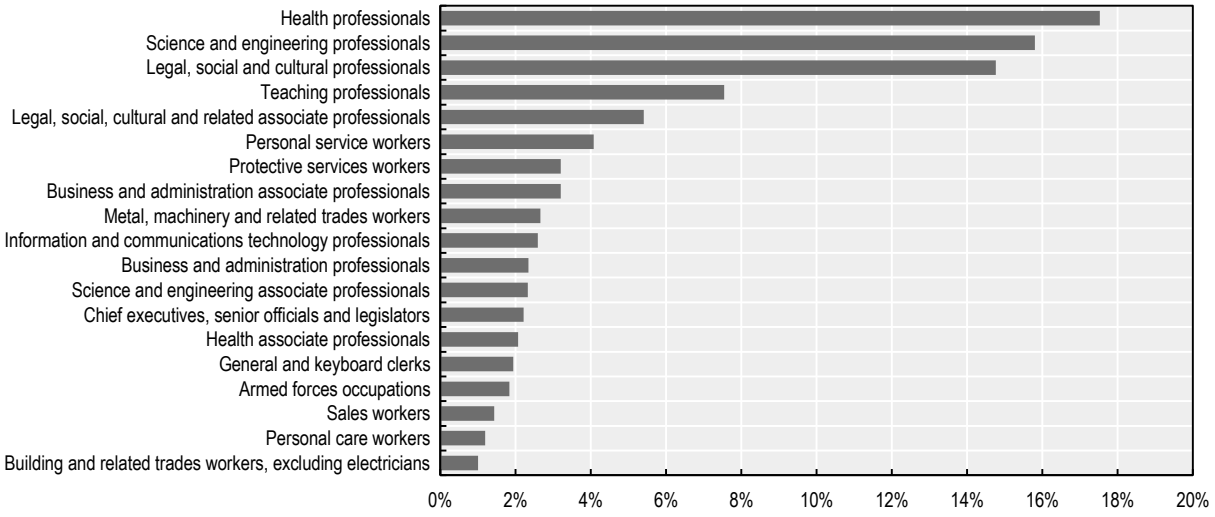
Over the last generation, the educational choices made by young people have become more important. They are facing greater need to make decisions about what to study, where to study, and what grades are required to progress towards higher levels of study and employment. Changes in the character of the labour market have implications for career guidance. As the nature of work changes and as occupations are buffeted by technological change, complexity grows, demanding career guidance provision which is broader and more insightful to enable young people to make sense of new careers.

## Young people may not have realistic labour market expectations

Data from PISA 2015 shows that most 15-year-olds already have career plans and only around 15% have not decided what they want to do. The question was left open to students, who could answer whatever they wished, and their answers were subsequently coded using the ISCO (International Standard Classification of Occupations) categories (see ILO, 2012 for information about the different categories used). Of those who did indicate an interest, occupations in health professions are the most common amongst young people (which include doctors and nurses), followed by science and engineering professionals and teachers (see Figure 3.1).

**Figure 3.1. What students want to be as adults**

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

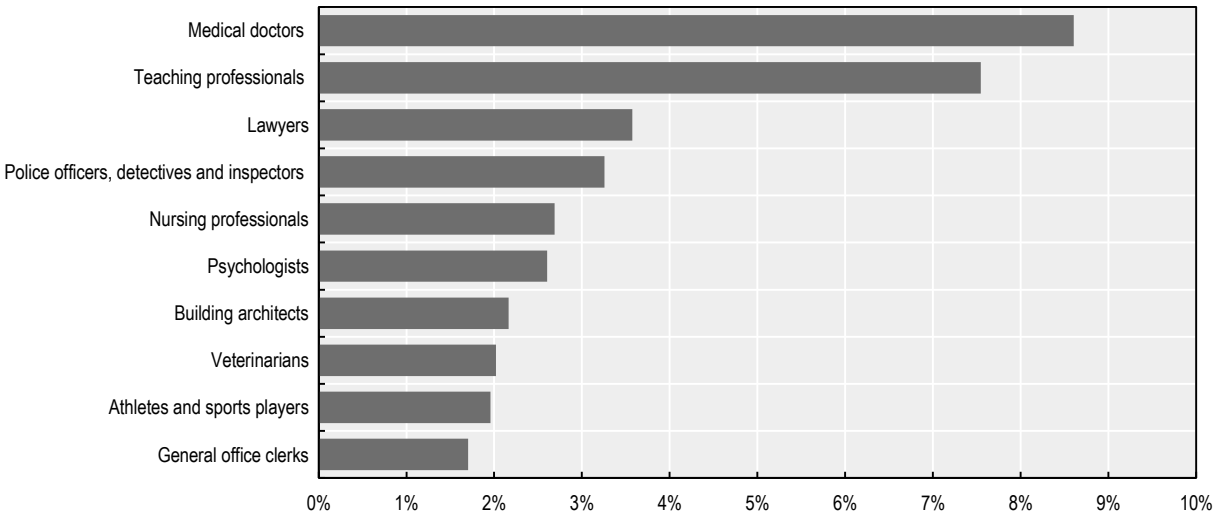



*Source*: OECD, PISA 2015 Database, www.oecd.org/pisa/data/2015database/.

It is also interesting to look more precisely at the occupations that arrive first in the students' expectations (see Figure 3.2).

**Figure 3.2. Top 10 career expectations of 15-year-olds**

Percentage of students who expected to work in the different occupational categories, among students who responded




*Note*: The medical doctors category was formed by combining together medical doctors, specialist medical practitioners and generalist medical practitioners. The teaching professionals category was created by combining all ISCO 23 (all categories together). The police officers, detectives and inspectors category was created by combining 5412, 3355 and 3411.
*Source*: OECD, PISA 2015 Database, www.oecd.org/pisa/data/2015database/.

These career plans do not match the composition of occupations within the workforce: one third of PISA respondents expressed interest in just 10 different occupations. Other research demonstrates similar conclusions. For example, studies analysing the link between aspirations of young people and projected labour market demand find that a large gap exists between the two (St Clair, Kintrea and Houston, 2011; Norris, 2011). Mann et al. (2013)[9] map the career aspirations of 12 000 British teenagers against the projected labour market demand (2010-20) and find career aspirations to be similarly concentrated as found in PISA data. The authors conclude that statistically teenage career aspirations are not coherent with the projected demand for labour. Research shows that unrealistic career expectations are an issue for different reasons (see Box 3.1 for an overview). These concerns are heightened by the impact that socio-economic background has on career expectations (see Figure 3.6, Figure 3.7 and Figure 3.8 for more PISA analysis on this). It is also heightened by the impact that characteristics such as gender and ethnicity have on career aspirations, which leads to social inequities.

[9] The study based on the career aspirations of almost 12 000 13-18 year-olds in England (United Kingdom) – in which respondents were presented with a list of 69 different occupations and were asked to select three – showed that career aspirations of 13-18 year-olds are many times unrealistic and are not linked to demand for labour as captured by the United Kingdom government's projections of skills demand (Mann et al., 2013).

**Box 3.1. What the evidence says about unrealistic career expectations**

Longitudinal studies suggest that individuals who at age 16 have underestimated the level of education required for their desired profession are more likely to end up being NEET (Not in Education Employment or Training) before the age of 20 (Yates et al., 2010). Sabates, Harris and Staff (2011) also analyse data from the British Cohort Study, which followed thousands of young Britons from birth in 1970 into adulthood, and found statistically significant higher levels of unemployment experienced and lower levels of earnings at age 34 linked to misalignment of career expectations and educational expectations as teenage students. Young people from poorer backgrounds are significantly more likely to have career aspirations that are misaligned with their educational choices.

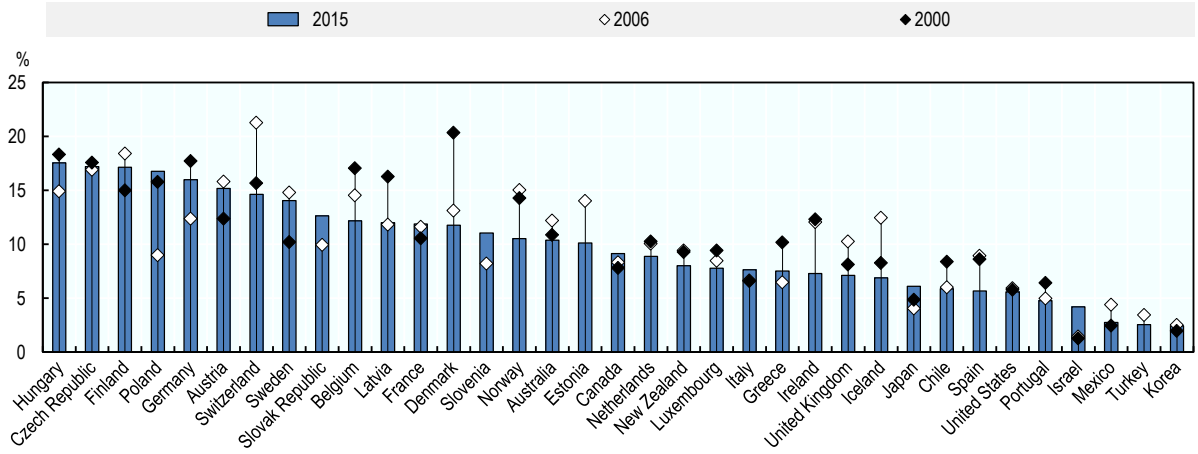
A high proportion of young people, up to half of the cohorts analysed in several studies in the United Kingdom, have uncertain or unrealistic expectations of the educational attainment needed to access desired careers (Mann et al., 2013). Staff et al. (2010) use U.S. data from the National Educational Longitudinal Study and find significantly lower earnings for adults aged 26 who were uncertain about their career aspirations as teenagers. Detrimental outcomes were also found by Gutman, Sabates and Schoon (2014) using also data from the BCS for individuals born only in 1970 (although similar patterns were not identified in data from the Longitudinal Study of Young People in England database for those born in 1990 and who were uncertain at age 14). However, the wage penalty was mediated by educational attainment and part-time employment at age 34. Not being entirely certain about one's future profession by age 16 seems to be part of a career decision-making process which does not necessarily incur a wage penalty for most young people, especially if it involves the acquisition of education qualifications (Sabates, Morrison Gutman and Schoon, 2017).

*Source*: Yates, S., et al. (2010), "Early occupational aspirations and fractured transitions: A study of entry into 'NEET' status in the UK", *Journal of Social Policy*, Vol. 40/03, pp.513-534; Sabates R, A. L. Harris and J. Staff (2011), "Ambition gone awry: The long term socioeconomic consequences of misaligned and uncertain ambitions in adolescence", *Social Science Quarterly*, Vol. 92/4, pp. 1-19; Staff, J. et al. (2010), 'Uncertainty in early occupational aspirations: role exploration or aimlessness?' *Social Forces*, Vol. 89/2, pp. 1-25; Gutman, L. M., R. Sabates and I. Schoon (2014), "Uncertainty in educational and career aspirations: gender differences in young people", in Schoon I. and Eccles J. S. (eds.) *Gender Differences in Aspirations and Attainment: A Life Course Perspective*, Cambridge University Press, Cambridge; Sabates R., L. Morrison Gutman and I. Schoon (2017), "Is there a wage penalty associated with a degree of indecision in career aspirations?", *Longitudinal and Life Course Studies International Journal*, Vol. 8/3, www.llcsjournal.org/index.php/llcs/article/view/470.

Figure 3.3 and Figure 3.4 look at the share of students who say they want to pursue skilled and semi-skilled manual jobs, and those who say they want a high skilled job (as one requiring a higher education qualification), across countries and the different PISA cycles. There are some striking differences between countries for both of these figures. In some countries, only a very small proportion of students say they want to have a manual job. The aspirations of young people have risen often considerably while interest in manual jobs is low and, in general terms, falling. These professions are most unpopular in Korea, Turkey, Mexico, Israel, Portugal, the United States, Spain, Chile, Japan, Iceland, the United Kingdom and Ireland. In other countries however, interest has been maintained with commonly more than one in seven teenagers expressing interest in manual employment.

**Figure 3.3. In many countries relatively few young people expect to have a manual job**[10]

The jobs that 15-years-olds expect to have by age 30: percentage expecting to have manual jobs. Percentage (ISCO 6-8 categories)

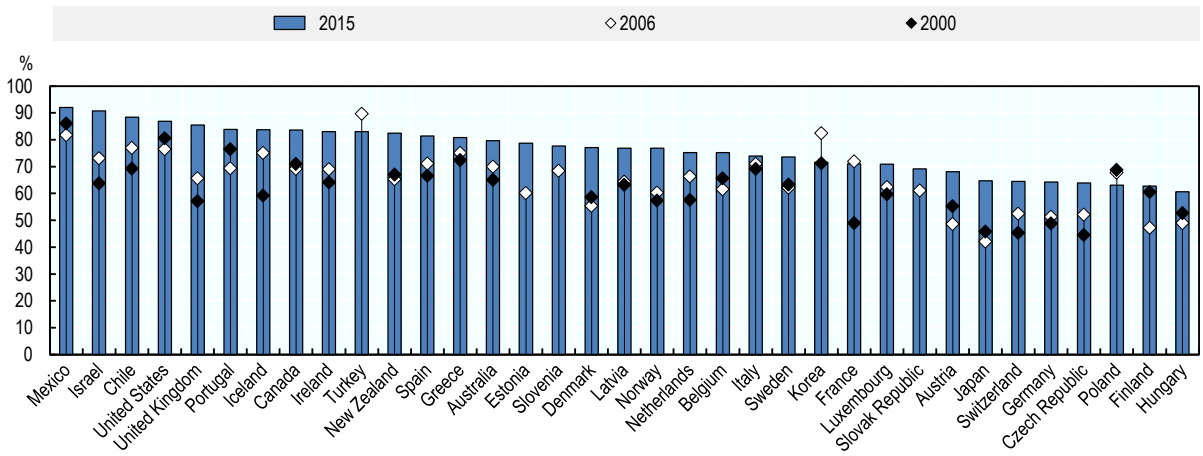



*Note*: ISCO 6-8 categories include skilled agricultural, forestry and fishery workers; craft and related trades workers; plant and machine operators, and assemblers.
*Source*: OECD, PISA 2015 Database, www.oecd.org/pisa/data/2015database/.

[10] For almost all occupations at this level the ability to read information such as safety instructions, to make written records of work completed, and to accurately perform simple arithmetical calculations is essential. Many occupations at this skill level require relatively advanced literacy and numeracy skills and good interpersonal communication skills. In some occupations, these skills are required for a major part of the work. Many occupations at this skill level require a high level of manual dexterity. The knowledge and skills required for competent performance in all occupations are generally obtained through completion of the first stage of secondary education. Some occupations require the completion of the second stage of secondary education, which may include a significant component of specialised vocational education and on-the-job training (ILO, 2012).

**Figure 3.4. Most young people expect to have a high-skilled job[11]**

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




*Note*: ISCO 1-3 categories include managers, professional and technicians and associate professionals.
*Source*: OECD, PISA 2015 Database, www.oecd.org/pisa/data/2015database/.

### *Students can be misinformed about the diversity of the different education and job options*

Parents are the most widely accessed source of advice and influence on career paths (Batterham and Levesley, 2011; Howieson and Semple, 2013). For example, a study by Tynkkynen, Nurmi and Salmela-Aro (2010) on a sample of Finnish young adults found that parents and siblings are the key sources of career information and inspiration in an initial career path choice. But parents often lack sufficient information on the full range of options and unaware of the diversity of jobs available in different sectors and the link between school, post-school education and vocations. Parents also are less inclined to offer advice about vocational routes (Batterham and Levesley, 2011)[12] and it seems that in many cases they prefer general education paths over more vocational ones. As one UK study reports, moreover, very few teachers considered an apprenticeship as a genuine alternative to academic upper-secondary education (Skills Commission, 2009).

In 2017, CEDEFOP undertook an opinion survey on the image of VET across in EU countries, and interviewed more than 35 000 people. Results show that although VET

[11] Jobs at that level typically involve the performance of tasks which require complex problem solving and decision making based on an extensive body of theoretical and factual knowledge in a specialised field. Occupations at this skill level generally require extended levels of literacy and numeracy, sometimes at a very high level, and excellent interpersonal communication skills. The knowledge and skills required at Skill Level 4 are usually obtained as the result of study at a higher educational institution for a period of 3-6 years (ILO, 2012).

[12] This study found that both young Britons and their parents viewed general qualifications as a route to university and linked vocational qualifications to specific industry sectors. Culpepper (2007), comparing transition from VET to tertiary education in Austria, Germany and Switzerland, suggests that in Germany and Austria, many students, in particular apprentices, are unaware of the possibility of entering *Fachhochschulen* and university.

suffers from a poor reputation compared to general education from those who have gone through general education, nine out of ten VET graduates were happy with their work skills. The survey shows huge misconceptions about VET itself: 70% believe that VET is simply about manual work, despite the diversity of jobs to which VET now leads. On the particular subject of career guidance, only half of respondents from general education programmes said that they had received information about VET themselves before picking a programme (CEDEFOP, 2017).

Teachers, students and their parents may not be aware that apprenticeship and vocational programmes are available in other fields that the "traditional" VET ones, such as the public sector, healthcare or ICT,[13] or that apprenticeships are available at the postsecondary level. For example, in some countries, apprenticeship programmes can be very demanding in terms of academic requirements. In Switzerland, one of top performers on PISA, 25% enter the most demanding apprenticeship programmes leading to the professions of electronics engineer, commercial employee, optometrist and medical laboratory technicians. At the same time in Switzerland, alongside regular apprenticeships lasting 3 to 4 years, shorter, two-year apprenticeship programmes are available to students who did not secure a regular apprenticeship or were at risk of dropping out (Swiss Coordination Centre for Research in Education, 2014). In France, one-third of all apprentices are at the postsecondary level. More than 50% of postsecondary apprentices are in services – more particularly in trade and administration in 2011-12[14] (OECD, 2014).

PISA 2012 analysis from Canada shows that only 8% of students plan on pursuing a job in the traditional trades, but those who have researched information about them, done an internship or been encouraged by their parents are more likely to plan so (see Box 3.2) (Gluszynski, 2014).

Career guidance can focus on broadening horizons, as well as on raising aspirations. Broadening is particularly important in terms of encouraging a deeper understanding of vocational options.

[13] There seems to be widespread stereotypes in different countries of what being an apprentice is or the jobs to which a VET programme can lead (see for example Mann, 2017, for the United Kingdom).

[14] For comparison, three out of four apprentices at the upper-secondary level were in technical and industrial fields that same period (mainly in civil engineering and in construction).

**Box 3.2. Trade aspirations from PISA, in Canada**

Canada in PISA 2012 added questions to students on their views on trades, such as electrician, crane operator, plumber or mechanic. It found that only 8% of students definitely wanted to pursue a job in the trades, while a further 18% would consider it.

Youth are more likely to definitely plan on pursuing a career in the trades (controlling for other variables) if they are male (Odds Ratio: 8.3); they have lower PISA scores (Level 1 vs. Level 6: Odds Ratio: 9.5); they had researched information about the trades (Odds Ratio: 8.2); they have parents who encouraged them to go into the trades (Odds Ratio: 18.9); they did an internship (Odds Ratio: 1.8). This is be an interesting example in favour of career guidance focusing on the trades, as these often suffer from negative stereotypes.

*Source*: Gluszynski T. (2014), "Canadian results from the 2012 PISA: Youth Attitudes Towards the Trades (YATT)", PowerPoint Presentation presented at 37th meeting of the PGB, 14-16 April 2014, Paris, France.

### *Career guidance, for a smoother integration in the labour market*

As noted above, individuals with the right skills are more likely to be employed and, when in employment, tend to have better jobs. A skilled workforce also makes it easier to introduce and disseminate new technologies and work organisation practices, thereby boosting productivity and growth. To ensure that the skills acquired through the education and training system correspond to labour market needs, and hence avoid major issues with skills mismatch, it is important to develop stronger links between the world of education and the world of work. Career guidance and partnership activities play a major role in this. Indirectly, informed student choice exerts pressure on institutions to improve the quality of programmes (OECD, 2004; OECD, 2012; Hooley and Dodd, 2015).

Career guidance can help bring to the surface student preferences as well as informing students about education and work paths that they may not have already considered, or even know about. A correlate of this line of argument is that career guidance can support retention and a more efficient education system because students who choose programmes for which they are ill suited either personally or academically are less likely to succeed (OECD, 2012).

The way in which adolescents think about their futures, in terms of career choices and education programmes, has a significant impact on what becomes of them as working adults (see for example Ashby and Schoon, 2010). Teenagers who are uncertain about their career interests have been found by a number of longitudinal studies to suffer negative economic consequences in adult life – although this can be mitigated by the accumulation of higher level qualifications (see Box 2.1). There are adult economic penalties linked to underestimates of the length of education required to achieve aspirations – an indication of career confusion or unrealism. Poor decision-making about the links between education and employment drives inefficiencies in the operation of the labour market and in the education system. It also raises significant questions of equity – because commonly, those young people who exhibit the most significant challenges in

making informed decisions are from the most disadvantaged backgrounds (Yates et al., 2010).

In many cases this translates towards a prejudice against VET, and many young people are only interested in just a small number of high profile careers. Career guidance can help to broaden and to raise aspiration. It can provide young people with fuller insights into the true nature of occupations and mitigate against such assumptions.

## Disadvantaged students face additional difficulties in school-to-work transitions

Disadvantaged young people face particular difficulties in navigating the journey from the world of education to the world of work (Diemer, Wang and Smith, 2010). There are different mechanisms at play here, in terms of the impact of socio-economic background which can lead to intergenerational cycles of disadvantage, and how career aspirations are formed, particularly when students do not benefit from career guidance.

Individuals with disadvantaged social origins typically tend not to realise their potential within the schooling system (OECD, 2012). How socio-economic status impacts people's aspirations and expectations has emerged as significant when the literature is reviewed. For some people, "low aspirations and low-skilled work is not something they see as a transitory state but as rather reflecting their 'natural place' and identity" (CEDEFOP, 2016b, p.8). The relative lack of intergenerational mobility in some societies means that the low-skilled also tend to have other family members in low-skilled employment and/or who experience significant spells of unemployment. As a consequence, young people from lower socio-economic backgrounds are much more likely to settle for work demanding lower levels of skills than possessed over a long period of time (CEDEFOP, 2016b).

This means that some groups of students, the disadvantaged ones, are less likely to consider certain education and job paths, because of barriers associated with economic disadvantage (limited transportation for example) or a lack of awareness of opportunity structures (such a programme option in themselves or access to financial support/assistance, see Box 3.3). Students from higher socio-economic status backgrounds are more likely to stay on in full-time academic education after the end of compulsory schooling than their less privileged peers, consequently increasing their chances of securing better paying jobs and reducing the risks of substantial unemployment (Schoon, Martin and Ros, 2007).

**Box 3.3. Looking at the evidence on why students choose not to enter higher education**

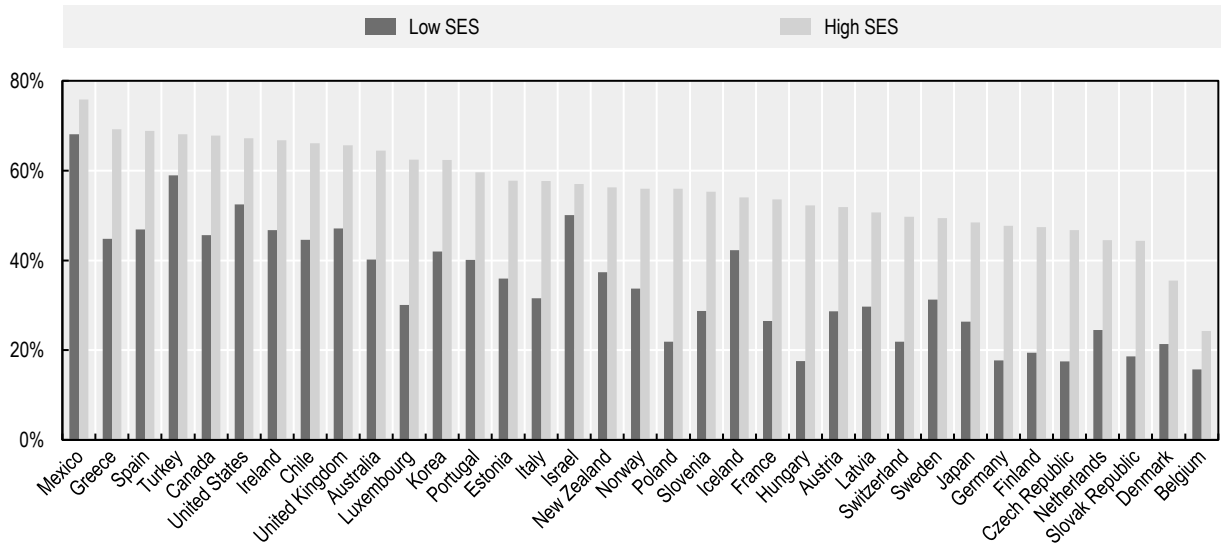
Looking at the impact that career guidance can have on actually changing young people's decisions, there are interesting parallels with the research on low higher education participation amongst students from disadvantaged backgrounds. There are different potential explanations to these low participation rates: one is that disadvantaged students underestimate the returns to obtaining a degree; if this is true, then providing such students with better information about returns should increase participation. Another potential explanation is that these students overestimate how much it will cost them to go to university; if this is true, then providing them with information about financial aid should increase participation.

The most relevant study carried out in the United States (Bettinger et al., 2009) randomly sampled a large group of individuals with family income below USD 45 000 and a family member aged 17-30 without a degree as they were completing their tax return, and offered them: a) the opportunity to have a college financial aid form completed (10 000 people); b) personalised information about their aid eligibility (1 650 people); c) a brochure on the importance of higher education and general information about college costs (control group; 12 000 people). The authors found that dependent individuals in treatment group a) were 15 percentage points more likely to submit an aid form and 8 percentage points more likely to enrol in college than those in the control group c). Outcomes for those in treatment group b) were no different to those in the control group. Interestingly, the authors also found that the effects were largest amongst those in the lowest income households, while families with incomes close to USD 45 000 were actually less likely to go to college (presumably because they found out that they would have to contribute more than they had anticipated). This suggests that providing practical help to students from low income families to complete an unfamiliar student loan form may well increase participation in higher education. It suggests that providing even relatively basic information about the returns to university may increase participation. Similar reasoning could be applied in general to providing more information about non-university tracks to disadvantaged young people.

*Source*: Crawford C., et al. (2011), *Social Mobility: A Literature Review*, www.gov.uk/government/uploads/system/uploads/attachment_data/file/32111/11-750-social-mobility-literature-review.pdf; Bettinger, E. et al. (2009), "The role of simplification and information in college decisions: Results from the H&R block FAFSA experiment", *NBER Working Paper*, No. 15361, www.nber.org/papers/w15361.

**Figure 3.5. Advantaged students (high socio-economic status – SES) are more likely to want to work as professionals than more disadvantaged students**

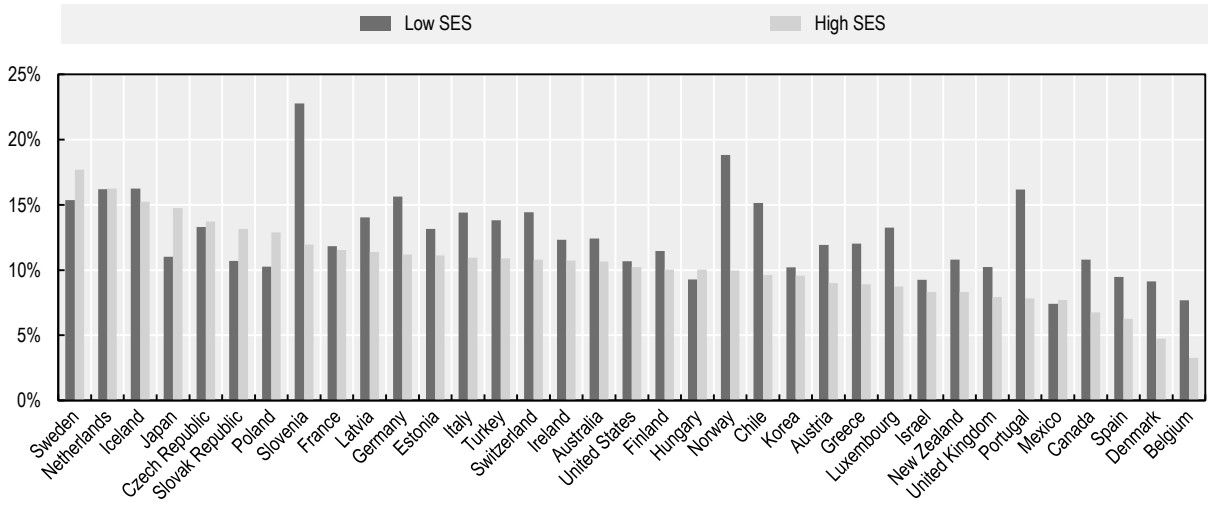
Percentage of students who say they want to work as professionals (ISCO category 2) by SES




*Note*: Data is not available for the Slovak Republic. Occupations classified as professionals include for example civil engineers, secondary school teachers, medical practitioners, operating theatre nurses and computer systems analysts.
*Source*: OECD, PISA 2015 Database, www.oecd.org/pisa/data/2015database/.

**Figure 3.6. Disadvantaged students are more likely to want be technicians than more advantaged students**

Percentage of students who say they want to work as technicians [15] (ISCO category 3) by SES




*Note*: Data is not available for the Slovak Republic. Occupations classified as technicians include shop managers, medical laboratory technicians, legal secretaries, commercial sales representatives, computer support technicians, and broadcasting and recording technicians.
*Source*: OECD, PISA 2015 Database, www.oecd.org/pisa/data/2015database/.

## *Social status has an impact on career aspirations*

Career aspirations of young people are influenced by a number of people – parents, friends, teachers, employers, career guidance counsellors – in addition to what they are exposed to in the media. Parents and friends influence student choices in complex ways, but the impact of socio-economic status on career aspirations can be seen very clearly in PISA.

This new PISA analysis illustrates how career expectations change according to the socio-economic status (SES) of students and their parents. Students from higher SES report wanting to work as a professional more in all OECD countries than students from lower SES (Figure 3.5). Similarly, students from lower SES expect more to work as technicians and associated occupations in the majority of countries (Figure 3.6). Surely not all students could and should aspire to work as professionals, but this means that there is a lot of waste of opportunities and potential amongst individuals that could aspire to more for their future.

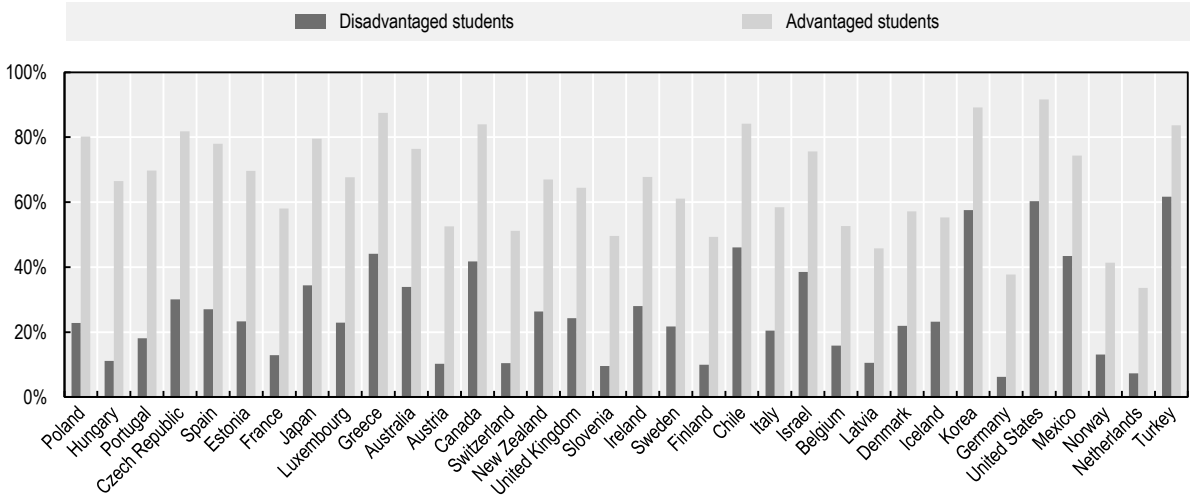
Similarly, advantaged students are more likely to report that they would like to study at the higher education level than disadvantaged students (Figure 3.7). The difference is more than 50 percentage points in countries like Poland and Hungary but the differences

[15] Occupations at that level typically involve the performance of complex technical and practical tasks which require an extensive body of factual, technical and procedural knowledge in a specialised field. Occupations at this skill level generally require a high level of literacy and numeracy and well developed interpersonal communication skills. The knowledge and skills required at Skill Level 3 are usually obtained as the result of study at a higher educational institution following completion of secondary education for a period of 1-3 years.

are marked in all countries. When controlling for proficiency levels (score in mathematics in PISA), the relationship holds: students from low socio-economic background are less likely to want to go to university than higher SES students at the same proficiency level.

**Figure 3.7. Advantaged students are more likely to want to go to university than disadvantaged students**

Percentage of students who want to study in higher education




*Note*: No data are available for the Slovak Republic
*Source*: OECD, PISA 2015 Database, www.oecd.org/pisa/data/2015database/.

In some countries, low proficiency students from an advantaged background are a lot more likely to want to go to universities than their more disadvantaged counterparts achieving similar results on the PISA tests (see Figure 3.8).

These findings are mirrored by the extensive literature that confirms that parental education levels and socio-economic status are important predictors of student choices (for an Australian perspective see, for example, Misko, Nguyen and Saunders, 2007). Guyon and Huillery (2018) look at French teenagers' educational and professional aspirations at the end of junior high school, and find that among classmates who perform equally well, low-SES students are 7 percentage points more likely to aspire to vocational upper secondary than high-SES students, and 4 percentage points less likely to aspire to university studies. Low-SES students have lower self-esteem about their current academic ability compared to their high-SES classmates.

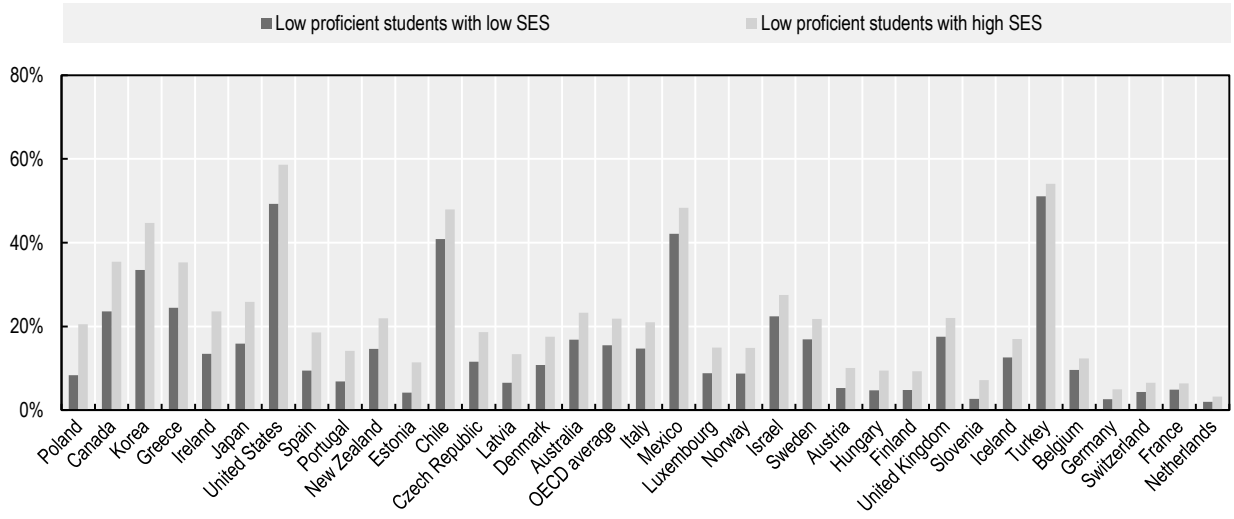
Howard et al. (2015) review a range of studies which document that the impact of family and parents is evident throughout school-aged years and appears to peak at around 13 years of age. Lower social capital and poorer access to networks and information provide poorer contacts with the world of work (van Tuijl and van der Molen, 2015). There is both a family effect (such as having a lower number of employed family members) and a neighbourhood effect (such as living in a high unemployment area).

Yates et al. (2010) showed that it is the young people from the lowest socio-economic groups who are much more likely to face uncertainty and misalignment in occupational aspirations and unmatched educational expectations, which have been found to increase

the likelihood of NEET status by the age 18. And even when the career aspirations of disadvantaged students are often high, these students and their parents commonly lack the knowledge and connections to provide reliable insight into how to achieve career ambitions (Menzies, 2013).

**Figure 3.8. Low proficiency students from an advantaged socio-economic background are more likely to want to go to university than those from a more disadvantaged background**

Percentage of students who say they want to go to university, by maths PISA score and ESCE category




*Note*: No data are available for the Slovak Republic
*Source*: OECD, PISA 2015 Database, www.oecd.org/pisa/data/2015database/.

## *Career aspirations also depend on individual characteristics such as gender and ethnicity*

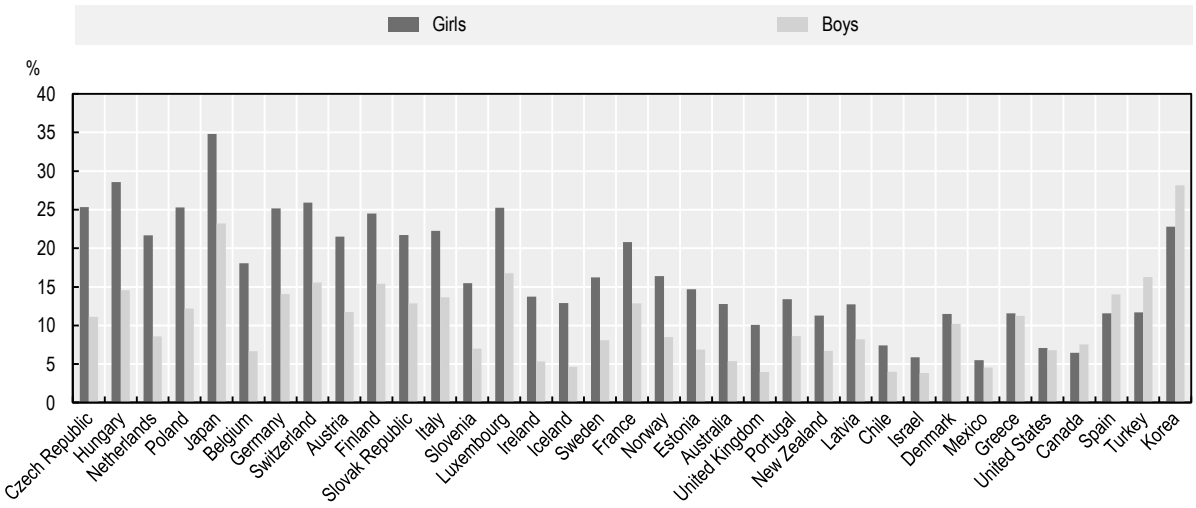
### *'Jobs for the boys' and 'women's work'*

The new PISA 2015 analysis shows how gendered career expectations are. The figures below show that girls are more likely to report at age 15 wanting to work as clerks or service and sales workers than boys, who are more likely to want to work in a job that requires manual work, at the same skills level (see Figure 3.9 and Figure 3.10). Of particular concern is the fact that, in many countries, gendered choices about apprenticeships contribute to gender segmentation in the labour market with female apprentices often being concentrated in fields which have lower completion rates, lower pay and weaker opportunities for progression (Beck, Fuller and Unwin, 2006a; Beck, Fuller and Unwin, 2006b).

Analysis shows that in terms of expectations to work in a highly skilled occupation, girls have higher career expectations than boys at the same proficiency level. Among boys and girls that have the same socio-economic background and the same proficiency level, girls have higher career expectations (see Figure 3.11).

**Figure 3.9. Girls are more likely to want to work as clerks and service and sales workers than boys**

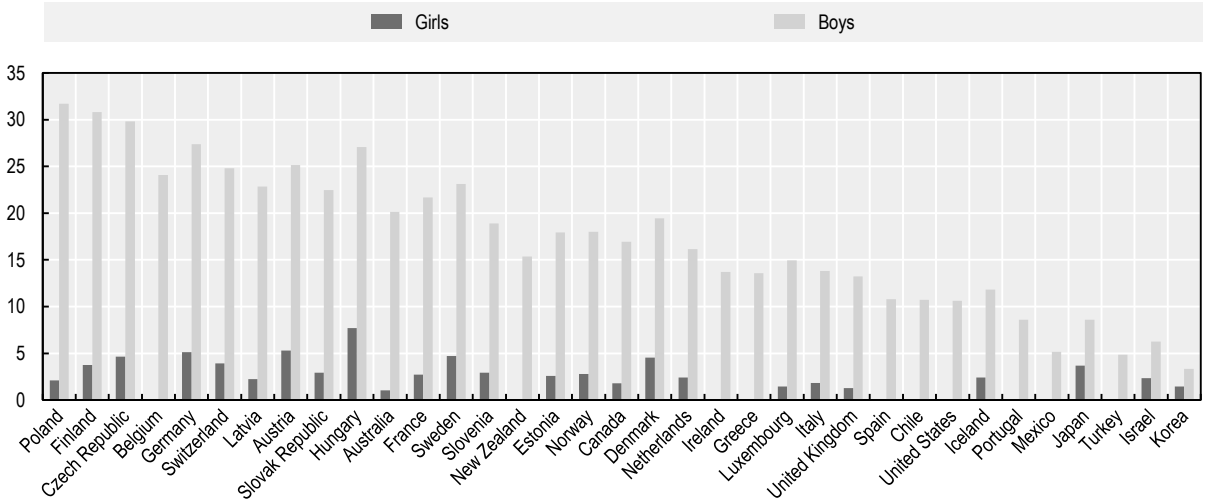
Percentage of 15-year-olds that say they want to work in ISCO 4 and 5 occupations, by gender




*Note*: ISCO 4 category is clerks and ISCO 5 category is service and sales workers.
*Source*: OECD, PISA 2015 Database, www.oecd.org/pisa/data/2015database/.

**Figure 3.10. Boys are more likely to want to work in a job that requires manual work than girls**

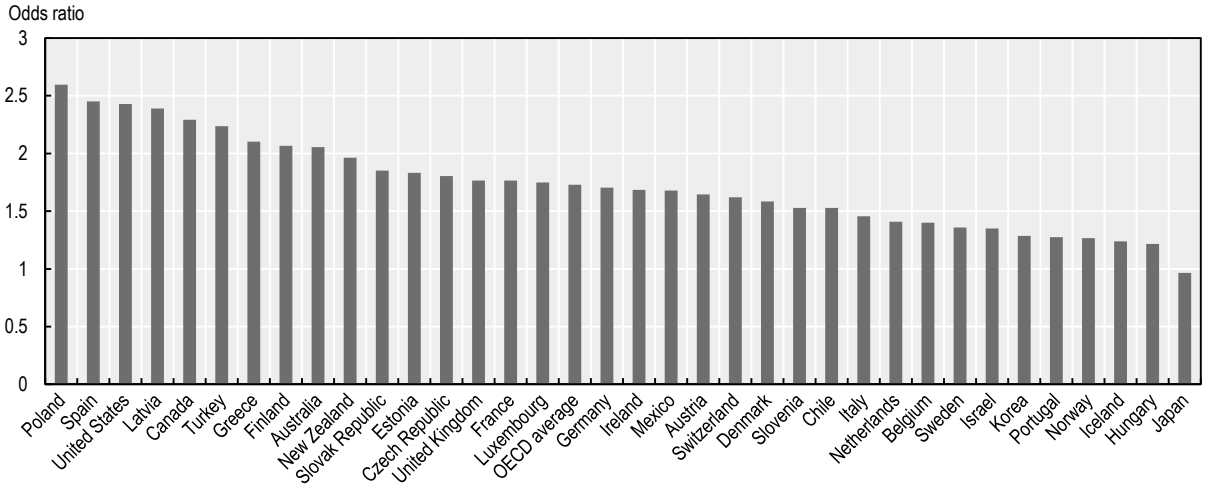
Percentage of 15-year-olds that say they want to work in ISCO 6, 7 and 8 occupations, by gender




*Note*: ISCO 6 is Skilled agricultural and fishery workers. ISCO 7 is craft and related trades workers. ISCO 8 is plant and machine operators, and assemblers.
*Source*: OECD, PISA 2015 Database, www.oecd.org/pisa/data/2015database/.

**Figure 3.11. Girls have higher career expectations than boys**

Odds for girls expecting to work in skilled professions over the odds for boys




*Note*: After accounting for student characteristics and performance in mathematics.
*Source*: Adapted from OECD, PISA 2015 Database, www.oecd.org/pisa/data/2015database/.

Research shows that girls often shy away from STEM fields of study due in part to different perception of their own capacities in maths and science (Sadler et al., 2012; Legewie and DiPrete, 2014; Archer and DeWitt, 2015). Gender stereotypes about scientists and about work in science-related occupations can discourage some students from engaging further with science. An interesting finding from a significant ongoing research project is that girls end up assuming that science is not for them partly because they do not imagine any career uses for it (ASPIRES, 2013).

While it is encouraging that boys and girls now show similar levels of science performance in PISA, large gender differences remain in students' dispositions towards science-related careers, even among students who score similarly in science and who report similar levels of enjoyment in learning science (OECD, 2015b).

Makarova, Aeschlimann and Herzog (2016) explore the perspectives of young Swiss women who had chosen to undertake vocational education and training in traditionally male dominated fields related to science, technology, engineering and mathematics and argue that interested young women commonly share concerns over how they could be expected to be treated in a gender-atypical job. Once on their apprenticeship, moreover, they did report encountering gender stereotyping and situations requiring resilience strategies. It is right for young women to question whether gender atypical training provision and workplaces can be expected to be fully conducive to a successful experience, and answering such questions demands a deeper commitment from career guidance than may be common (Bimrose, 2006).

### *Ethnicity and aspiration*

Similarly, migrant and minority background shapes career preferences and opportunities. Ethnicity shapes youth preferences by affecting self-efficacy and perceptions of career development barriers (Dale et al., 2002; Cardoso and Marques, 2008; Cardoso and Moreira, 2009; van Tuijl and van der Molen, 2015). One line of influence is attached to

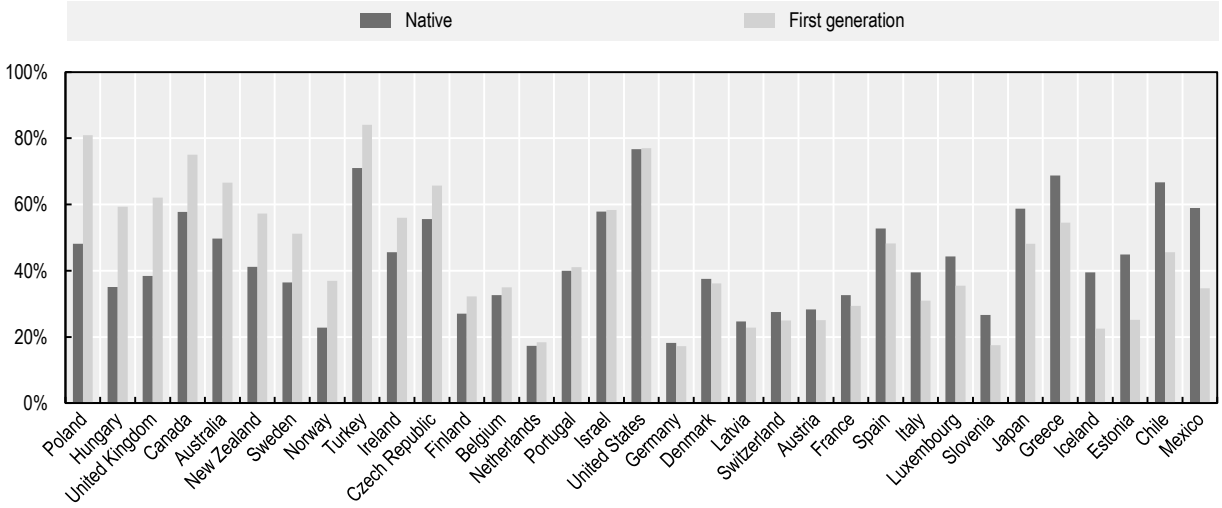
the lower socio-economic status often linked to immigrant background as well as large differences in life chances[16] (Bimrose and McNair, 2011). But as it does for native students, parental education in their country of origin also matters for migrant students, over and above socio-economic status in the country to which they immigrated to (Ichou, 2014).

Family roles, expectations and values tend to differ across cultures, and are projected into career decisions of immigrant students[17] (Basit, 1996, Fouad et al. 2016; Ma and Yeh, 2010; Mitchell and Bryan, 2007; Bimrose and McNAir, 2011; Kristen, Reimer and Kogan, 2008). This can lead to patterns in countries in which non-native students tend to avoid the more traditional vocational tracks.

PISA 2015 analysis shows a wide heterogeneity of patterns across countries between expectations to go to higher education of native students, compared to first generation students (see Figure 3.12). This may reflect specific national migrant patterns, regarding the level of the migrants' parental education.

**Figure 3.12. Native students and first-generation migrant students have different expectations to go to university in some countries**

Percentage of 15-year-old students who say that the want to go to university by migrant status




*Note*: No data are available for the Slovak Republic.
*Source*: OECD, PISA 2015 Database, www.oecd.org/pisa/data/2015database/.

[16] It should be noted that newly arriving immigrant families or children may also face high acculturation stress that might negatively affect their education outcomes, which then limits their occupational options (Mitchell and Bryan, 2007). Discrimination and racism is another barrier that immigrant communities or ethnic minorities often face in various contexts, including access to labour market or quality education (Shinnar, 2007; Yakusho et al., 2008).

[17] Roysircar, Carey and Koroma (2010) studied U.S. college major preferences among Asian Indian students and found that parents' preferences for science and math significantly shaped preferences as well as actual choices of first and second-generation children. Ma and Yeh (2010) analysed how individual and family factors affected educational and career aspirations of Chinese immigrant youth in New York and found a key importance of English fluency. Higher English fluency combined with career-related support from parents led to higher career and educational aspirations, while lower fluency predicted plans to work immediately after high school.

## Career guidance can help tackling inequities

Choosing an educational institution and a programme of study is one of the biggest decisions an individual makes in his or her lifetime. Public interventions in career guidance are often justified using arguments from social capital theory: the lack of both personal and professional network connections, and lack of exposure to the world of work, is thought to hinder the labour market progress of young people, in particular from disadvantaged backgrounds. The assumption is that young people have a weak understanding of the labour market, and that their career aspirations often do not reflect the reality of the labour market. Young people are commonly understood to make use of their episodes of career guidance, and especially first-hand experiences of the labour market, to gain trusted insights into the operation of the labour market, its breadth and demands. In turn, it is argued, new insights enable more informed decision-making, smoothing the transition into sustained employment (arguments as developed in Hughes et al., 2016).

Governments must always ask themselves the question: what will happen in a policy area if no action is taken? Without some form of career guidance intervention, family background disproportionately shapes career thinking. For certain young people, often from distinctive social groups, some careers are seen as inappropriate or inaccessible. Evidence suggests that career guidance can help reduce inequalities in opportunities associated with a child's background (related to ethnicity and socio-economic status for example) and parental experiences and expectations. Effective career guidance can act as an intervention to challenge the cycle of disadvantage by exposing young people to alternatives which they may not have considered. It gives them confidence in pursuing those aspirations which may in some ways be atypical. This is why career guidance is important.

## There are economic, education and social benefits to career guidance

Assessing, and optimising, the benefits of career guidance has become increasingly important for a number of reasons. Firstly, pressures on the public purse necessitate having a strong evidence-base to secure funding. Secondly, the development of evidence-based practice requires evidence on the impact of the different interventions on their recipients. Thirdly, in some countries, the setting of quality standards for career guidance provision requires judgements to be made on the levels of service quality which maximise its benefits net of costs. Fourthly, quality assurance mechanisms require quantitative and qualitative performance indicators to be available. Evaluating career guidance can be complex, since the activities vary widely between education and training institutions in classrooms and online services. Such activities are often brief in their intensity, and co-exist with other concurrent interventions and influences. Obtaining clear answers about impacts under these circumstances requires large-scale research with investment in using experimental or quasi-experimental approaches, longitudinal data and statistical controls, in particular data on the background characteristics of the participants.

The benefits for the students are: better progression throughout education stages, greater motivation and self-management skills, higher job satisfaction and better employment prospects and earnings, as the following sections will present.

### *Reviewing the evidence*

Different types of outcomes can be considered: educational outcomes, such as attainment level, participation in education and/or training, and completion; economic and employment outcomes, such as earnings, likelihood to be in employment, transition from education to work; and social outcomes. But issues remain on what are the desirable outcomes, and how to measure them. Social outcomes in particular are usually self-reported by participants and methodological challenges remain.

The literature on the impact of career guidance activities on student outcomes is largely considered weak (particularly at pre-secondary level) and fragmented (see for example Hughes et al, 2016, for a review of the literature since 1995). Quasi-experimental (including those analysing longitudinal databases) and experimental studies are lacking in the field. Selection bias is a major challenge: for example in measuring the impact of career guidance activities on earnings, individuals from wealthier socio-economic background are more likely to attend schools with privileged access to career guidance activities, but also go on to earn more due to social advantage, regardless of those activities. For this reason, it is essential to include controls for an individual's family background, and school environment. But the data available does not always make it possible to control for such background characteristics. The evidence base used for the evaluation of career guidance initiatives is often based on self-reported student satisfaction or one-off destination information, with its obvious limitations.

### *Economic outcomes*

Hughes et al. (2016) commissioned by the government-funded Education Endowment Foundation in England, reviewed literature using reliable methodologies to explore the impact of career guidance activities on young people's outcomes. They considered first economic outcomes in young adulthood linked to school-age engagement in career guidance, typically measured in adult wage premiums, rather than individual self-reported perceptions. Hughes et al. (2016) identified 27 high quality studies published since 1996 which explored the links between school-age career education and later economic outcomes for those individuals. Two-thirds of the studies reviewed provided evidence of largely positive economic outcomes; one-third found evidence to be mixed with no distinct pattern in terms of outcomes. It is also interesting to note that no study found evidence that participation in a career education intervention can be linked to poorer adult economic outcomes.

Career guidance programme participants, within the framework of services provided to young job seekers, had better chances to progress to employment compared to non-participants, after controlling for background characteristics (Blundell et al., 2004). In a study using longitudinal data, Kashefpakdel and Percy (2016) find that students who participated in career guidance activities (in this case career talks at age 14-16 with speakers from outside of school) enjoyed a wage premium in their early careers (see Box 4.2). The impact, specifically, of activities engaging employers in career guidance, such as career talks, on economic outcomes is discussed in Chapter 4.

How does career guidance lead to better employment prospects? It seems to be because it helps students identify their preferences and more effective progression routes through

education and training, and aids intrinsic motivation which has an impact, on both academic achievement, leading to better grades, and better jobs.[18]

These findings are mirrored by other studies: looking at survey responses by young Britons about their experiences of employer-led career guidance activities, Jones, Mann and Morris (2015) look at the causal link between episodes of exposure to workplaces and wage premia to see what were the drivers behind it. More than the explanations around human capital theories, they draw on Bourdieu's cultural capital theory and found that through their schools, higher achievers/advantaged students engage with employers in different ways than lower achievers, that access to specific work experience placements is shaped by family networks, and that students' thinking about how they engage with employers is very gendered. Analysing survey responders, they find that students participating in work placements thought that their placements made them more self-assured and gave them confidence about their choices, as well as providing constructive challenges about personal dispositions, more than the development of either technical or 'employability' skills (aspects of human capital).

Saniter and Siedler (2014) look at the causal link between participating in career guidance activities and educational choices and labour market outcomes in Germany. The results suggest that individuals, who went to school in administrative districts in which visits to job information centre career guidance are mandatory have higher educational attainments, and a smoother transfer to the labour market, than students who did not have access to these facilities. But they found no effects on individuals' earnings in their first job or later in life.

### *Educational outcomes*

Hughes et al (2016) identified 45 research studies[19] providing reliable assessment of the impact of career guidance on the educational achievement of young people. Out of 67 different interventions considered within the studies, 60% were found to describe a largely positive impact in terms of better educational outcomes and academic achievement. Only one study suggested negative impacts. The remainder provided either mixed results or no impact.

There is much variation, however, in how academic outcomes are measured. Studying more precisely results of five comparable studies looking at the impact of different career education interventions on achievement at GCSE [20] (as analysed by Hughes et al., 2016), the literature suggests, on average, relatively modest attainment boosts. The literature offers few explanations as to why interventions related to career-focused education have such impacts on the attainment of young people. It does, however, broadly support the

[18] Sellami et al. (2015), looking at the determinants of student choices in higher education majors found, using longitudinal data from Flanders, that students who choose their field of study because they are interested in the field of study in itself and enjoy studying, have better labour market outcomes than those who choose for other reasons.

[19] The literature is strongly focused on secondary education with 44 studies providing comment on career- focused mediated provision received by pupils between the ages of 12 and 19. Looking at specific interventions, four areas have been investigated by five or more studies: leadership, mentoring, career guidance, and work-related learning.

[20] GCSE is a qualification in a specific subject typically taken by school students aged 14-16, at a level below A Level in the United Kingdom (except Scotland).

hypothesis that career education helps young people to better understand the relationship between educational goals and occupational outcomes, increasing pupil motivation and focus. The evidence does suggest that boosts cannot be taken for granted and may relate to either the character or quality of the activity being undertaken or by the type of young person who undertakes and responds to it.

An argument often mentioned in favour of career guidance is that it increases educational achievement: a longitudinal study following more than 80 000 individuals in the United States (Tracey and Robins, 2006) found that choosing the wrong education paths does lead to disengagement from education.

Kashefpakdel, Mann and Schleicher (2016) analyse PISA 2012 data on career guidance activities in six OECD countries (Australia, Belgium, Canada, Denmark, Finland and Ireland) and look at the impact of participating in career guidance activities (including attendance at a careers fair, speaking with an adviser and job shadowing) on student motivation controlling for different background characteristics. Students who participated in career guidance activities are more likely to be motivated by school in general, and demonstrate greater belief the usefulness of school to their future. The strength of career guidance relies on its capacity to change behaviours and how the young people see themselves. In a follow-up study, Kashefpakdel and Schleicher (2017) consider relationships between participation in career development activities and the results of the PISA assessment. With controls again in place for social background and other drivers of attainment, they find evidence of a relationship, in some circumstances, between career guidance activity and modestly higher assessment performances.

### *'Social' outcomes*

Career guidance promotes positive engagement in work and learning. In terms of social outcomes, studies look at outcomes such as community engagement, self-esteem, well-being and career management skills. Hughes et al. (2016) identified 25 research studies providing evidence of the impact of career education on the social outcomes of young people. Two-thirds of the studies provided some evidence of improvements in self-efficacy, self-confidence, career maturity and decision-making skills, which are self-reported by participants themselves.

This echoes other sources: evaluation evidence on the benefits of career guidance is positive in particular with respect to its short-term learning and motivational outcomes (OECD, 2010). In the less immediate term, there is considerable evidence suggesting that good quality career guidance develops the career-related skills, self-awareness and self-esteem which lead to rewarding choices (Bowes, Smith and Morgan, 2005; Hughes, 2010).

In PISA 2012, 15 year-olds report if they have acquired competences such as how to find information on jobs and how to prepare for a job interview. Sweet, Nissinen and Vuorinen (2014) found a very strong relationship between perceived career development competence and participation in career development activities. But a simple correlation does not indicate causation: it could be that 15-year-olds who believe that they have acquired more career development competences are more likely to participate in career development activities than those who believe that they have acquired fewer. Again this shows that more research could be done in this field.

It would be helpful for future PISA surveys to include a new and wider range of questions concerning teenage participation in career development activities. Future questioning

might include a focus on whether participation in career education was compulsory or optional, so reducing the risk of self-selection biasing results. In 2012, the 65 countries participating in PISA could choose to add an optional part of the survey in which respondents were asked, amongst other things, about participation in career guidance activities, but only 22 countries chose to do so.

## Conclusion

Many students have internalised ideas of what is appropriate for them, or what people think they should choose as an education and job path, on how they fit into the education system and the labour market. As discussed above, this is about socio-economic status, gender and ethnicity. Career guidance can actively tackle these assumptions about what are appropriate choices for girls and boys, children from affluent families, and from poorer ones, etc. Such assumptions are often mixed up with a weak understanding of what particular jobs involve. The idea behind is that if students find out what a certain profession is really about, or discover the many different ways in which you can work in a particular field, they might find it easier to imagine themselves in that role. Career guidance is of special importance to young people who consider vocational education and training as they often affect students' career prospects more directly than general secondary programmes.

Career guidance, in addition to individual benefits, offers wider social and economic benefits, which justify public investment in the area. It also allows a higher return on public investment in human capital. Counselling and career guidance can boost skills by improving the match between young people and their chosen path, and improve the labour market signalling function of qualifications.

There is a strong equity factor to career guidance. It can strengthen social mobility by informing young people of career paths that their family and social networks may not suggest, and encouraging them to choose paths more likely to lead to stable employment. The argument is that if young people and parents know more about the full range of jobs open to people with the right qualification, they will have a clearer idea of the routes to better jobs. This knowledge may already be available to students from families of professionals and graduates, but it might not be the case for students who come from families in which many people are unemployed or in low-skilled jobs or from a migrant background. The same can also be true for professionals struggling to give advice about trades and apprenticeships. The subtle interaction between social and demographic characteristics and aspirations demands early interventions, before secondary education, to reduce the risk of poor information driving educational engagement and decision making.

# Chapter 4. Designing effective career guidance services

When career guidance services are effective, they can expect to influence the labour market outcomes of young people – improving their employment prospects by providing a better alignment between what young people have to offer and what employers demand. Interestingly too, evidence suggests there is a relationship between exposure to career guidance and better engagement in education, underpinning academic achievement. This chapter looks at how to design effective career guidance services which support young people to develop informed aspirations for future employment and to help them make immediate choices about education and training.

## The OECD has looked extensively at issues around career guidance

The OECD looked extensively at career guidance services by conducting a major review of national career guidance policies in 14 countries[21] during 2001-13. In each country, the reviews assessed how the organisation, management and delivery of career guidance services contribute to the implementation of lifelong learning and active labour market policies. Their main message is clear: accessible, independent and impartial, proactive career guidance is needed, backed by solid career information.

Since this substantial body of research was instigated, many things have changed, as discussed in Chapter 2. In many countries the marketisation of education means that now students have to choose from more options delivered by competing institutions than before. Also, ICT has changed dramatically the way career guidance is thought of.

The OECD also looked at these issues in the broader framework of vocational education and training, through two review cycles (*Learning for Jobs* - reviews of upper-secondary VET and *Skills beyond School* - reviews of post-secondary VET).

**Box 4.1. Learning for Jobs (2010) and Skills beyond School (2014)**

*Learning for Jobs* (OECD, 2010) sets out the issues at upper-secondary level, and argues that career guidance has often been neglected. Guidance services in some countries are fragmented and under-resourced; some guidance services are dominated by a counselling approach, with inadequate knowledge of, and attention to, labour market opportunities; they may also have an academic bias, especially where they are delivered by academically trained teachers. The move in a number of countries towards stronger professionalisation of career guidance needs to be supported and extended to all countries.

[21] Countries reviewed include Australia, Austria, Canada, the Czech Republic, Denmark, Finland, Germany, Ireland, Korea, Luxembourg, the Netherlands, Norway, Spain and the United Kingdom.

*Skills beyond School* (OECD, 2014) specifies what the issues look like in postsecondary VET. At this level, the diversity of postsecondary options, including university options, add to the challenge. Pre-entry guidance may be delivered by a variety of agencies, including not only public employment services and stand-alone career guidance services but also by trade unions, employers, voluntary and private sector organisations, each with their own interests and priorities. This means that the career guidance information available may be unduly narrow.

*Source:* OECD (2010), *Learning for Jobs*, http://dx.doi.org/10.1787/9789264087460-en; OECD (2014), *Skills Beyond School: Synthesis Report*, https://doi.org/10.1787/9789264214682-en.

The way young people see themselves and their social and cultural capital all have an impact on the decisions they make, and on how they engage in education and in the labour market. It seems that career guidance remains neglected, and its potential as a strategic tool is not always maximised. Another dimension of the policy issue for career guidance is about the medium and tools used in making information available. Employer engagement, as it will be developed in Chapter 4, has an important role to play here.

### *Schools and teachers are an essential gateway to career guidance services*

School continues to be a key access point to formal career guidance in most countries (OECD, 2004; OECD, 2010; CEDEFOP 2016a; Watts, 2009). The strength of school-based career guidance lies in the potential to reach many young people in a systematic way. Usually activities in schools are divided in two types:

- Career education in which students learn about the world of work and develop career management skills through classroom teaching, and through other activities such as work experience.
- Individual career counselling on a one-to-one or group basis, providing specific information and advice on career options and decisions.

Teachers are also a strong influence on young people and may provide young people with well-intentioned but poorly informed advice that does not take into account future job prospects or reflects their own biases and preferences – for example, that everyone who can should pursue an academic pathway. There is a strong consensus in the literature that good-quality career guidance requires the involvement of both qualified career guidance specialists and the wider teaching and school staff – including school leaders. Young people frequently seek out career support from a trusted adult within their immediate social network, and teachers are a likely source of this support, particularly where career aspirations are connected to interest in academic subjects. It is often argued that many teachers have limited experience of employment outside the education system, but it can also be argued that inevitably all career informants have limited perspectives. These perspectives can be enriching as long as their limits are understood and the teacher's experience is not presented as the only career option. Teachers need to be able to offer some solutions to students, including referring young people to professionals and other specialists (Hooley, Watts and Andrews, 2015).

### *But career guidance services sometimes face issues in their delivery*

Across OECD countries, there is widespread concern that career guidance services are relatively poorly resourced in schools, that staff are inadequately prepared for dealing with labour market issues, and that advice may lack objectivity. Different career guidance providers may be competing.

#### *Services may be under-resourced*

Within the school, it is often delivered by regular non-specialist teachers who are given an additional responsibility for career guidance. This function is often under-resourced because the activity competes with the 'mainstream' teaching and pastoral functions of educational institutions which tend to dominate priorities (OECD, 2010).

#### *Staff providing career guidance are sometimes inadequately prepared*

Some career guidance activities are dominated by a psychological counselling approach, with inadequate knowledge of, and attention to, labour market opportunities. While a background in psychology may be appropriate for supporting students with personal problems, it does not necessarily equip career guidance practitioners to deliver advice on types of job and career prospects. Career guidance staff often lack specific career guidance training, including navigation and understanding of data about labour market demand and supply (Watts, 2010a).

#### *Counselling may lack objectivity*

Career counselling sometimes lacks objectivity. When advising students in the choice of a career path, some teachers might be biased towards general streams of education that they know better from their own experience of academic education (OECD, 2004; Deloitte UK and Education and Employers Taskforce, 2010; OECD, 2010). This challenge is common in many countries. Although career education curricula sometimes rely on labour market information or include work-based experience, there is evidence that school career guidance tends to favour general education options (Watts, 2009). In many countries, school funding operates in ways that schools actually lose funding if students switch to another institution, which can contribute to teachers and school leaders pushing for students to narrow their options and enrol in the streams that they offer.

#### *Different career guidance providers may be competing*

Outside of schools, career guidance to young people may be delivered by a variety of agencies, including not only public employment services and stand-alone career guidance services and agencies, but also by trade unions, employers, and voluntary and private sector organisations. Some countries have established specialised career guidance agencies. The arguments in favour of such agencies are that they can have a clearer identity, better links to the labour market, better trained staff, can provide advice more objectively and with more coherence and continuity than school-based career guidance.[22]

[22] In some countries, school-based career guidance has been supported by the work of specialised agencies that might be age-segmented. For example, Youth guidance centres (Ungdommens Uddannelsesvejledning) in Denmark focus on transition from upper-secondary education to tertiary education or labour market, including work with NEETs. The centres are tasked to co-operate closely with schools, businesses and PES (public employment services). They organise guidance activities at schools, complementing the work of teachers (CEDEFOP, 2012).

But these services might be detached from local circumstances, the school curriculum and might face difficulties in reaching out to all young people (OECD, 2004; Watts, 2010b). Different career advice providers may have their own interests and priorities, especially those that also provide education programmes, which can lead to narrower, and sometimes competing perspectives than are desirable to guide the career choices of young people (OECD, 2014).

### *Some of those students with greater need for career guidance sometimes have less access to it*

#### *Girls receive less employer-led career guidance than boys*

Across OECD countries, there is much debate about the effectiveness of career guidance services. Many studies find that career guidance services are not always available to the same degree, or at the same quality, to all students.

In PISA 2012, in some OECD countries, students were asked about what they did to find out more about possible future studies or careers. There are some wide differences in some countries between boys and girls in the participation in different activities (see Figure 4.1).

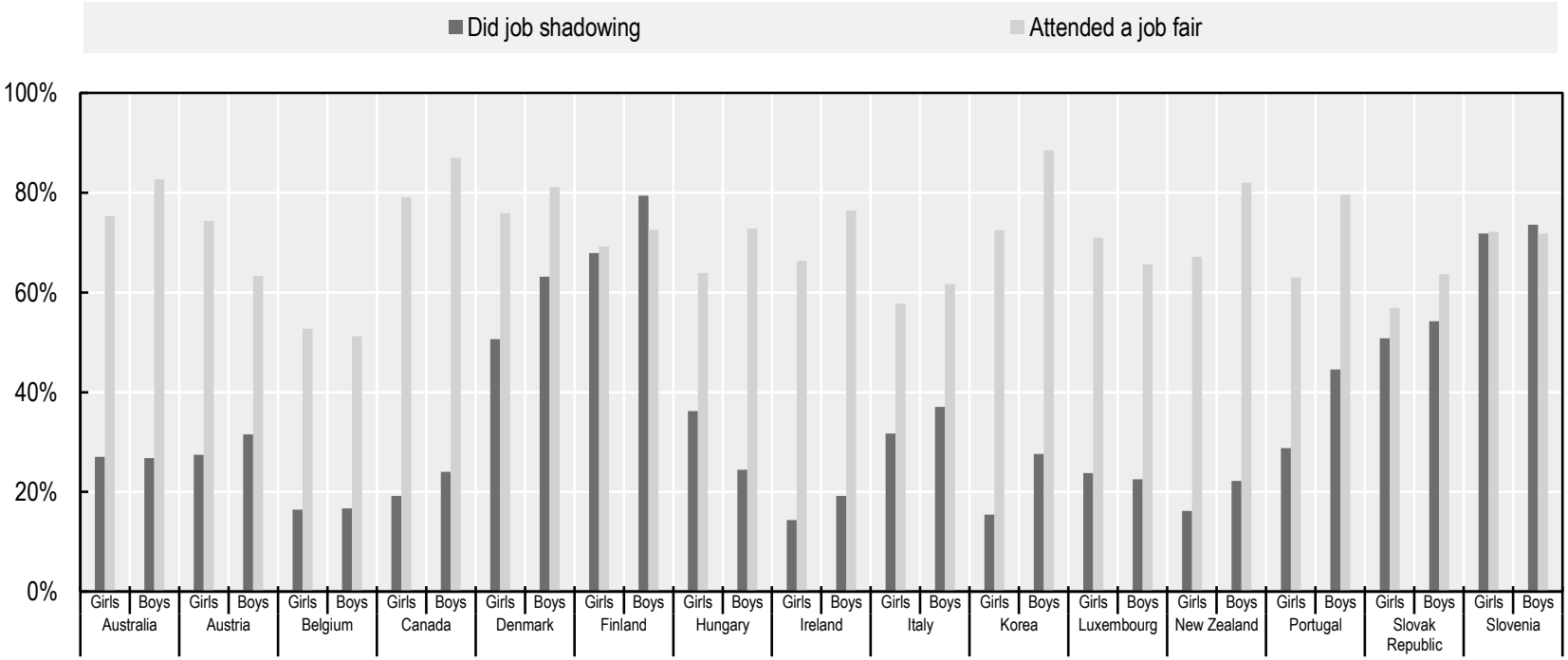
#### *Disadvantaged students participate less in activities than more advantaged ones*

Analysis looking at the participation in different types of activities based on socio-economic status (SES) shows that there are differences in terms of access to career guidance opportunities across countries for which data is available. For activities that engage employers and other stakeholders (job shadowing and careers fairs), in most countries (apart from Austria, and to a lesser extend to Australia and Luxembourg), more advantaged students participate more in those activities than those from more disadvantaged background (see Figure 4.2).

For more school-based career guidance activities, advantaged students participate to a greater extent in such activities – with the exception of Hungary, where those from lower SES participate more in tours of higher education institutions, and Austria where those from lower SES searched more the Internet (see Figure 4.3).

**Figure 4.1. Career guidance activities in which engage employers by gender**

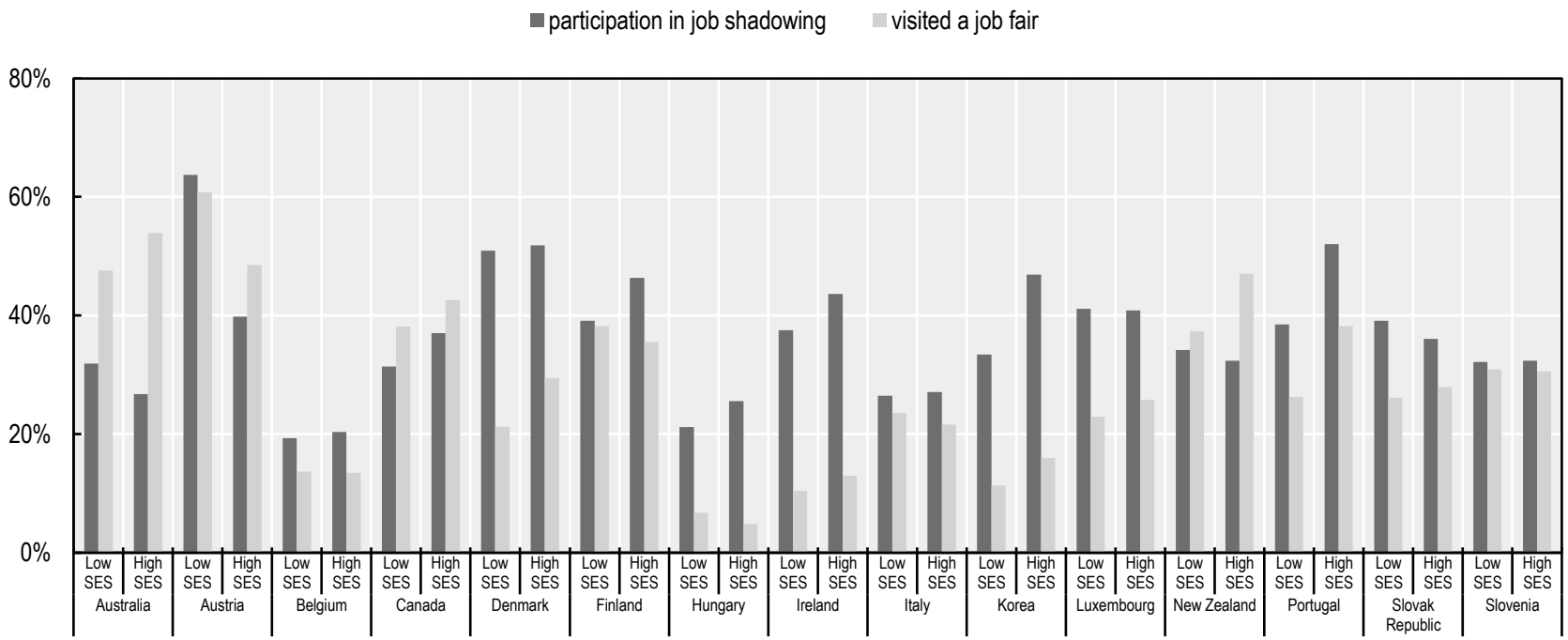
Percentage of students who participated




*Source*: OECD, PISA 2015 Database, www.oecd.org/pisa/data/2015database/.

**Figure 4.2. Career guidance activities in which engage employers by SES**

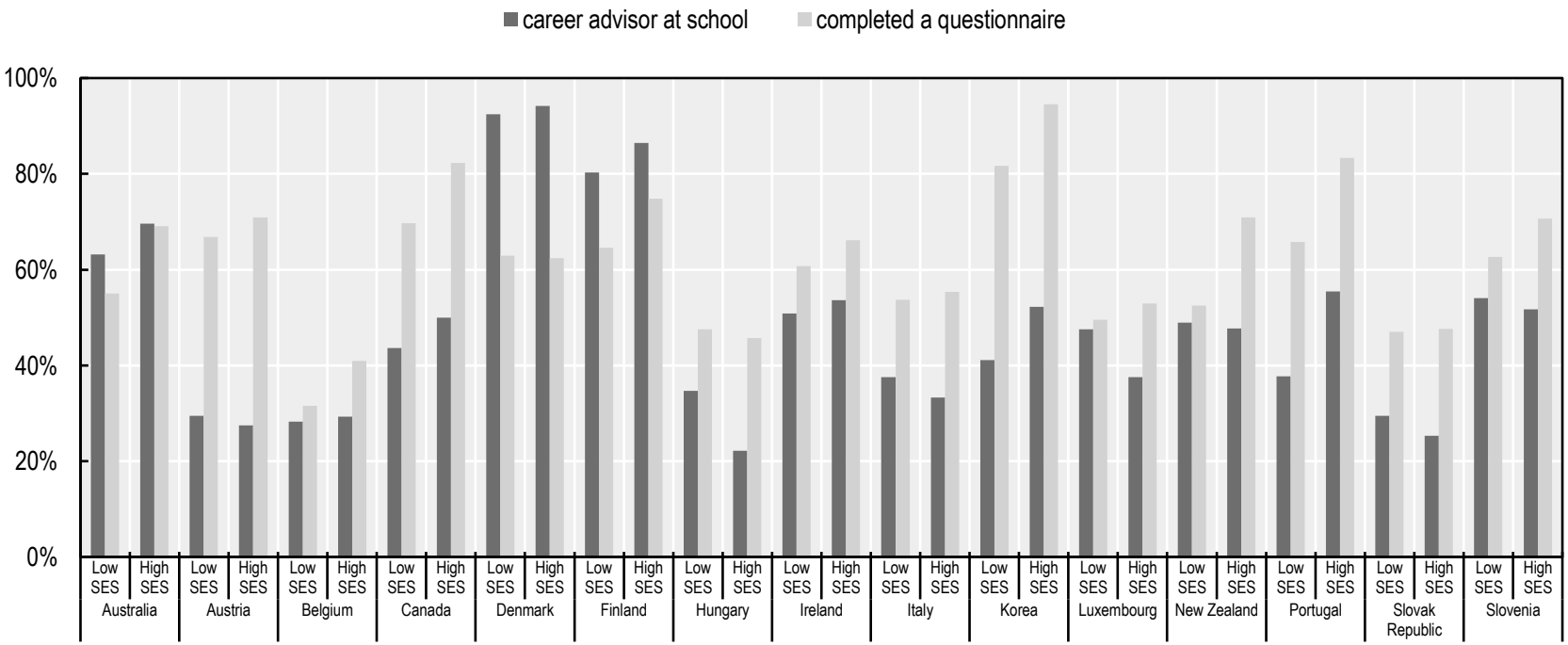
Percentage of students who participate




*Source*: OECD, PISA 2015 Database, www.oecd.org/pisa/data/2015database/.

**Figure 4.3. School-based career activities and participation by SES**

Percentage of students who participate




*Source*: OECD, PISA 2015 Database, www.oecd.org/pisa/data/2015database/.

Moote and Archer (2017) investigate some 13 000 students' views on career education provision in England and their satisfaction with this provision and find a clear student demand for 'more and better' career education. They also find that some schools may not be meeting the statutory requirement to provide impartial career support for all students. They highlight that the provision of career education is "patterned" in ways that may be working to promote inequalities relating to gender, ethnicity and social class. The majority of careers support is provided via a 'self-referral' system, which disadvantages those who, arguably, might benefit most.

Similarly, evidence from different countries shows that attention to career guidance tends to be weaker in vocational tracks than in the academic ones. In Australia, for example, a review of career development services in both types of institutions concluded that VET students had fewer opportunities than those in universities to benefit from career guidance in their institutions. Whereas almost all universities had dedicated career guidance services units with an institution-wide responsibility for providing career guidance services to students, such services in the VET sector (TAFE) were more likely to be provided as part of general student services such as student counselling. The latter tended to be staffed by professional counsellors, often psychologists, who might offer some career counselling alongside personal/welfare counselling. Student outcome surveys consistently showed student counselling services and career/job information to receive lower satisfaction ratings from graduates than any other aspects of their TAFE experience. Progress in improving pathways and VET had not been accompanied by corresponding progress in the provision of career support to facilitate these pathways (Watts, 2010a).

## What does research say about career guidance practices?

The following policy levers are based on research.

### *Start early, and continue into later stages in different shapes*

#### *Start early ..*

Career expectations in early adolescent years (from about 13 years old) are good predictors of actual career choices: Tai et al. (2006) use U.S. representative large-scale longitudinal data to investigate whether science-related career expectations of early adolescent students predicted the field of their bachelor's degrees that they get later, controlling for differences in academic achievement, academic characteristics, and students' and parents' demographics, and find positive results. Ashby and Schoon (2010) compare early career aspirations with actual careers observed during follow-up surveys for the same individuals, and find similar results. Research has shown career interests to be relatively stable throughout upper-secondary education (Sadler et al., 2012). This means that career guidance interventions need to start early,[23] before secondary education, when career thinking is emerging.

[23] Whereas career aspirations certainly become more realistic over time, career thinking should start early. Career aspirations of young people change over time, and ostensibly become more realistic. For example, at age 13 to 14 the most popular job is actor. By the age of 17-18, this preference has fallen out to number 11 of the occupational choices (Mann et al., 2013).

Even before starting school, children already have some awareness of jobs, linked to their personal experiences and family background.[24] Career-oriented activities should begin in primary school or even a bit earlier (see for example Watson and McMahon, 2005; Knight 2015; Gutman and Akerman 2008). This can help to prevent the emergence of stereotypical perceptions of certain educational and career paths. Research has shown that early interventions can bring lasting impact on children's development and perceptions of different occupations and of the subjects enabling access to them (see Howard et al. 2015 for example for a summary of the evidence arguing the importance of own experiences of children in future career decisions). Gothard (1998) studying children in the United Kingdom finds high levels of interest and engagement amongst primary school (grade 4, 8-9 years) children during 'careers week' and high levels of receptiveness to learning about employment opportunities and skills. Along these lines, some countries start career guidance education already in the pre-primary and primary school, aiming often simply to draw connections for children between education undertaken and possible future selves in part to underpin engagement within schooling (Debono et al., 2007). The 2017 Careers Strategy of the Department for Education in England (United Kingdom), for example, highlights the importance of career-related provision and employer engagement within primary education (DfE, 2017 and see also Wade et al., 2011, for the evaluation of career-related learning aimed at children aged 8 to 11 in England).

*… and intervene at key transition points, with pro-active delivery*

Helping students understand their interests and aptitudes is important for further career planning, and when making choices. Career guidance services need to be adequate and protected against the risk of being continuously squeezed at the margins of an activity such as regular teaching. Key elements of guidance should be delivered pro-actively to all students, so that students can be supported in one-to-one guidance by professionals when they make key decisions about choices surrounding further education and training in the light of emerging career aspirations. This is especially important where the decisions of young people can have lasting consequences in terms of enabling or restricting access to future programmes of study and occupations. This means, for example, that when students are choosing a school track, or a particular school or vocational programme, there should be a compulsory one-to-one interview with a career guidance professional (OECD, 2010). It is important that career guidance services inform all young people, who might benefit from such programmes, of VET options alongside the other options available to them (Watts, 2010a).

The age and the grade at which these key choices are made vary greatly across OECD countries depending on how tracking first occurs, as these decisions can typically close education paths. Countries use diverse types of interventions, such as professional career

[24] A study of children between three and five years in Australia and their parents showed that more than 70% of the four- to five-year-old children in the sample aspired to real 'adult' jobs, with 11% nominating fantasy aspirations (Care, Deans and Brown, 2007). Children at an early stage rule out jobs that do not fit with their gender. The early thinking in children of men's and women's jobs likely comes from the roles they see from an early age in their families but also broader environments, including media, school, books and toys (Martin, Ruble and Szkrybalo, 2002). For a recent insight into the career ambitions of children aged under 12, see Chambers et al. (2018). Children perceive differential competencies of men and women regarding gender-typed occupations and differences in pay for men and women at a very young age. Levy, Sadovsky and Troseth (2000) found that children (particularly boys) viewed men as more competent than women in masculine occupations, and rated women as more competent than men in feminine occupations.

counselling, assessments and tests, information provision and contacts with the world of education and the world of work. In practice, identity development at pre-primary and primary levels of education can be organised in the form of co-operative activities or extracurricular activities that help children play roles and assume responsibilities. During secondary education, psychometric assessments, interest inventories, portfolios, action planning or personal development planning can also be used as frameworks for reflection (Hooley et al., 2012. See in the annex of this paper a typology of these different practices). Job shadowing and workplace visits assist young people in better evaluating the content of particular occupations vis-à-vis their own preferences and profiles,[25] as developed in Chapter 4 below. Specific interventions can target groups of students who may need more help in making career choices (see the next section for more information about this). These approaches are complementary and in many countries students benefit from a wide combination of them (see Box 4.2 for an example from Norway and Box 4.6 for an example from Germany).

**Box 4.2. Career guidance programmes at the lower-secondary level in Norway**

Educational choice (*utdanningsvalg)* is a compulsory subject at the lower-secondary school from 8th to 10th grade aimed at reducing the number of students choosing the wrong educational programme as well as the drop-out rate at the upper-secondary level. The subject is intended, moreover, to make a stronger link between the lower and the upper-secondary level. A week of work placement and courses at the different educational programmes at the upper-secondary schools is the most common use of the subject.

The subject was introduced in 2006, and an evaluation based on a survey and case studies was undertaken in 2012 (Lødding and Holen, 2012). The study showed that many of the students expressed uncertainty of whether the subject assisted them in making an informed choice for further education. However, students with low grades found the subject more relevant and meaningful than students with higher grades. These students might experience an added value with this course compared to the more theory driven subjects. Students with a minority background at the first grade of upper-secondary school expressed that they found the subject helpful.

Teachers at both the lower and upper-secondary schools expressed uncertainty as to whether the subject had achieved its goals, although the lower-secondary teachers were more positive than the upper-secondary teachers. VET teachers considered the subject to be more relevant than the general study teachers. A majority of the school providers believed that it helped to reduce the number of students making poor choices, but not that it reduced the drop-out rate. However, the co-operation between the lower and upper-secondary schools had been better after the introduction of this subject.

The evaluation concluded that the subject cannot alone ensure that students make successful educational choices because educational guidance cannot make up for other educational difficulties that students from less advantageous homes might have. These are problems that require other measures.

[25] Kuijpers and Meijers (2009) look at the development of career competences among 12-19 year-old students enrolled in prevocational and secondary vocational education in the Netherlands, and find that career guidance in school, in which a dialogue takes place with the student about concrete experiences, contributes most to the presence of career competencies among students.

The Working Life Skills (*arbeidslivsfaget*) is an optional subject at the lower-secondary level in Norway. It was first introduced as a four year pilot in 2009, and then as a fixed measure in 2015. The subject is based on one of the eight VET programmes at the upper-secondary level. The purpose is to give students a possibility to work in practical ways and to try out their interests for vocational training. The first period of the trial was evaluated in 2010 (Christensen, Homme and Midtbø, 2010). This study showed that one in every four students at the schools included in the pilot went on to choose the subject. The subject is more popular amongst boys than girls, and also among students achieving lower grades in the other theoretical subjects. A large proportion of the students participating in the trail were very satisfied with the subject.

*Source*: Lødding, B. and S. Holen (2012), *Utdanningsvalg som fag og utfordring på ungdomstrinnet*. NIFU report 28/2012, Oslo; Christensen, D., A. Homme and T. Midtbø (2010), *Kartlegging av forsøk med arbeidslivsdag 2009-2010*, Rokkan Center, report 5 2010, Bergen.

### *Ensure that students can talk to career counsellors who are well-trained, independent and impartial*

Every student, whatever his/her personal background, needs to:

- Understand enough about career options to enable them to make informed decisions, whenever these decisions are open to them.
- Understand that choosing certain subjects and/or study programmes opens door to careers that would otherwise be closed.
- Understand enough about the world of work to know what skills, qualifications and attributes they need to succeed in it.

Well-trained career guidance counsellors can help provide young people with these three elements, with objective information, and relating them to the personal circumstances of the students. Career guidance responsibilities are demanding and important: the assimilation of the guidance profession into psychological counselling distorts and marginalises this role. In general, therefore, countries should seek to establish a separate profession of career advisers (OECD, 2010). Countries can define a national standard for the delivery of career guidance – and the competences demanded of professionals – so that all the actors involved are working to the same end (e.g. Education Scotland, 2015; Institute of Guidance Counsellors, 2017).

OECD (2010) details which competences are required for career guidance:

- Good knowledge of education systems, labour markets, careers and learning opportunities, and the capacity to identify and use further relevant sources of information to provide more specific career advice to individuals.
- The capacity to draw out from young people what their interests, aptitudes and objectives are and together to identify career choice solutions which are both realistic and meet their needs in the context of a dynamic labour market characterised by rapid workplace change (see Box 4.3 on Scotland).
- Readiness to continuously analyse changes in the labour market and importantly adjust professional counselling.

While it makes sense to deliver guidance in schools in order to ensure access to all students, it is important that guidance professionals preserve their independence from the school. This could involve, for example, a professional career guidance service managed from outside schools, but with a roving function in the schools (OECD, 2010). Countries should address the quality issues that sometimes exist in school-based career guidance.

**Box 4.3. Career guidance and advisers in Scotland**

Scotland has a well-developed and comprehensive system of career guidance. Independent and impartial career information, advice and guidance (CIAG) is central to Scottish Government (SG) achieving its ambitions in the key areas of skills, education and employment. The importance of high quality CIAG is therefore reflected across numerous SG policies and strategies. The SG funds a national public body, Skills Development Scotland (SDS), to deliver work-based learning, engage employers in learning and deliver CIAG. Skills Development Scotland (SDS) takes a coaching approach to career guidance across its all age. Careers advisers facilitate a career learning process focused on enabling and empowering individuals to develop relevant career management skills (CMS). The end goal is to help Scotland's people to create and implement their own personal plans in an increasingly complex and fluid world of work.

SDS is the advocate for the CMS Framework for Scotland (2012). This is embedded within all SDS services, and SDS also promotes understanding and use of the Framework in the wider CIAG sector within Scotland, e.g. through co-designed and co-delivered lesson plans for teachers and appropriate advice/resources for parents.

The all-age service is delivered in schools and via a network of local high street Centres and in local partnership and outreach premises. The SDS universal CIAG offer ensures delivery of a non-targeted all-age career guidance service in Scotland, free to anyone at the point of need. While most customers will predominantly receive assisted or self-directed support through My World of Work, an award-winning career information and advice website, all the face-to-face services offered through SDS Careers Centres are available to any customer according to their current need. There is also the choice of using a dedicated telephone helpline, and in this way there is an integrated, multi-channel delivery of the CIAG service.

The Skills Planning model used by SDS allows career practitioners to be equipped with the most recent available labour market intelligence, provided in an easily-accessible format. This includes information on industry demand, at both a regional and sectoral basis, with a focus on the needs of priority and growth areas such as the STEM sectors. They also have up-to-date information on the full range of routes and pathways that can be taken into those careers, including options for work-based learning. This information also informs the development of CIAG resources, such as workshop materials, and online digital content.

SDS takes a person-centred approach to the delivery of CIAG, tailoring the provision of support to the unique needs of each customer. It is recognised that some customers require more support than others to make a successful transition to work or further learning. To increase equality of opportunity for all, SDS CIAG services target resources at those customers who require the most support. A 'needs matrix' is used to suggest the level of support need for each customer and the corresponding service offer they might receive; that need is then validated to confirm the service offer entitlement.

Scotland recognises that 'career guidance is a distinct, defined and specialist profession which demands a unique set of core skills and expects all career guidance practitioners to be professionally qualified' and fulfil a minimum of 21 CPD hours annually.

For more information see: Kuczera M. (2013), *A Skills beyond School Commentary on Scotland*, www.oecd.org/edu/skills-beyond-school/ASkillsBeyondSchoolCommentaryOnScotland.pdf.

### *Integrate teachers into the provision of career guidance in school-wide approaches*

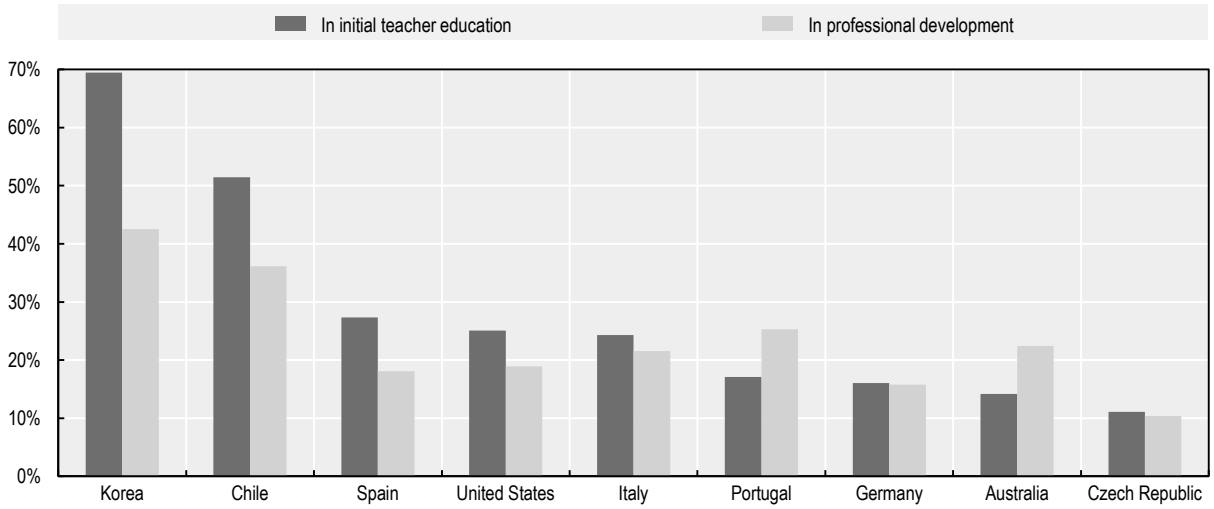
Although much of the recent debate has focused on the role of career guidance professionals, with less focus given to teachers in this discussion, teachers should be part of the debate on career guidance: young people often turn to their teachers for advice and that the curriculum provides a fertile space for developing the skills that employers need and for helping young people to understand the pathways open to them (Hooley, Watts and Andrews, 2015).

Teachers can and do link their subjects as taught in the curriculum to the world of work, by for example, highlighting how a particular scientific process is used in research or industry. Embedding career education within subjects can be driven either by a quest for relevance (using career interest to engage students in the subject) or by labour market need (helping students to see how subject skills can be employed best within the labour market). This means that teachers can also benefit from direct knowledge from the workplace and exposure to a wide diversity of professionals.

Teachers' roles are distinct from, but complementary to, the role of career guidance professional. This, of course, has implications for teacher initial education and continuing development. In PISA 2015 teachers were asked if student career guidance and counselling was included in their initial teacher education, and if it was included in their professional development activities during the last 12 months. Data is available for nine countries and participation in specific career guidance training is quite low in some countries (see Figure 4.4). This means that many teachers might not have had training in understanding career guidance.

**Figure 4.4. Teacher training in student career guidance and counselling**

Percentage of teachers having participated in training in career guidance and counselling




*Source*: OECD, PISA 2015 Database, www.oecd.org/pisa/data/2015database/.

Some countries have developed a middle leadership post – the career leader – who has responsibility for spearheading this area of education in school. This is a post that requires training and reward. This calls for school-wide approaches in the implementation

of career guidance programmes,[26] as opposed to isolated interventions without the support of the institution's leadership and wider partnerships (OECD, 2004; Hooley, 2014) (see Box 4.4).

**Box 4.4. Examples of comprehensive career guidance services**

A comprehensive, all-encompassing multi-programme approach to career guidance has been developed by the Government of Prince Edward Island in Canada. It is based on a co-ordinated, whole school approach organised by career development themes. The key elements include: career development integrated into health education in grades 1-9; compulsory career course in grade 10; experiential learning opportunities through a wide range of courses and programmes offered by the communities in school and including hands-on experience out-of-school; partnership with post-secondary institutions, employment specialist and industry sectors; specialised training to career guidance staff and teachers; parent/guardian coaching programme; and student graduation and transition planner based on four step inquiry process linking interests and skill, support networks, labour market information and post-secondary education options (ICCDPP, 2015).

*Source*: ICCDPP (2015), Symposium. Promising/Best Practices: Canada. June 14-17, 2015 in Des Moines, Iowa, USA. www.is2015.org/promising-practices/.

### *Complete these approaches with the opportunities given by ICT technologies and labour market information*

Technological advances have made career decision making more complex (OECD, 2016b), but they have also opened up access to new sources of information about the labour market and the average returns for different qualifications and enabled too new means of accessing advice and guidance (Kettunen, Vuorinen and Sampson, 2015; CEDEFOP, 2016a). Therefore, there is a need to support the development of career management skills so that individuals are able to access, understand and use information in the choices that they make.

Students should receive information on:

- All available options and pathways specific to the individual's needs, including VET ones.
- The qualifications to which they lead, and the further qualifications to which these give access.
- The occupations to which these qualifications provide access, and the extent to which the qualifications are sufficient for entry.
- The salary/wage levels offered by these occupations.
- The projected demand for these occupations.

[26] In some countries, the provision of career guidance is organised through multiple channels which reflects the autonomy of schools in deciding the model for provision of career guidance (Debono et al., 2007). In others, there is some type of national policy that ensures homogeneity in the way school-based career services are organised and delivered.

- The labour market outcomes achieved by those successfully completing the programmes, including the nature of their jobs, their salary/wage levels, whether or not the jobs are in an occupational sector directly related to their VET programme, and the extent to which they are using the skills and competences acquired in the programme (see Box 4.5 on destination surveys of graduate learners).

For example Utdanning.no is a public career guidance web portal in Norway. It includes an overview of the educational pathways in Norway, where the education is being provided as well as descriptions of more than 600 careers and professions. The webpage also includes interviews with skilled workers, overview of places to work and information on average salaries.

**Box 4.5. Destination surveys**

Better data are essential to link the mix of provision to labour market needs, and it underpins career guidance activities. A destinations survey administered to those leaving vocational programmes around one year after completion, (or after they drop out) establishes whether graduates are working and in what occupation, whether they are pursuing further study, and if they are unemployed or otherwise not in the labour market. It can be undertaken through mobile phone contacts obtained from college students, allowing a follow-up regardless of location. This allows the success or failure of different vocational programmes and institutions to be assessed. A survey can also ask graduates about what they thought of their vocational programme – whether it was well taught and provided them with relevant skills for example. In this way such surveys also become a tool to monitor quality. There is much international experience of destinations surveys, typically in higher education but also increasingly at secondary school level (as recommended by McCarthy and Musset, 2016, in the *Skills beyond School Review of Peru*).

In Australia the Student Outcomes Survey is conducted annually among students who completed some vocational training. Conducted by the National Centre for Vocational Education and Research since 1997, it is funded by the Australian government and provides information on employment and further study outcomes, the relevance and benefits of training, and student satisfaction. The information collected supports the administration, planning and evaluation of the VET system.

In Ireland, the School Leavers Survey is based on a national sample of school leavers, contacted 12 to 18 months after leaving school. Face-to-face interviews, used in this survey since its beginning in 1980, have become more difficult as a result of declining response rates and high costs. Therefore, since 2007, the School Leavers Survey has used a mix of approaches. The selected individuals were asked to complete an online questionnaire and could also ask for a paper copy. Participants were offered an incentive to complete the questionnaire, with their names being entered in a draw for prizes. Those who were particularly difficult to reach (e.g. early school leavers) were followed up by telephone initially and then face-to-face.

*Source:* OECD (2010), *Learning for Jobs*, OECD Reviews of Vocational Education and Training, http://dx.doi.org/10.1787/9789264087460-en; McCarthy, M. and P. Musset (2016), *A Skills beyond School Review of Peru*, http://dx.doi.org/10.1787/9789264265400-en.

Understanding labour market information requires a different set of skills, for both students and advisers (Bimrose, Barnes and Attwell, 2010). Accurate and individualised

information (in particular on wage returns) may prevent students from creating false expectations about their choices and labour market outcomes (CEDEFOP, 2016a). Evidence from Spain suggests that students take labour market information into account when making educational decisions like dropping out (Aparicio, 2010). Evidence from France suggests that students do adjust their preferences in terms of field of study when they receive information about on their future prospects (Hestermann and Pistolesi, 2016).

Some caution must remain regarding ICT and labour market information: students and parents often encounter difficulties in handling and interpreting the volume and complexity of online information. The ICT technologies also contribute to a rise in private players that enter the careers support market, which may be unreliable.

### *Ensure that the approaches used are personalised*

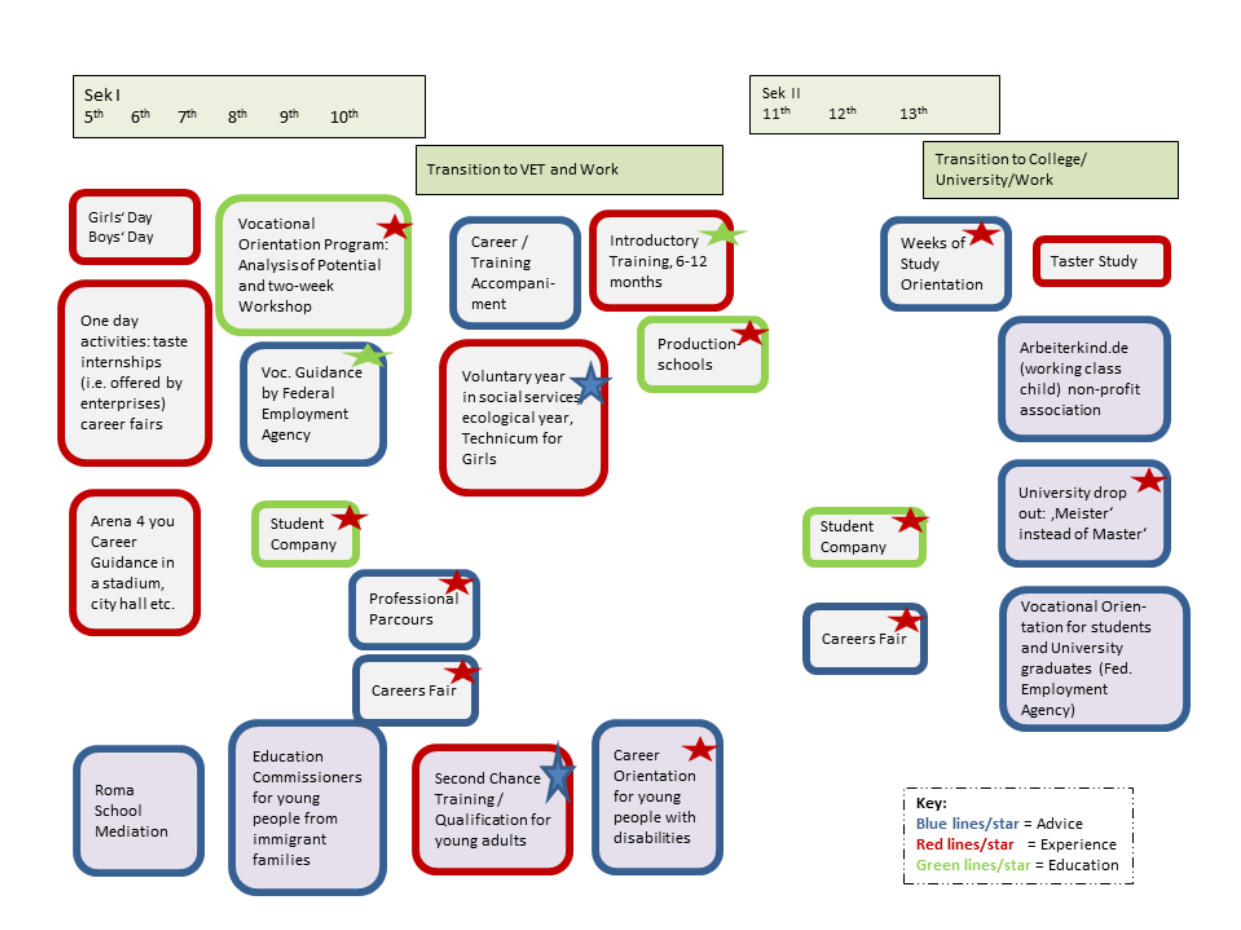
Career guidance services can prepare students to search and apply for opportunities which are suitable for what they want, and develop their confidence. They need to be personalised and recognise the distinct characteristics of the young people involved. Some of the initiatives offered in Germany, presented in Box 4.6, are highly specific for some targeted groups of students.

For example, this may mean using matching techniques for job shadowing opportunities, between the interest of the students and the employer (Sattar, 2010). The Bay Cove Academy's Career Development Programme in the United States surveys students before the Groundhog Job Shadowing Day event about their career interests and then reaches out to employers which match those interests. Bay Cove Academy also collects feedback from employers and teachers. The evaluation includes questions about how prepared the employer felt, how they benefited, ways for improving the experience, what support would be useful, and whether they would be ready to repeat their participation (Larson, 2012). A similar approach is undertaken by the Iowa Transition Alliance Program (TAP) which matches the work-based opportunity to the youth's specific interests. Prior to organising a job shadowing experience, the TAP Co-ordinator gets to know each student and his/her career interests by participating in the students' individualised education program (IEP) team meetings. Career assessments are used to help students identify their interests and skills and to help students identify local employers where they could learn more about a specific career interest (Larson, 2012).

**Box 4.6. Career guidance activities in Germany**

In Germany there is a multiplicity of different career guidance activities as a national strategy, from grade 5 onwards, both outside and inside the school, as shown on the diagram below. Some involve direct experience of the workplace.

**Figure 4.5. Career guidance services in Germany**




*Source:* Puhlmann A. (2016), "Career guidance services in Germany", PowerPoint presentation given on 21 September 2016 at the OECD career guidance and work-based learning workshop, Glasgow.

### *Focus on certain groups, those who need the most assistance*

A key challenge for young people is to get good information about what different careers actually involve. As mentioned earlier, this can be even harder for students from disadvantaged backgrounds. Social structures can make some programmes or fields-of-study seem unthinkable, and sometimes practical and financial barriers are real (Norris, 2011). Barriers also include the paucity of information provided, and the quality of advice

and guidance made available.[27] However, improving the availability of information does remove barriers. Many students from non-traditional backgrounds report, for example, that they simply do not feel that they 'belong' within higher education institutions (Thomas and Jones, 2007).

Career guidance needs to be more proactive and to target specific groups to overcome the barriers faced by students from under-represented groups. Schools and career guidance agencies need to target resources to support disadvantaged student, and also increase the monitoring of participation (not just provision) (Moote and Archer, 2017). Programmes specifically for disadvantaged students, such as young people at risk of becoming NEET, work best when they are targeted, located in the community and highly individualised (OECD, 2004; Novak and Chen, 2013) (see Box 4.7).

**Box 4.7. Assisting disadvantaged groups with employer engagement and career guidance**

The LIFT programme in Switzerland targets young people who face difficulties. It creates, delivers and evaluates innovative programmes for these young people, through the collaboration of different education and social services. Students are identified early on, and can benefit from targeted support. Other pillars include exposure to work experience, remedial education, and counselling and mentoring to prepare students for the world of work. A survey of the practitioners involved in the programme (including the firms providing mentoring and work placements) highlighted its usefulness in their views. Effects on students, in terms of education and labour market outcomes, have not been evaluated for the time being.

*Source* : Balzer L. and B. Neuhaus (2017), "Evaluation du Programme. Projet LIFT pour les Jeunes. Rapport domaine d'évaluation C 2017", Rapport domaine d'évaluation C 2017, Zollikofen: Institut fédéral des hautes études en formation professionnelle IFFP.

In the case of girls and mitigating gender stereotypes 'preventing' them to progress in the same fields as boys, schools can counter stereotypes and help students cultivate a wider perspective on different career options, including in science, through better career information. Employers and educators in perceived masculine or feminine fields can also help eliminate existing stereotypes. Employer engagement and direct exposure to the world of work is important to enable young people to see for themselves and explore whether it really is achievable to go against gender norms and to see whether workplaces are in fact as hostile as might be suspected (see Box 4.8). These interventions have to be designed carefully to be effective: it is interesting to note that a study on gender issues in work experience placement shows how work experience can exacerbate rather than

[27] Further disadvantage may arise in relation to their comparatively low reserves of cultural capital (i.e. knowledge relating to higher education and graduate employment) that can be called upon from family, school and other spheres, as well as social capital – i.e. networks of contacts to provide "hot knowledge" about higher education and the labour market, and to assist them to adjust to higher education and secure suitable graduate employment (Thomas and Jones, 2007).

challenge students' gender stereotypical trajectories (Osgood, Francis and Archer, 2006; Hatcher and Le Gallais, 2008).

Policies should focus on schools challenging gender stereotyping and other ways in which young people might be ruling options out without properly thinking about them within a strategic approach to career guidance. A study by the U.K. Equal Opportunities Commission (2005) suggests that:

- Students experience at least two different types of work placement with one in a non-traditional occupation.
- Data collection is improved and targets are set to reduce gender stereotyping in work experience placements.
- Guidance and information are provided for students that include the benefits and opportunities of non-traditional options.
- Guidance and training is provided for schools and employers to tackle gender stereotyping in work experience placements.
- Students are given appropriate support to succeed in a non-traditional placement. Promising practice and strategies developed by key organisations are integrated into future strategy.

**Box 4.8. Career guidance services to help address gender stereotypes**

National Boys' Days and Girls' Days are organised in several countries, including Belgium, Germany and Switzerland. As part of these programmes, universities and employers usually invite students to spend a day on their premises and learn more about academic degrees and occupations in sectors in which their gender is under-represented. In the French Community of Belgium, boys' and girls' days are preceded by discussions about gender issues during class. There are also various programmes that, in different ways, promote interest in the study of science, technology, engineering and mathematics (STEM) subjects among female students. In the United States, the Department of Education's "Race to the Top" programme prioritises improving STEM achievement overall and within under-represented groups – including women and girls – in awarding grants to states. The same approach is used in the Department of Education's "Investing in Innovation" programme, which focuses on increasing the number of individuals from groups traditionally under-represented in STEM – including minorities, individuals with disabilities and women – among those who teach STEM subjects, and provide them with high-quality preparation and professional development. In Canada, two regions support programmes specifically aimed at promoting non-traditional jobs among girls. The "Futures in Skilled Trades and Technology Programme" supports greater participation of women in skilled trades in the Newfoundland and Labrador Province by piloting modules targeted at girls in grade school. The Ontario "Youth Apprenticeship Programme" reserves some of its funding to promote skilled trades among women through conferences and hands-on activities.

As one of four key elements under its "Restoring the focus on STEM in schools" initiative, the Australian government is expanding summer schools for STEM students with the aim of increasing the number of girls and disadvantaged students participating in these activities. Other organisations operating in STEM fields can also support programmes to attract more talent, particularly female talent. The National Aeronautics and Space Administration (NASA) in the United States has two programmes that focus on girls. Through the NASA/Girls Scouts of the USA partnership, NASA scientists provide training sessions, led by NASA scientists, for girl scouts. Some 100 000 girls have participated in these sessions to date. Under the "NASA G.I.R.L.S." programme, female NASA professionals provide online lessons in STEM fields to girls selected through a competitive process. Surveyed countries support many other programmes that foster interest in STEM careers, but these are not specifically targeted to women. Some countries also support initiatives to attract interest among male students in female-dominated professions. Germany, for example, funds a nationwide network and information platform to support gender-sensitive career and life orientation for boys through the programme "New Paths for Boys and Boys' Day". The programme provides information and material to education and social work professionals, career advisers, human resource teams, education and training specialists, and parents. Nationwide conferences and meetings are also organised to facilitate exchanges between researchers and practitioners.

*Source*: OECD (2015b*), The ABC of Gender Equality in Education: Aptitude, Behaviour, Confidence*,: http://dx.doi.org/10.1787/9789264229945-en.

In the case of students with an immigrant background, students and their parents might face objective (e.g. language) as well as cultural bias (specific stereotypes linked to certain education pathways for example) and barriers (regarding their involvement with school staff for example). They might lack sufficient information about the education system (including policies, rules, means of test taking and learning) and career paths in a new institutional context. This may prevent them from advising their children outside traditional family career pathways (Gonzales et al., 2013; Mitchell and Bryan, 2007; and Evanovski and Tse, 1989). Evidence from a specific metropolitan area in England showed that only 10% of apprentices were from a black or Asian background, compared to 15% of the general population (York Consulting, 2016) and the English government has now adopted a specific target to increase minority participation in apprenticeships (HM Government, 2015) with specific initiatives to inform such students and their parents about vocational options (see for example England's Skills Funding Agency toolkit about making apprenticeships more accessible to all, Skills Funding Agency, 2016). This fits with the general approach of personalisation of career guidance practices to the characteristics of students.

**Box 4.9. Reaching out to migrant students and their parents**

Limited language proficiency is often a significant barrier in exploring all range of career options for young immigrants (Ma and Yeh, 2010; Mitchell and Bryan, 2007). Career guidance counsellors might collaborate with native language teachers to promote immigrant students' language proficiency. In different contexts, this target group can be offered assignments that help them to develop career management skills and confidence. For example, teachers may include college brochures or job advertisements as part of their reading comprehension material. It may also be helpful to teach common job or college application terminology or phrases that students are likely to encounter. Mock interviews can teach students the national etiquette in interviewing.

Information in native languages and bilingual role models offered through structured workshops in the immigrant communities led to better awareness among parents and increased demand for career guidance information among Korean and Chinese youth in the United States (Evanovski and Tse, 1989).

Finland has recently received an increased number of refugees and immigrants with new demand for education and employment and related services such as guidance and validation of prior learning, and a new reform on career guidance services aims at taking this new demand into account (ICCDPP, 2017a).

Source: Ma, P. W. W. and C. J. Yeh (2010), "Individual and familial factors influencing the educational and career plans of Chinese immigrant youths", *Career Development Quarterly*, Vol. 58/3, pp. 230-245; Mitchell, N. and J. Bryan (2007), "School-family-community partnerships: Strategies for school counselors working with Caribbean immigrant families", *Professional School Counseling*, Vol. 10/4, pp. 399-409; Evanoski, P. O. and F.W. Tse (1989), "Career awareness program for Chinese", *Journal of Counseling and Development*, Vol. 67/8, pp. 472; ICCDPP (2017), Country Paper - Finland, http://iccdpp2017.org/download/Country_Paper_Finland_ENG.pdf.

### *Policy levers*

The objective of career guidance is to help young people to understand an increasingly complex labour market and make informed decisions about educational, training and occupational ambitions. Career guidance should also help young people to develop skills that will enable them to take effective decisions about work throughout their lives.

Effective provision of career guidance should take into account the growing body of research literature and:

- Provide regular opportunity for young people, from primary education onwards, to reflect on and discuss their prospective futures.
- Allow students to consider the breadth of the labour market and particularly occupations which are of strategic economic importance, newly emerging and/or likely to be misunderstood (such as the skilled trades).

- Undertake school-wide approaches, bringing on board career guidance specialists, but also teachers and school leaders, as well as parents, and people in work.
- Provide easy access to trustworthy labour market information and advice/guidance from well-trained, independent and impartial professionals in advance of key decision points.
- Recognise that the ways in which young people think about jobs and careers are shaped by parental influence, their social background and sense of identity, addressing information asymmetries about specific professions and challenging gender and ethnic stereotyping.
- Target young people from the most disadvantaged backgrounds for the greatest levels of intervention.
- Continue to develop evidence in this policy field, using robust methodologies, including longitudinal data, to provide better evidence for the outcomes of policy interventions.

## Conclusion

The design of career guidance activities matters. Effective career guidance will take account of individual circumstances in determining the appropriateness of necessary interventions. Effective provision, moreover, will begin at a young age to expose students to the breadth of the labour market. Early interventions will aim at helping young people to become informed about the character of potential careers, addressing gender and ethnically driven stereotyping, while improving understanding of the connections between educational provision and employment. Schools can challenge emerging assumptions and encourage curiosity in atypical and new professions. Schools need to begin young to prevent early assumptions becoming self-fulfilling prophecies. Whilst education is about more than its ultimate extrinsic value in the labour market place, the motivation of young people is, in significant part, driven by their capacity to draw a personalised connection between who they are in a classroom and who they may become in a workplace. Effective provision of career guidance should also maximise student engagement with people in work. This is the subject of the next chapter.

# Chapter 5. Why and how to engage employers in career guidance

Chapter 2 and Chapter 3 explained why career guidance is important, and Chapter 4 looked at some of the key design features of effective career guidance practices. Chapter 5 focuses on the engagement of people in work in career guidance, and how to design such practices. Through such experience young people can be introduced to some of the choices they will face in their learning and professional pathways.

Career guidance should systematically inform students about the world of work and career opportunities. This means that schools should encourage an understanding of the world of work from the earliest years, backed by visits. Over the last decade, a series of studies have demonstrated the significant impact of teenage participation in such activities on their later adult outcomes. Young people need access to authentic engagements with the labour market to provide them with informed confidence about their choices and aspirations. Consequently, it is not just the leaders or managers of an enterprise who should engage with young people, but professionals working across occupations, from apprentice to CEO. Each interaction with people in work helps young people to make better sense of how the labour market operates, how they can best navigate towards career ambitions and relate such aspirations to immediate decisions about schooling. Employer engagement in career guidance typically includes such activities as job or careers fairs, talks and networking sessions, work experience placements and job shadowing, and mentoring activities.

## Why give students insights into the world of work

Direct contact with those working in different careers and direct exposure to workplaces can significantly help to provide young people with a clearer idea about what jobs involve and also supply trusted information about labour market demand. The paper first presents the theoretical arguments and then gives some practical considerations.

### *Theoretical arguments*

#### *Direct contacts with people in work are a good complement to other types of guidance services*

There are different theoretical arguments for why people in work should be engaged in career guidance provision. Employer engagement in education[28] is a strategic tool that can be used by schools to: enhance young people's understanding of jobs and careers; provide young people with knowledge and skills demanded by the contemporary labour

[28] In this chapter, the phrase 'employer engagement in education' refers to the engagement of people from across the economic community who exchange labour for financial rewards with children and young people as mediated by their schools and colleges. Consequently, the idea of employer engagement is as just as important to professional associations and trade unions as it is to employers themselves.

market; provide young people with knowledge and skills demanded for successful school-to-work transitions; enrich education and underpin student attainment (Mann, Rehill and Kashefpakdel, 2018).

Workplace exposure can help young people become better prepared to make education and training decisions. It allows them to think about the breadth of career choices and routes into them. People in work have the capacity to provide young people with insights and experiences which offer distinct value which is difficult for schools to replicate (Rehill, Kashefpakdel and Mann, 2017). Young people are more likely to trust the information about specific occupations they get from a first-hand experience with employers: such encounters provide insights which students commonly feel are both reliable and broad in scope in comparison to advice from parents and friends (seen as reliable but narrow in scope) or from the media/internet (seen as unreliable but broad in scope). The strong point of employers is authenticity, and effective employer engagement will work hard to 'keep it real'. In the specific context of career guidance, employers can be seen to be offering something new and different to what is made available through educational institutions (Mann et al., 2017; Stanley and Mann, 2016). At least theoretically, this can help to decrease a mismatch between career aspirations, study selections and labour market demand.

Finally, certain forms of direct contacts with employers, such as internships, can be useful for career guidance purposes but also be good opportunities for young people to develop skills and gain experience relevant in the workplace and which employers value in recruitment (see OECD, 2014, for a general analysis of the value of work-based learning for students).

### *There are also some benefits for employers*

Employers too are interested in providing students in school with knowledge about jobs and the workplace for a range of reasons, including shaping the future skills supply (particularly in areas where there are critical shortages in future skills needs), the opportunity to promote careers within their organisation or sector, the opportunity to "try before you buy" and meet young people whom they may be interested in employing, and finally to help to enhance young people's employability skills so that they become more effective ultimate employees (Hooley, Watts and Andrews, 2015). Employer motivations commonly fall therefore into one of four overlapping areas of interest: 1) recruitment, 2) staff development, 3) staff engagement, 4) corporate reputation (Mann and Glover, 2011). Governments can help employers, of all sizes, recognise the importance of such motivations which may at times be latent and poorly articulated by employers themselves.

### *Hands-on experience in the workplace could help mitigate some negative stereotypes about different paths*

Another argument is that employers can help mitigate the academic bias because they provide a diversity of views, as do the different stakeholders who can be engaged. Parents and children often have few opportunities to observe and experience different jobs, and this is often the case in the more technical, technological and scientific fields.

An interesting example is what PISA 2015 says about students' expectations about careers in science. The data show that students sometimes have a limited understanding of what a career in science and technology can mean, and students think school science is useful only for a rather limited set of careers (see Chapter 3 of OECD, 2016c, on instrumental motivation to learn science and expectations of a science career and Box 5.1

on PISA and science-related careers). What they do know often comes from personal interactions – mostly with their teachers, sometimes with family members – or through the media. In the case of science-related careers, scientists are often portrayed as men in white coats in laboratories (OECD, 2008). But the power of personal interactions can also be harnessed in more formal career guidance activities to counter the stereotyped images that otherwise prevail. Providing children with opportunities for personal contact with professionals from different fields – in particular those who suffer from a negative image (technical and technological occupations for example, but also some professions in healthcare) – can lead to students making better informed career choices. But methodologically, the impact of such exposure on career perceptions, and if this is actually conducive to young people considering other jobs and education paths, is difficult to measure.

**Box 5.1. Expectations in career-related professions in PISA**

On average across OECD countries, about 25% of students, both boys and girls, report that they expect to work in an occupation that requires further science training (beyond secondary education). Some 57% of students report that they expect to pursue a career outside of science-related fields, and the remaining 19% of students gave a vague answer about their expected occupation, or skipped the question entirely. Specifically, 9% of students expect to work as professionals who use science and engineering training (e.g. engineer, architect, physicist or astronomer), 12% as health professionals (e.g. medical doctor, nurse, veterinarian, physiotherapist), 3% as ICT professionals (e.g. software developer, applications programmer), and 2% as science-related technicians and associate professionals (e.g. electrical or telecommunications engineering technician). However, the share of students expecting a science-related career varies widely across countries.

Boys and girls are interested in different fields of science. Girls envisage themselves as health professionals more than boys do; and in almost all countries, boys see themselves as becoming information and communication technology (ICT) professionals, scientists or engineers more than girls do. Countries that saw increases in their students' instrumental motivation to learn science – their perception that studying science in school is useful to their future lives and careers – also saw increases between 2006 and 2015 in their students' enjoyment of learning science, on average.

Expectations of future careers in science are positively related to performance in science and to enjoyment of learning science, even after accounting for performance. The relationship with enjoyment is stronger among higher-achieving students than among lower-achieving students. But socio-economic status also matters: in a majority of countries and economies, more advantaged students are more likely to expect a career in science – even among students who perform similarly in science and reported similar enjoyment of learning science.

PISA findings are coherent with national research studies: Aschbacher, Ing and Tsai (2014) look at middle school students' aspirations in STEM careers using survey data. Students who believed they could do science and valued science were more likely than others to indicate interest in STEM careers. Also, advantaged students tend to be more self-confident about their capacity to have a career in science.

*Source:* OECD (2015b*), The ABC of Gender Equality in Education: Aptitude, Behaviour, Confidence,*: http://dx.doi.org/10.1787/9789264229945-en. Aschbacher, P.R., M. Ing and S.M. Tsai (2014), "Is science me? Exploring middle school students' STE-M career aspirations", *Journal of Science Education and Technology*, Vol. 23/6, pp. 735-743, http://dx.doi.org/10.1007/s10956-014-9504-x.

## *Empirical evidence*

### *Direct contact with employers are valued by students and teachers*

Survey evidence from the United Kingdom shows that two-thirds of teachers and secondary school students in England agreed that short work experience placements helped in career decision-making and navigation (Mann and Dawkins, 2014). Moreover, those young people who had substantial contact with employers through their schools were more optimistic about their chances to find a job than peers (Deloitte UK and Education and Employers Taskforce, 2010). Similar survey evidence shows that both students and their teachers believe that work experience enhances pupil motivation, engagement in education and ultimately leads to better attainment (Mann and Dawkins, 2014). However, research does not say how much it actually increases their perceptions of the different career possibilities.

### *There seem to be benefits for future economic prospects*

There is also a growing body of research that has investigated and demonstrated significant links between school-mediated employer engagement and the employment outcomes of young people (Mann, Rehill and Kashefpakdel, 2018; Kemple and Willner, 2008; Mann and Percy, 2014; Massey, 2014; Neumark and Rothstein, 2005; and Percy and Mann, 2014). These studies have focused on a wide range of employer engagement including work experience placements as well as career-focussed interventions. Mann and Percy (2014) draw on contemporary UK survey data wherein young adults (aged 19-24) provide data on the volume of their school-mediated employer engagements, details of current full-time earnings and a range of control measures related to social background and found wage premiums of up to 18% being linked to school-mediated employer engagement. But while such studies do provide interesting insights, they have inevitably been limited by the breadth of control variables available and depend upon retrospective recollection of participation levels in workplace activities.

Analysis using longitudinal data offers a more reliable means for robust evidence. Kashefpakdel and Percy (2016) drew on the British 1970 Cohort Study, and found a positive association between school-organised career talks with outside speakers and the future earnings of participants when adults aged 26 (see Box 4.2 for details about this study). It found career talks had a bigger impact when given at ages 14-15 than when at ages 15-16. Teenagers themselves self-assessed that they often found sessions "unhelpful", "helpful" or "very helpful." The study found that adult wage premiums were

higher when teenagers reported that talks had been "very helpful". Teenagers experiencing higher volumes of career talks were more likely to agree they had found sessions to be "very helpful" to themselves. And this is a very powerful policy tool: the correlations with later earnings suggest that the initial reactions of participants were right: that the information was, in fact, helpful for their labour market prospects.

**Box 5.2. An interesting paper on the impact of career talks using longitudinal data**

Kashefpakdel and Percy (2016) analyse the British Cohort Study (1970) longitudinal dataset, designed to survey approximately 17 000 babies born in Great Britain, and use data from 1986 and 1996. At age 16, individuals were asked whether they had school-organised contacts with employers outside of school. Among respondents, receiving a career talk from speakers outside school was the most common, with 66% of students participating in at least one such talk. The survey also indicated how many of these talks from a speaker outside of school the individual have received in year 10 and year 11 (respectively aged 14-15 and 15-16).

The study tests for relationships between school-mediated career talks with speakers from outside of the school at ages 14-16 and full-time earnings at age 26. Extensive controls include family and social background, learning environment, and prior attainment. The analysis provides a test, therefore, as to whether wage premiums observed by young British adults with higher levels of teenage school-mediated workplace exposure might best be understood through social capital theory: that access to higher volume non-redundant, trusted information and insights about the job market through encounters with working professionals can be seen to provide economic advantages in later job market transitions. The study finds that at age 14-15 participation in each career talk is associated with an earning premium, at age 26, of 0.8% (rising to 1.6% where the teenager reported their career talks to have been 'very helpful'). The hypothesis they test is that each additional career talk will be associated with an additional change in outcomes, since each outside speaker will convey different insights. The authors also took into account how useful the students reported the talk to be, as an estimate of its quality.

*Source*: Kashefpakdel, E. T. and C. Percy (2016), "Career education that works: An economic analysis using the British Cohort Study", *Journal of Education and Work*, pp. 1-18.

These findings echo similar results found in related contexts: from a U.S. perspective, McDonald et al. (2007), for example, study the role of informal mentoring for teenagers (i.e. developing an important relationship with a non-parental adult) in the transition to full-time employment among young adults, and identified significant employment boosts for young adults aged 23-28 who possessed, when younger, strong networks of non-family contacts, including people from workplaces. The study also found that this "informal mentoring" was more effective for young men than for young women. Drawing on Finnish data, Jokisaari and Nurmi (2005) used longitudinal data on 343 young adults,

to explain positive employment outcomes in the two years following the conclusion of full-time education linked to professional networks enjoyed as older teenagers.

Mann, Rehill and Kashefpakdel (2018) review 42 studies based on reliable methodologies undertaken in six OECD countries (Australia, Canada, Finland, Netherlands, the United Kingdom. and the United States), and found that of the 75 specific assessments of activities within the 42 studies, 47% provided evidence of largely positive outcomes for young people and 53% provided evidence of mixed or negligible outcomes. No study identified negative outcomes. Studies were concentrated around consideration of the impact of mentoring, careers events and generic work-related learning. Of particular interest to this paper, the authors review the literature to identify the characteristics of effective employer engagement in education to enhance young people's understanding of jobs and careers (see Box 5.3).

**Box 5.3. The characteristics of effective employer engagement in education in enhancing young people's understanding of jobs and careers**

The literature suggests that effective delivery of 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.

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

*Be 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.

*Be 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.

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

*Be 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.

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

*Source*: Mann, A., J. Rehill and E. Kashefpakdel (2018), *Employer Engagement in Education: Insights from International Evidence for Effective Practice and Future Research*, Education Endowment Foundation, London, https://educationendowmentfoundation.org.uk/public/files/Employer_Engagement_in_Education.pdf.

## How to successfully bring schools and the world of work closer together

Engagement with the world of work can take several forms, including bringing people into the school to talk about their work, school visits to workplaces, taster programmes and work-shadowing.

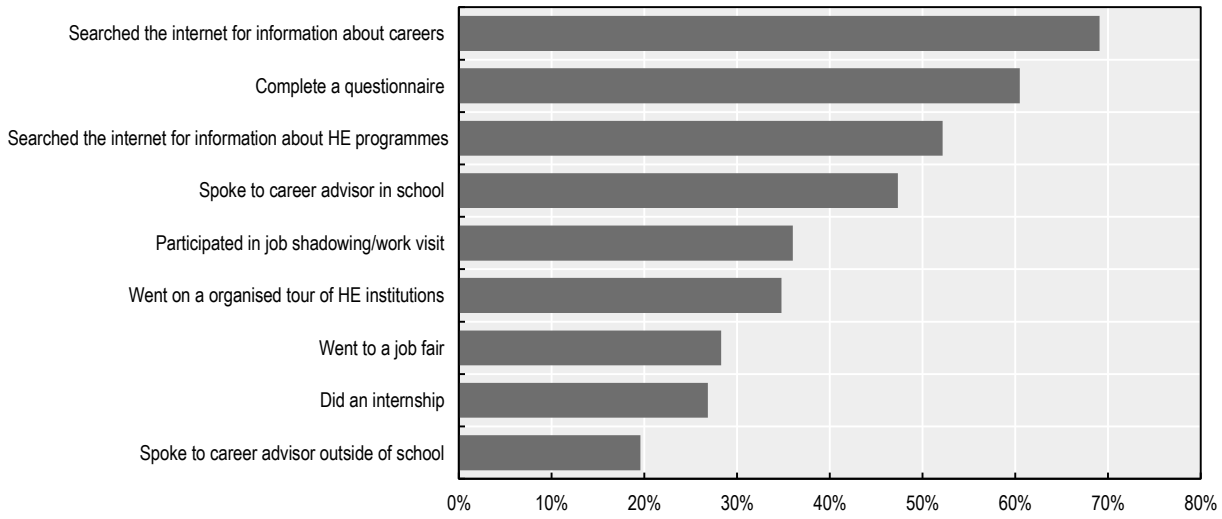
### *In practice bringing together the classroom and the workplace can be challenging*

#### *Participation can be limited*

In reality, the engagement of employers is often limited and faces many barriers. Results from the PISA 2012 survey show that only 27% of students reported that they had participated in an internship programme and about 37% had shadowed a worker at his or her job. More commonly, students engaged in career guidance activities which did not engage employers: as many as 60% of students had filled a questionnaire and 70% searched the Internet for information (Figure 5.1).

**Figure 5.1. In which career guidance activities do students participate across the OECD**

Percentage of students having participated, OECD average

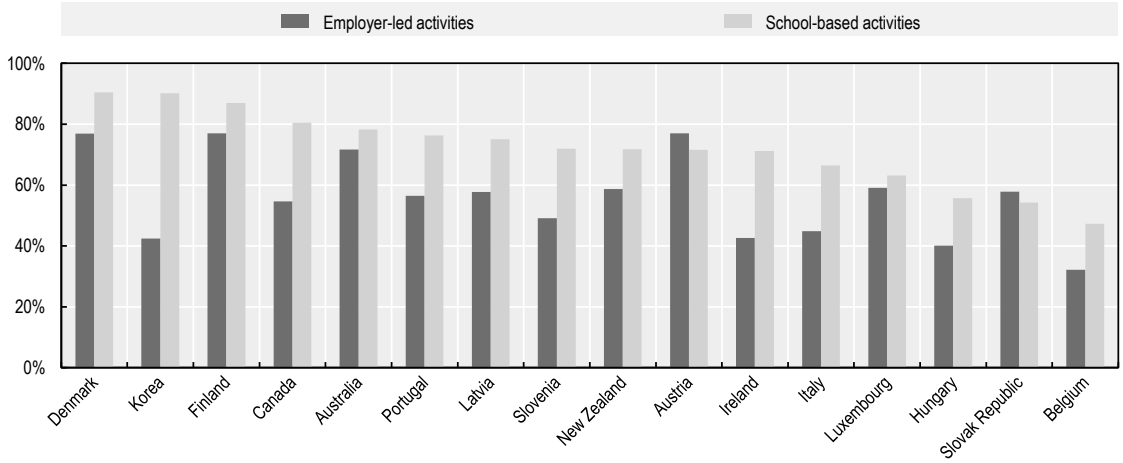



*Source*: OECD, PISA 2012 Database, www.oecd.org/pisa/data/pisa2012database-downloadabledata.htm.

There are important differences between countries, as seen in Figure 5.2.

**Figure 5.2. Fewer students participate in career guidance activities in which employers are engaged across the OECD**

Percentage of students having participated

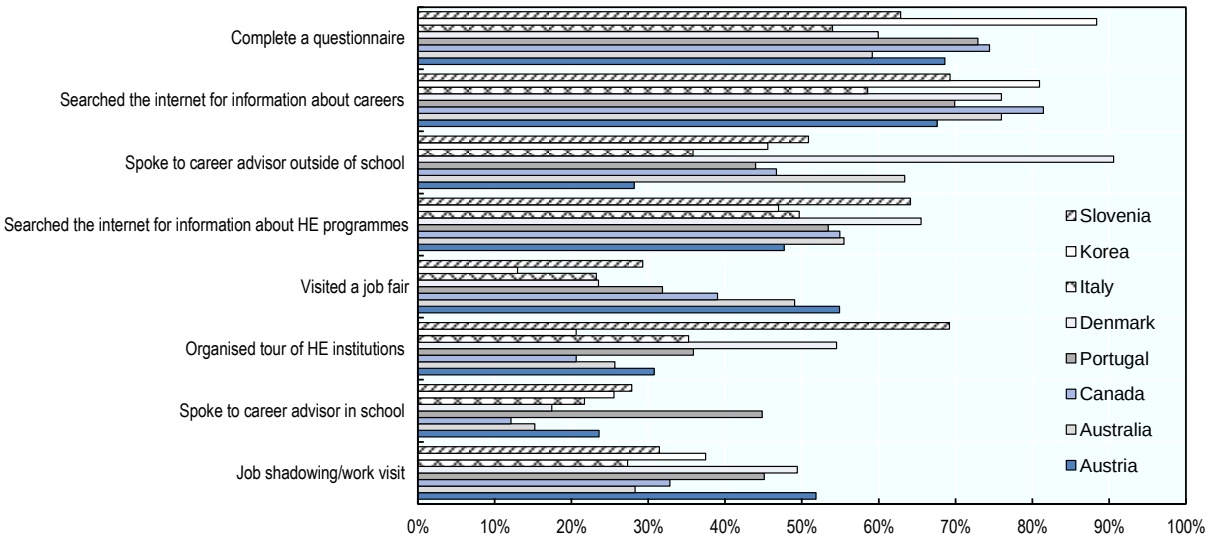



*Note*: Employed-led activities include internship, job shadowing, career fairs. School-based activities include speaking to an adviser in school, filling in a questionnaire about preferences and interests.
*Source*: OECD, PISA 2012 Database, www.oecd.org/pisa/data/pisa2012database-downloadabledata.htm.

In some countries many students participate in school-based activities: for example, 90% of students in Denmark spoke to an adviser in school, and almost 90% of students in Korea completed a questionnaire. As for participation in activities in which employers are engaged, about 50% of students in Austria and Australia visited a careers fair, and in these two countries, as in Denmark, many students do an internship.

**Figure 5.3. In countries, student participation in the different types of career guidance activities varies greatly**

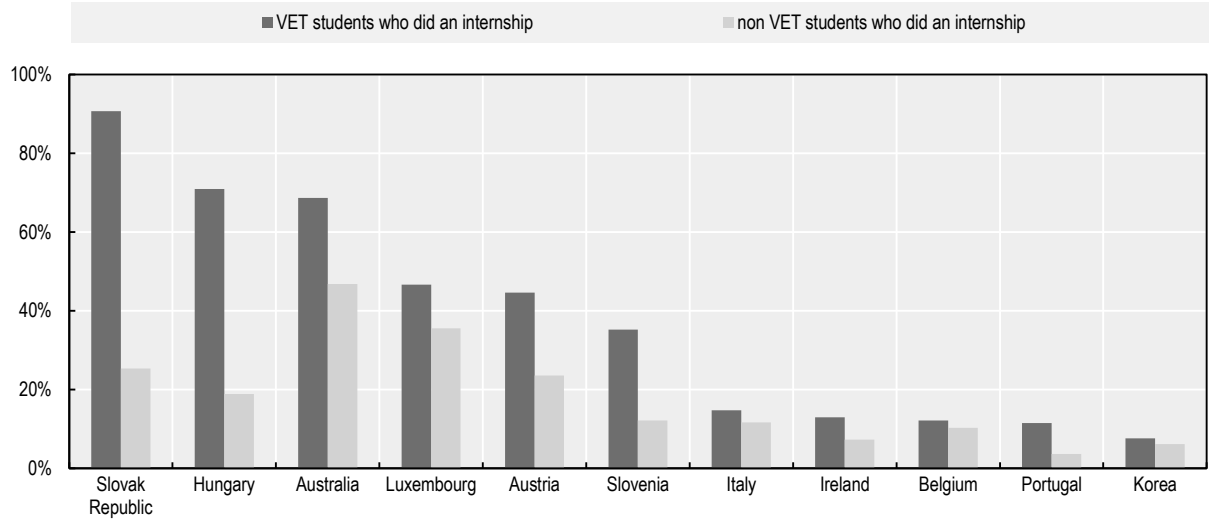
Percentage of students having participated, selected countries




*Note:* For more information please see Table A A.2., in which the participation rates by countries and by activities are available.
*Source*: OECD, PISA 2012 Database, www.oecd.org/pisa/data/pisa2012database-downloadabledata.htm.

This partly reflects that in countries where there are important (in size) vocational systems, students in those tracks tend to have more contacts with employers, and for example do more internships (see Figure 5.4 for countries in which data is available). Career guidance activities start earlier as students have to make decisions about the choice of tracks, and therefore educational pathways and groups of occupations early on (students are typically tracked at an early age in systems where VET is important, with the possible notable exception of Denmark, see OECD, 2012 on early tracking and OECD, 2010 on tracking and VET).

**Figure 5.4. VET students participate more in internships in many countries than students in academic tracks**




*Source*: OECD, PISA 2012 Database, www.oecd.org/pisa/data/pisa2012database-downloadabledata.htm

### *Understanding the barriers and designing effective practices*

For these schemes to be successful, schools need to reach out to people in work primarily through their employers, but also through their trade unions, professional associations and as individual volunteers, and people in work need to engage with schools. This requires:

- Making the business case to employers and employees to demonstrate why they would benefit from participating – since the direct benefits may be limited (during short placements, students do not typically do productive work).
- Identifying barriers and obstacles for schools and for employers that may stand in the way and dismantle them.

Employers and schools often face technical, legal or information barriers that might deter them from mutual co-operation.

- A key barrier for greater employer engagement is often not knowing what schools and education providers need and what employers can provide.
- Employers have enterprises to run and might not have sufficient motivation to engage in the provision of career guidance, and it is not always clear for the employers how they can benefit from participating in career guidance activities.
- In some countries, there might be legal constraints with respect to a greater involvement of employers in education, e.g. health and safety or child

safeguarding regulations related to work-based learning or other forms of workplace experience.

- Teachers and school leaders might be reluctant in accepting people in work in their classrooms and schools.
- Schools may lack resources to cover the costs linked to reaching out to people in work. Internships in particular include costs in administration.

### *Some forms of activities are simpler than others to achieve*

Some forms of employer-led career guidance activities may be easier to achieve, and might also cause less resistance in schools. Different types of events can better serve different purposes.

One study asked Human Resource managers to rank how demanding different employer engagement activities were to their employer. From this point of view, in-workplace activities (job shadowing, internships, workplace visits) were rated as being more demanding, compared to school-based activities such as employee participation in enterprise competitions and careers fairs. To provide employer talks in schools was considered to be the least resourceful activity for employers (CIPD, 2012).

- **Employer talks and careers fairs**: schools can organise careers fairs in which they invite professionals from different sectors. It is considered relatively easy and cost-effective practice (Larson, 2012), while they have long lasting positive effects (Kashefpakdel and Percy, 2016). For example, in Scotland, employer and graduate talks are used to promote the flagship apprenticeship programme, and former apprentices or representatives of employers who participate in the programme speak to students in schools (SDS, 2015).
- **Workplace visits:** structured workplace visits are often highly valued by young people and teaching staff, in particular for the youngest age groups, and are relatively easy to organise, compared to other forms of employer involvement such as internships (for example see Hatcher and Le Gallais, 2008 and Huddleston, Mann and Dawkins, 2012). In the United Kingdom, a poll of 400 school leaders in 2007 found that 58% of primary schools engaged in off-site visits, as did 91% of secondary schools (Edcoms, 2007). Only 21% of respondents felt that such visits were ‘very difficult’ to organise with a further 18% agreeing that they were ‘difficult’ (Mann and Dawkins, 2014). But there may be unmet demand: a survey of 333 teenagers in the United Kingdom found that 62% of respondents wanted their school or college to provide more workplace visits (Deloitte UK and the Education and Employers Taskforce, 2010).
- **Job shadowing/short internships and taster programmes**: relative to longer and more structured internships, short programmes, such as job shadowing and taster programmes, typically are less costly and might be easier to organise. Such one-week placements are mandatory in France at age 14-15. In Norway, 9th grade students have one week of work experience and some a further work placement in grade 10. The question remains as to whether these briefer and possibly less structured experiences provide comparable levels of impact to the traditional longer internships. In a Scottish study on job-shadowing (one week) that students do in their 4th year of secondary school, more than 90% of employers felt that one week was long enough, to give students a good taster of the industry. Many employers surveyed felt that it would be difficult for many employers to offer more than one week due to the supervision needed (Eddy Adams Consultants,

2008). Such initiatives can be more difficult to organise in some specific settings, such as in rural areas (Hutchins and Akos, 2013).

- **Mentorship programmes**: informal work mentors and supervisors might improve self-esteem and encourage pursuit of career goals among secondary school students, as found in the United States (Jome and Carnicella, 2012 and McDonald et al., 2007) and in Finland (Jokisaari and Nurmi, 2005), leading to later economic outcomes. But it might be difficult to secure wide access to mentoring and to monitor quality. The German programme "Coaching for the transition to work" assists young people at risk by providing a mentor who helps them with the school-leaving qualification and supports them in the transition by finding a stable apprenticeship placement. Evaluations of the programme have identified positive impacts in higher attainment, more realistic career goals and more successful transitions. However, the outcomes of such employer mentoring programmes do vary and success cannot be taken for granted.

Other stakeholders such as trade unions may also be involved (see Box 5.4 for an example from Denmark).

**Box 5.4. Connecting the world of work with the schools at an early age in Denmark**

Danish VET students act as role models and visit lower-secondary schools to promote VET through the campaign "The Route to VET", a campaign initiated and led by the Danish Vocational and Technical School Students Union (www.eeo.dk/vejentil/). At the school visit, the young role models present their own experiences on why they chose VET, their training and the possibilities they have both within the labour market and for further education. The campaign reflects a partnership between VET schools, the employers and lower-secondary schools to increase first-hand encounters between younger students and older peers able to provide personal insight into VET pathways.

*Source*: EEO (2017), "Kampagnen", http://eeo.dk/vejentil/om-kampagnen/, (accessed 24 December 2017).

In practical terms, a good place to start would be for schools and colleges without experience of engaging with employers to focus on building the participation of employers and employees in the activities that are the most effective in enhancing career understanding, and therefore start with career talks and then job shadowing and workplace visits.

### *Countries need to make it easy for employers to become involved*

The use of incentives and policies to encourage employer engagement can vary, depending on career guidance activity or specific local conditions and needs, ranging from relatively soft forms such as encouraging more active engagement through to co-designing, convening or leading activities related to career guidance (Wilson, 2015). Employer engagement is also in the interest for the firms because they can, for example, more easily recruit candidates for apprenticeships.

- **Information exchange**: Employers might be more likely to engage in career guidance if they better understand how they can be useful in a particular local context. Employer unions can be engaged in such tasks. Frameworks and forums that enable views to be exchanged might facilitate creation of local partnerships. Detailed and regular surveys gathering information about the needs and capacities of firms can help to design programmes that match the needs of employers and students for effective career guidance.
- **Careful design of programmes, and support to employers**: In the context where direct benefits to employers from engaging in career guidance might not be clear or immediate, paying attention to the design of activities and providing detailed guidance on their implementation can make a difference. For example, guidance and support is a key component of the Students@Work job shadowing initiative implemented in the state of North Carolina in the United States. A toolkit for employers was developed to help employers prepare to host a job shadowing day at their workplace. The toolkit includes an action plan for job shadowing with concrete steps for employers to take. While employers design their own agenda, the suggested schedule consists of a large group welcome and overview of the employer's enterprise, two to four hours of one-on-one job shadowing in which each student is matched with an employee, a lunch presentation and discussion with a senior member of staff, and a tour of the workplace (Larson, 2012). In South Korea, the government developed a system of recognition through certification and awards to those companies that offer support to schools (Solberg and Borbely-Pecze, 2015).

Transaction costs linked to employer-led career guidance activities relate mostly to finding the most suitable volunteer or workplace with which to engage, but in some activities further financial costs are incurred. In mentorship programmes, schools must ensure that mentors are properly trained, and meetings are properly managed. Schools need to ensure that work placements are checked for health and safety compliance. Such costs (in time and in money) are additional to those incurred in simply finding the right person or organisation with whom to engage, as for example in a careers fair. A simple web-based interface can provide the encouragement and stimulus that employers and schools need – see for example www.ourskillsforce.co.uk/invest-in-young-people/marketplace/. Some design features using ICT can reduce the cost of engaging employers and professionals to schools. The Inspiring the Future initiative uses online matching of volunteers from the world of work with primary and secondary schools (Box 5.5).

**Box 5.5. Inspiring the Future: Matching schools with the world of work in the United Kingdom**

Inspiring the Future is a secure website where schools, colleges and volunteers from the world of work connect. It is based on the concept of online match making, deploying software used by leading companies for online shopping, to provide secure, trusted, just-in-time, and cost-free interactions between schools and the world of work. Volunteers from various professions pledge one hour a year to volunteer in a state school or college near where they live or work to talk to young people about their job and career route. In addition, volunteers can select a

number of areas of expertise that might be of interest to students, such as how maths is used at work, financial literacy, languages, or engineering and technology. Teachers select and invite people who best meet the needs of their students from a range of sectors and professions.

The project was developed by a non-profit charity in partnership with a range of stakeholders – employers, trade unions, education, government, third sector and intermediaries. It was preceded by research to identify what are the barriers in better linking employers and schools. To date, some 200 000 invitations have been issued by teachers in thousands of schools to a pool of 40 000 volunteers.

Two adjacent campaigns have been launched. The project has been extended to primary schools. Primary Futures works on the same principle, but targets pupils in primary schools. It aims to raise and broaden pupils' aspirations by helping children to understand the world of work and its relationship to learning better. The Inspiring Women campaign links working females and girls at schools with the aim of exposing girls and young women to the wide variety of roles that women have in order to broaden their horizons and inform their ambitions.

*Source*: Education and Employers (2016), Inspiring the Future website, www.inspiringthefuture.org/ (accessed 5 July 2016).

### *The quantity and the quality of the interaction with people at work matter*

The availability of opportunities to interact with employers is strongly linked to the socio-economic status of the school. Equity issues arise when those from more disadvantaged backgrounds do not have access to the same enticing contacts with employers as part of career guidance services as enjoyed by their more advantaged peers. Particular concerns are apparent in the relationship between social background and access to periods of work experience or internship. Often it will be the responsibility of students to decide upon, and secure, their placement. In such cases, opportunities accessed by students will commonly reflect parents' professional networks. Young people from more privileged backgrounds more often enjoy personal and family connections linked to better paying, higher status professions, and are more adept at finding the most meaningful work-based learning opportunities. For example, evidence from England shows that typically half or more of secondary school students have found their own work experience placements (Francis et al., 2005). Hatcher and Le Gallais (2008) found that the lower the SES of the school, the greater the likelihood of students being placed in roles during their short work placement during secondary education that reproduce patterns of social inequality, for example, being required to do mundane tasks. A study looking at the disadvantaged students doing the one-week mandatory job placement at age 15 in France shows that these students have more difficulties in finding a placement, and when they do find one, the placement is many times of lower quality (L'Horty, Duguet and Petit, 2012).[29] Where

[29] The study looked at the impact of giving these students extra support throughout the process: using randomised controlled trial methods, it found that this extra support did not have an impact on the quality of the job placement, but students receiving the extra guidance were more open to considering vocational tracks as an option for them (L'Horty, Duguet and Petit, 2012).

schools actively support young people in securing placements, a second issue related to equity emerges – with opportunities reflecting the economic health of the area in which the school is situated. Whereas engagement of employers can serve to challenge social inequalities, it can also serve to underpin patterns of intergenerational transmission of disadvantage.

It is important that schools are supported in the process of exposing students to the world of work. Schools' social and culture capital shapes greatly the opportunities available to students, as parents are a key resource. Countries could consider policies that would allow resources to be pooled by schools and then distribute them more equitably between students, as well as between schools, in a school system where some schools have access to more, and better resources than others. Intermediary bodies operating on a local or sub-regional basis can enable such a process.

### *Policy pointers for schools and governments*

Career guidance services should fully integrate diverse members of the economic community into their career guidance activities, ensuring multiple and authentic interactions with young people from an early age. Action should be taken to identify and address obstacles preventing engagement. Where countries are new to employer engagement, it is best to begin where logistics are easiest. In terms of delivery, countries and schools should consider that:

- Employer/employee talks and careers fairs are a relatively easy and effective tool.
- ICT can provide many new ways of facilitating the interactions between schools and employers, lowering barriers.

## Conclusion

Schools in many countries have long engaged employers, employees and others from the economic community within career guidance activities. Emerging evidence shows that they are right to do so. It helps prepare young people to develop the critical thinking to make informed decisions about what, where and the grades they will need to pursue their preferred option. Schools should encourage a rich, first-hand understanding of the world of work from the earliest years. Effective delivery of employer engagement within career guidance will be authentic, commonplace, valued by young people, varied by activity, contextualised with professional guidance, personalised and begun at pre-secondary level.

For programmes of employer engagement to be successful, schools need to reach out to employers and employers need to engage with schools. This requires understanding and addressing barriers to engagement. Different activities come with different transactional costs. A good place for countries, without a tradition of such involvement, to begin is in career talks and careers fairs involving volunteers from the world of work. In all aspects of engagement, it is important that schools retain a sense of ownership. It must not be forgotten that employer engagement can serve to either challenge or replicate patterns of intergenerational cycles of social disadvantage. Delivery is important. Research suggests that schools should focus on the quantity (numbers of interactions) and quality (as perceived by students) of provision – and target action particularly on students from families lacking strong social networks related to careers of interest.

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# Annex A. Additional information

**Table A A.1. Mapping of the career guidance tools used during different stages of a student's life**

| Objectives/stages | Kinder garden | Primary school | Lower-secondary school | Upper-secondary school | Tertiary education | Young people not in education and training |
|---|---|---|---|---|---|---|
| Approximate age | 3-5 | 6-9 | 10-14 | 15-18 | 19-24 | 15-29 |
| Tackling stereotypes and widening horizons | Games and competitions | Accompanying parent at work | Employer talks | Job shadowing | | |
| Decreasing negative effects of socio-economic background | Careers days | Parental involvement | Mentoring, tutoring and coaching | Internships | | Individual counselling |
| Assisting disadvantaged youth | | | Psychometric tests | Mentoring, tutoring and coaching | Work experience | |
| Increasing self-esteem and motivation | | Extra-curricular activities | Students' skill portfolios | Mentoring programmes | Mock interviews and CV consultations | Pre-vocational programmes |
| Providing quality information (about occupations, education streams, labour market) | | | Career brochures | Visits to universities and technical colleges | Career websites | Individual counselling |
| Raising awareness of learning and employment opportunities | | | Apprenticeship ambassadors | Learning provider talks at schools | Careers fairs | Work experience |
| Facilitating school-to-work transition | | | | Taster apprenticeship | Voluntary work | Mentoring, tutoring and coaching |

*Source*: Mýtna Kureková, L. (forthcoming), *Strengthening Guidance and Career Information, Technical Paper*.

**Table A A.2. Student participation in the different types of career guidance activities**

In percentage, selected countries

| | Did an internship | Job shadowing/work visit | Spoke to career adviser in school | Organised tour of higher education institutions | Visited a careers fair | Searched the Internet for information about higher education programmes | Spoke to career adviser outside of school | Searched the Internet for information about careers | Completed a questionnaire |
|---|---|---|---|---|---|---|---|---|---|
| Australia | 47% | 28% | 15% | 26% | 49% | 55% | 63% | 76% | 59% |
| Austria | 37% | 52% | 24% | 31% | 55% | 48% | 28% | 68% | 69% |
| Canada | 9% | 33% | 12% | 21% | 39% | 55% | 47% | 81% | 74% |
| Denmark | 69% | 49% | 17% | 55% | 24% | 66% | 91% | 76% | 60% |
| Italy | 13% | 27% | 22% | 35% | 23% | 50% | 36% | 59% | 54% |
| Korea | 6% | 37% | 26% | 21% | 13% | 47% | 46% | 81% | 88% |
| Portugal | 5% | 45% | 45% | 36% | 32% | 53% | 44% | 70% | 73% |
| Slovenia | 23% | 31% | 28% | 69% | 29% | 64% | 51% | 69% | 63% |

*Source*: OECD, PISA 2012 Database, www.oecd.org/pisa/data/pisa2012database-downloadabledata.htm.