Adolescent Education and Pre-Employment Interventions in Australia

KEEPING YOUNG PEOPLE IN EDUCATION, EMPLOYMENT AND TRAINING



OECD

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BETTER POLICIES FOR BETTER LIVES

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Foreword

Prolonged periods out of employment, education or training may harm the well-being of young people and lower their long-term economic prospects. The Australian Department of Education, Skills and Employment (DESE), now replaced by the Department of Education and the Department of Employment and Workplace Relations, was interested in learning about education and pre-employment interventions targeting 12-16 year-olds that could be applied in the Australian context to reduce the risk of young people becoming NEET (i.e. not in employment, education or training).

The Department tasked the Youth and Diversity Team of the OECD Directorate for Employment, Labour and Social Affairs (ELS) and the Skills Analysis Division of the Centre for Skills (SKC) to provide an overview of good practices of education and pre-employment interventions in other OECD countries, with a particular focus on evidence-based practices. The Department was also interested in policy recommendations on data collection and evaluation systems to facilitate the monitoring and evaluation of interventions.

This report fits within the broader effort of the OECD to improve the school-to-work transition and create better opportunities for young people in OECD countries. Successful engagement of young people in the labour market and society is indeed crucial not only for their own personal economic prospects and well-being, but also for overall economic growth and social cohesion.

The report was jointly prepared by Sarah Kups (ELS at the time of writing the report), Helke Seitz, Irina Vogel and Sarah Wildi (SKC), under the supervision of Veerle Miranda (ELS) and Francesca Borgonovi (SKC) and the senior leadership of Stefano Scarpetta (Director of ELS), Monika Queisser (Head of the Social Policy Division in ELS) and El Iza Mohamedou (Head of SKC). Valuable input was provided by Hlodver Hakonarson and Lina Tafur (both interns at ELS at the time of writing the report). Hanna Varkki (ELS) provided editorial support.

The report benefitted from a series of exchanges and discussions with representatives of the Department of Education and the Department of Employment and Workplace Relations in Australia, who also commented on earlier versions of the report.

Table of contents

Foreword 3

Executive summary 6

1 The NEET population in Australia and levers for prevention 8
1.1. Recent trends in NEET rates and educational attainment 9
1.2. NEET characteristics in Australia and across OECD countries 13
1.3. The implications of NEET characteristics for potential preventive interventions 15
1.4. Reducing the shorter- and longer-term risks of becoming NEET 18
References 18
Notes 20

2 Education interventions 21
2.1. Background: Existing policies to prevent early school leaving in Australia 22
2.2. Direct prevention interventions. 27
2.3. Indirect prevention interventions 35
References 44
Notes 56

3 Pre-employment interventions 58
3.1. Career education 60
3.2. Career counselling and guidance 69
3.3. Work-based learning and employer engagement 73
3.4. Social inclusion and community interventions 77
References 80

4 Preventive interventions in vocational education and training 88
4.1. Background: Upper secondary VET in Australia 89
4.2. Vocational preparatory programmes 92
4.3. Increasing the accessibility of VET programmes 95
4.4. Supporting students as well as vocational teachers and trainers 97
4.5. Making VET a well-known and attractive alternative to general education 99
4.6. Strengthening school-industry partnerships 102
References 110
Notes 116

5 Embedding interventions into a strengthened monitoring and evaluation system 118
5.1. Generating and maintaining a strong data infrastructure 119

5.2. Putting in place robust ethical oversight and data privacy considerations 121
5.3. Promoting the use of high-quality data for M&E purposes 122
5.4. Facilitating the dissemination of M&E findings 123
References 126
Notes 127

FIGURES

Figure 1.1. With the exception of the pandemic year 2020, the overall NEET rate in Australia was below the OECD average 10
Figure 1.2. Both older teenagers and young adults less likely to be NEET in Australia than on average across the OECD 11
Figure 1.3. The share of unemployed individuals among 15-19 year-olds who are NEET is higher in Australia than across the OECD 12
Figure 1.4. The rate of young people who are NEET is almost consistently the lowest in Canberra 12
Figure 1.5. The share of university educated young people who are NEET is particularly low in Australia 14
Figure 3.1. Despite relatively few teachers in Australia having received training in career guidance, an above-average share of Australian students have participated in career development activities 61
Figure 3.2. The share of young Australians who have met with a career advisor is relatively high 72

TABLES

Table 2.1 Selected rigorous impact evaluations of early warning systems 29
Table 3.1. Selected studies on the association of career education and later NEET outcomes 62
Table 3.2. Selected career education interventions 67
Table 3.3. Selected studies on the impact of career guidance on NEET outcomes 70
Table 3.4. Selected career guidance interventions 73
Table 3.5. Selected studies on the association of employer engagement activities and later NEET outcomes 75
Table 3.6. Selected employer engagement and work-based learning interventions 76
Table 4.1. Indicative summary of upper secondary VET teacher qualification requirements in six OECD countries 104
Table 4.2. Qualification and training requirements for in-company trainers in five OECD countries 105

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Executive summary

In 2021, about one in ten young people in Australia were not in employment, education or training (NEET), compared to an OECD average of around one in seven. This report explores how educational, pre-employment and vocational interventions targeted at 12-16 year-olds might reduce the prevalence of the NEET status among older teenagers and young people in their early twenties. Among young people who are NEET, a higher share are unemployed rather than inactive, potentially making it easier to guide them to employment or education or training. Lower educational attainment, health problems and limitations, and Indigeneity are all associated with a higher likelihood of being NEET. These characteristics need to be considered when designing NEET prevention policies.

Educational policies and interventions can mitigate the chances that young people become NEET. By acting during compulsory schooling, effective policies and interventions can support transitions between primary and secondary education and prevent young people leaving school early. In terms of the long-term trajectory of young people, promoting educational attainment through relevant educational policies and interventions indirectly supports the transition into employment. A range of direct prevention interventions can be implemented to prevent early school leaving, including: i) early warning systems to identify students who are at risk of leaving school early; ii) additional support to at-risk students that emphasises inclusive learning environments; and iii) curriculum interventions that set out guidelines of what at-risk students should be taught and take away from their studies. Such interventions can be complemented by indirect prevention interventions to promote student engagement motivation and learning, such as: i) promoting a whole school approach, explicitly addressing the needs of learners not only within the curriculum but across the whole school and learning environment; ii) supporting transitions between educational levels; and iii) fostering an inclusive teaching environment.

Pre-employment interventions including career education, guidance and employer engagement can likewise make it more likely that adolescents have a smooth transition to higher education or employment. The number of longitudinal studies that demonstrate an association between pre-employment interventions and the NEET outcomes several years down the line are limited. But there exists more ample evidence that these interventions can positively influence other outcomes that are themselves associated with improved transition outcomes, such as improved educational outcomes, increased career certainty and career alignment with their occupational ambitions. A higher share of teenagers in Australia compared to OECD countries on average participate in career development activities, but the availability of such pre-employment interventions varies across types of activities, between schools and in terms of quality. Career education appears to work well when it is part of a whole-of-school strategy, adapted to the age group in question and integrated into subject matter classes, possibly alongside dedicated career learning classes. Teachers, as well as career guidance professionals, need to be equipped with sufficient resources through initial and continuous education and training, and adapted materials, to provide quality advice that recognises young peoples' interests and aspirations and puts them on the path to achieving their goals. Involving employers in pre-employment interventions is key to ensure that it is relevant to their industry and interesting to students who want to work in the industry, and interventions that involve the broader community can be helpful.

For students who favour more practical learning, vocational education and training (VET) programmes can foster their motivation and engagement with education and enable them to find a learning context that suits their needs and expectations. Moreover, by ensuring they develop the right skills demanded by the labour market, VET programmes allow them to transition into employment more easily. In order to better support learners at risk of becoming NEET in Australia, four broad areas should be tackled within VET: i) the reputation of VET (e.g. by providing easily accessible and understandable information on VET to counter misconceptions); ii) industry involvement (e.g. by strengthening work-based learning opportunities in collaboration with companies; including the industry in the development of VET curricula, examinations, and qualifications; and enhancing networks to reduce barriers); iii) support provided to vocational teachers and trainers; and iv) tailored support provided to young learners. The first two areas help improve the overall VET system and how it is perceived, making it an attractive and equally valid alternative compared to general upper secondary education, while the third and fourth areas are crucial to ensure that students have a good learning experience and receive the support they need.

Monitoring and evaluation can facilitate the design and implementation of evidence-based policies and increase the accountability and transparency of public policies. While Australia benefits from a strong data infrastructure and high-quality longitudinal datasets to track individual-level outcomes over time, cohort-specific research is still lacking for the assessment of NEET prevention interventions for adolescents. Monitoring and evaluation is also insufficiently used in Australia to inform policy making in this area, compared to countries like the United Kingdom, Korea or Mexico, which have a dedicated team or agency responsible for the monitoring and evaluation of policies across different sectors. Australia can also learn from an increasing number of OECD countries that make evaluation results public, for instance through the creation of a unique platform/repository, to encourage openness and transparency in the public sector.

Key policy recommendations

- Support primary-to-secondary transitions and incentivise participation and attainment in school by monitoring, identifying, and supporting at-risk young people through curriculum and teacher capacity interventions.
- Allow students to learn about different education and occupation options by ensuring equitable access to high-quality career education and guidance, including contacts with the real world of work through workplace visits and internships.
- Strengthen work-based learning opportunities in collaboration with companies and involve the industry in the development of VET curricula, examinations, and qualifications to improve perception of VET and make VET an attractive and equally valid alternative to general education.
- Improve monitoring and evaluation of youth policies through continued investment in data infrastructure, the development of robust ethical oversight and data privacy considerations, and the dissemination of findings through a unique platform.

1 The NEET population in Australia and levers for prevention

This chapter compares the share of young people not in education, employment or training (NEET) in Australia with that in other OECD countries and describes their characteristics. It explains why understanding NEET trends and characteristics among older teens and young people in their early twenties is important for designing policies and programmes intervening preventatively among adolescents in their mid-teens, which is the focus of the report. Apart from 2020, the NEET rate in Australia has generally been below the OECD average in the recent past. As in many other countries, young people with lower educational attainments or health issues and those with a First Nations peoples' background are over-represented among the NEET population.

Young people's disengagement from employment, education or training has major costs for individuals but also for society as a whole. When young people are not in employment, education or training (NEET), they fail to acquire valuable skills, thus facing a higher likelihood of being unemployed as adults and having a lower lifetime income. They are also more likely to suffer from poorer physical and mental health and to be less socially integrated within their communities. Finally, individuals who are long-term NEET are more likely to require social assistance and to contribute fewer taxes over their lifetime.

Some young people become NEET because of transitory conditions, such as economy-wide or industry or region-specific economic downturns. A stark example is the upswing in the share of young people who are NEET across the OECD following the global financial crisis (OECD, 2016[1]) or more recently, during the economic crisis as a result of the COVID-19 pandemic (OECD, 2021[2]). In these cases, proactive measures are required to support individuals who are NEET during the downturn and to hasten their return to the labour market. However, such measures, which in Australia include the Transition to Work services and ParentsNext support, are directly targeted at young school leavers and NEET youth and thus mainly concern older teenagers and young adults (i.e. 15-24 year-olds), whom are outside the scope of this report. For other young people, their NEET status is the result of their lack of engagement with education, employment and training, often stemming from negative experiences or socio-economic conditions during their childhood or teenage years. In such cases, preventive measures are needed to lower the risk of becoming NEET (OECD, 2016[1]).

In acknowledgement of the potential importance of preventive measures for reducing NEET risks among young people, the-then Australian Government Department of Education, Skills and Employment[1] has tasked the OECD with preparing a report on good international practices in education and pre-employment preparation interventions targeting the age group of 12-16 year-olds. Since much of the international comparative literature so far has focused on prevention and activation measures in older youth age groups, the report could also be of interest to actors beyond Australia.

The structure of the report is as follows: This chapter presents an overview of the prevalence and characteristics of individuals who are NEET in Australia and their specificities in comparison with other OECD countries, to ensure that the recommendations in the rest of the report are relevant in the Australian context. The following chapters explore the preventive policies and interventions already in place in Australia and presents a summary of key aspects of different interventions in three policy areas: education interventions (Chapter 2), pre-employment interventions (Chapter 3) and interventions within vocational education and training (Chapter 4). Wherever possible, the chapters also present evidence from the existing literature on the impact of the interventions on the likelihood of entering the NEET status. Finally, Chapter 5 discusses in broad terms how a strengthened monitoring and evaluation system could support preventive policies and interventions over time.

As the report refers to various age groups among young people, the terminology used is generally as follows: "Young people" generally refers to the population of older teenagers and young adults aged 15-29. "Adolescents" or "mid-teens" generally refers to the population of 12-16 year-olds; "late teens" to 15-19 year-olds and "early twenties" to 20-24 year-olds.

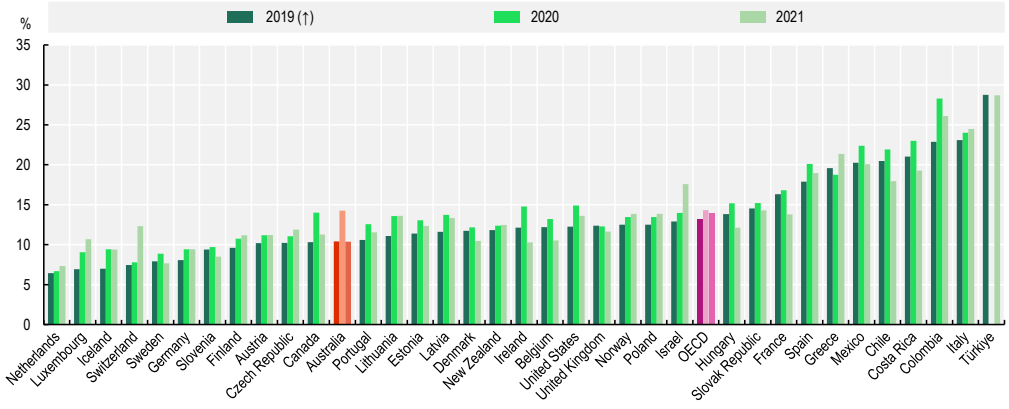
1.1. Recent trends in NEET rates and educational attainment

Australia's NEET rate is generally lower than the rate observed on average for other countries in the OECD, but several countries including Nordic ones show that the rate can be brought further down. In 2021, the NEET rate in Australia stood at 10.4% among 15-29 year-olds, below the OECD average of 13.9% (Figure 1.1). The impact of the COVID-19 pandemic and the required lockdowns was stronger in Australia than in most OECD countries. This led to a 2020 NEET rate slightly above the OECD average, but the rate quickly reverted to the pre-pandemic situation. This trend is a reflection of developments in the overall unemployment rate during the pandemic: in Australia, the unemployment rate of 15-64 year-olds initially

increased more than in many European countries, though to a lesser extent than for example in Canada and the United States. A contributing factor to this difference was that many other countries already had long-established and broad-ranging job retention schemes, including short-term work programmes. These short-term work programmes subsidised hours that employees did not actually work, for example because a business was closed or faced drastically reduced demand during lockdowns. By allowing employers to maintain contracts without bearing the entire financial brunt, employers were less likely to lay off workers. In contrast, prior to the pandemic, the Australian wage subsidy programme focused on supporting individuals receiving income support; and the lump-sum wage subsidy introduced during the pandemic took the role of a minimum salary (OECD, 2021[3]).

Figure 1.1. With the exception of the pandemic year 2020, the overall NEET rate in Australia was below the OECD average

Young people not in employment, education or training (% of 15-29 year-olds), 2019-21



Note: Sorted in ascending order (↑) by the 2019 NEET rate. The unweighted OECD average excludes Japan and Korea. The NEET rates generally refer to the yearly average, but refer to the second quarter for those countries where the statistics are taken from the Education at a Glance database (Australia, Greece, Iceland, Ireland, Israel, the Netherlands, New Zealand, the Slovak Republic and Türkiye).
Source: Own calculations based on labour force surveys and (OECD, 2022[4]), *Education at a Glance 2022* database, https://stats.oecd.org/Index.aspx?DataSetCode=EAG_TRANS.

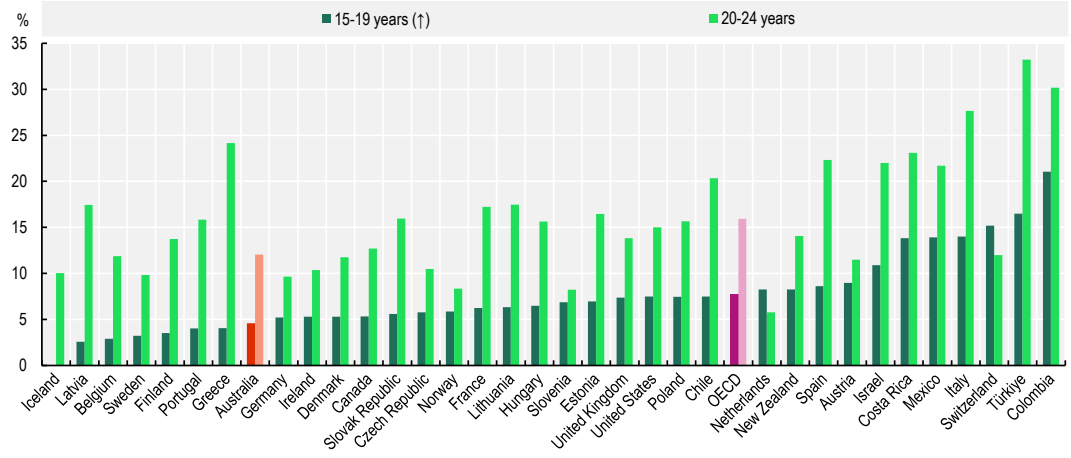
The rate of young people who are NEET among 15-19 year-olds is typically lower than the rate among 20-24 year-olds as most young people are still in secondary education. In Australia in 2021, the rates of young people who are NEET among 15-19 and 20-24 year-olds stood at 4.6% and 12.1% respectively, compared with OECD averages of 8.5% and 17.1% respectively (Figure 1.2). Differences in the rates of young people who are NEET across countries among 15-19 year-olds reflect, to a large extent, the degree to which legal and systemic factors in countries mandate and encourage young people to stay within upper secondary and transition to post-secondary education, although some older teenagers can also transition to the labour market. For the 20-24 age group, the rate of young people who are NEET is determined both by a system's ability to guide young people who entered post-secondary education towards graduation and by its ability to ensure that those who graduate or otherwise leave educational programmes can establish themselves in the labour market.

Among teenagers who are NEET, a higher proportion are unemployed (i.e. actively looking for a job) rather than inactive (i.e. not actively looking for a job) in Australia compared to the OECD average; but the opposite is true among young people in their early twenties. In 2021, 51.1% of female and 53.1% of male 15 to19-year-old individuals who were NEET were available and actively looking for work, compared to the respective 22.2% and 28.2% OECD averages. In contrast, the share of unemployed individuals in Australia among 20-24 year-olds who are NEET is lower than the OECD average with 25.7% of young women and

45.1% of young men in Australia who are NEET compared to 34.1% and 49.5%, respectively in the OECD (Figure 1.3). Depending on the circumstances, it may be easier to activate unemployed rather than inactive young people, especially those who sought out the support of the public employment service. However, prior analyses show that in many countries, a significant proportion of young jobseekers are not actually registered with the public employment service, the agency or office providing job seekers with labour market information and job brokerage as well as, depending on the country, administering unemployment benefits and active labour market programmes (OECD, 2021[5]). A certain share of inactive individuals, though by no means all, may also be completely unavailable for the labour market, be it because of illnesses or family obligations.

Figure 1.2. Both older teenagers and young adults less likely to be NEET in Australia than on average across the OECD

Young people not in employment, education or training, by age group (% of youth in age group), 2021



Note: Sorted in ascending order (↑) by the NEET rate of 15-19 year-olds. The unweighted OECD average excludes Japan and Korea. The NEET rates generally refer to the yearly average but refer to the second quarter for those countries where the statistics are taken from the Education at a Glance database (Australia, Greece, Iceland, Ireland, Israel, the Netherlands, New Zealand, the Slovak Republic and Türkiye).
Source: Own calculations based on labour force surveys and (OECD, 2022[4]), *Education at a Glance 2022* database, https://stats.oecd.org/Index.aspx?DataSetCode=EAG_TRANS.

Figure 1.3. The share of unemployed individuals among 15-19 year-olds who are NEET is higher in Australia than across the OECD

Young people not in employment, education or training, by age group (% of age group and sex) and proportion of unemployed among young people who are NEET in age group and sex, 2021

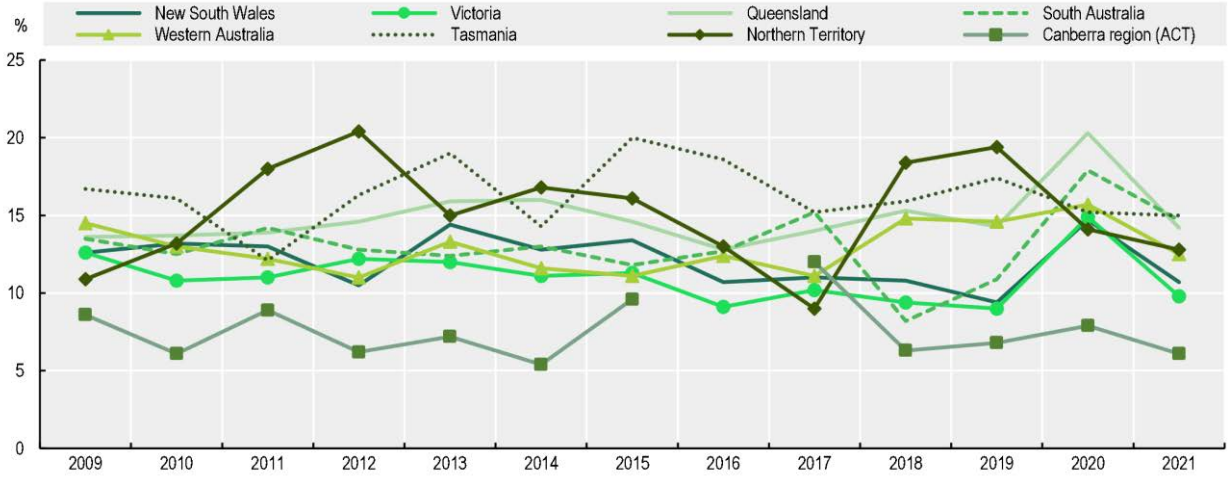


Note: The unweighted OECD average excludes Japan and Korea.
Source: Own calculations based on labour force surveys and (OECD, 2022[4]), *Education at a Glance 2022* database, https://stats.oecd.org/Index.aspx?DataSetCode=EAG_TRANS.

The NEET rate in Australia varies quite strongly across different States and Territories. Looking only at the population of 18-24 year-olds over the 2009 to 2021 period, the NEET rate in the territory with the highest rate is around three times higher than the territory with the lowest rates. For example, this occurred in 2012, 2014 and 2018-19 (Figure 1.4). NEET rates do not always fall and rise in tandem across Australia – for example, between 2017 and 2018, the rate basically doubled in the Northern Territory while it halved in the Australian Capital Territory (Canberra). The one constant, aside from the outlier year 2017, is that the NEET rate in Canberra is generally lower than in any other state or territory.

Figure 1.4. The rate of young people who are NEET is almost consistently the lowest in Canberra

Share of 18-24 year-olds not in employment, education or training, by state or territory, 2009-21



Source: OECD (2020), "Early leavers from education and NEET", *OECD Regional Education Database*, https://stats.oecd.org/index.aspx?queryid=90228.

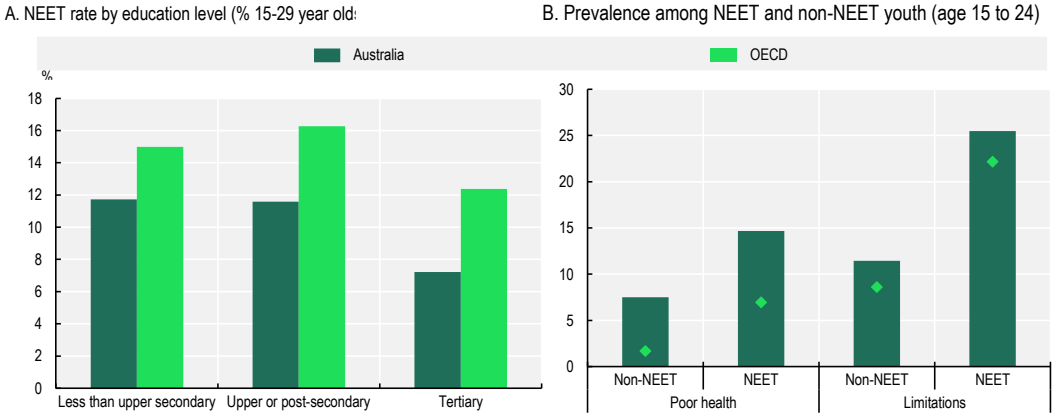
1.2. NEET characteristics in Australia and across OECD countries

The characteristics of young people who are not in education, employment or training differ from that of the youth population overall. As this section will show, the share of young people who are NEET differ between young male and female adults; university graduates and early school leavers; First Nations peoples and others; and along a variety of other characteristics.

Teenage girls are less likely than boys to be NEET in Australia, but this difference has historically reversed in their early twenties with young women being more likely than boys to be NEET. In 2021, in the age group of 15-19 year-olds, the rate of young people who were NEET was lower for girls than for boys in Australia (3.9% versus 5.1%), while across the OECD they were almost identical (8.8% and 8.7%, respectively) (Figure 1.3). In 2021, for youth aged 20 to 24, in contrast, the rate of young people who were NEET was more elevated for young women than young men across OECD countries (17.3% for women and 14.7% for men), but not in Australia (10.3% and 13.7%, respectively). However, prior to 2019, the rate of 20 to 24-year-old women who were NEET was usually higher than that of their male peers. This difference was driven largely by a higher share of young women who were inactive. Caretaking responsibilities are an important factor in shaping the differences in the evolution of NEET prevalence among young men and women. According to OECD estimates based on the Household, Income and Labour Dynamics in Australia (HILDA) Survey, the NEET rate among teenagers and young people in their early and late twenties is lower among *childless* women than their male peers in the same age group. Moreover, on average from 2017 to 2021, less than half a percent of 15-19 year-old girls and women who were either in education or employed had a child, while 8.5% of NEET girls and women in the same age group were mothers. These figures were in line with those estimated for the other 26 OECD countries with available data. Teenage motherhood is slightly more common among Australian- than among overseas-born women, but four times as common among First Nations peoples than other women (AIHW, 2015[6]). In the 20-24 age group, the prevalence of motherhood among young women who are not NEET and who are NEET equals 4.3% and 30.3% in Australia, and 4.6% and 33.6% across OECD countries.

Participation in higher education is strongly associated with a lower likelihood of experiencing NEET status in Australia. In 2021, the NEET rate for 15-29 year-olds who graduated from university was 7.2%, compared to 11.7% for those who did not graduate from upper secondary school (Figure 1.5, Panel A). In contrast, on average across OECD countries, the university graduate NEET rate of 12.4% was much closer to the rate for those who did not complete upper secondary school (15.0%) (Department of Education, 2022[7]).

Figure 1.5. The share of university educated young people who are NEET is particularly low in Australia



Notes: Panel A: The reference year is 2021. The NEET rates generally refer to the yearly average, but refer to the second quarter for those countries where the statistics are taken from the *Education at a Glance* database (Australia, Greece, Iceland, Ireland, Israel, the Netherlands, New Zealand, the Slovak Republic and Türkiye). The unweighted OECD average excludes Japan and Korea.
Panel B: The reference year is 2021 for Australia and the latest available year for the different OECD countries. Calculations based on household survey data, excluding Canada, Costa Rica, Colombia, Japan, Korea, New Zealand and Israel.
The indicator for "Limitations" refers to the share of individuals who report that their health limits their daily activities, such as moving a table, pushing a vacuum cleaner, bowling or playing golf.
"Poor health" refers to the share of individuals who rate their general health as very bad or bad, or equivalently the two worst outcomes on a five-point scale.
Source: National household and labour force survey data and (OECD, 2022[4]), *Education at a Glance 2022,* https://doi.org/10.1787/3197152b-en.

First Nations youth face a higher risk of experiencing NEET status. This increased risk arises because First Nations teenagers and young adults are more likely to experience factors that are associated with an increased likelihood of experiencing a NEET status such as living in remote areas, living in poverty, suffering from poor mental health, and not achieving minimum educational achievement standards. At the same time, First Nations young people may also experience sources of disadvantage associated with how others perceive their identity, such as social and cultural exclusion and discrimination, as well as the accumulation of multiple sources of disadvantage (National Indigenous Australians Agency, 2022[8]; AIHW, 2018[9]).

In 2020, the NEET rate among First Nations youth was nearly two times as elevated as among young people who did not identify as First Nations peoples. According to earlier analyses, First Nations individuals made up around 3% of the youth population, but 10% of young people who are NEET (OECD, 2016[10]). The persistence in the NEET status is very high for First Nations young people: According to analyses based on the linked Australian Census Longitudinal Dataset, two-thirds of First Nations young people aged 15-24 who were NEET in 2011 remained so by 2016 (Dinku, 2021[11]). The employment gap between First Nations youth and other young people widens with age; and young First Nations women are at a particular disadvantage in terms of their employment rates (Venn, 2018[12]). First Nations youth are also under-represented among tertiary students and even more so among graduates: The Australian Government Department of Education's (2022[7]) higher education statistics shows that they make up 1.4% of all students at university in 2020, with First Nations students completing 0.8% of total awarded courses in 2020.

In many of the countries with available data, Indigenous individuals and ethnic minorities are more likely to be NEET. For example, in Canada in 2018/19, among young people living off-reserve, the rate of 15-19 year-old Aboriginals (First Nations, Métis and Inuit) who were NEET was 5 percentage points higher

than among their non-Aboriginal peers. Among 20-24 and 25-29 year-olds it was 10 percentage points higher (Brunet, 2019[13]). In the younger age group, the difference was due to lower school enrolment while in the older age group, lower employment was a main factor. In many European countries with substantial Roma populations and reliable data, the rate of Roma young people who are NEET tends to be higher than it is among the general population of young people. In Hungary, for instance, the rate of 18-24 year-olds from Roma communities who were NEET was 38% in both 2011 and 2016, whereas the rate among non-Roma communities for the same age group decreased from 13% to 9% percent (Scharle, 2020[14]).

In 2020, Australia was one of the few countries in which foreign-born young people were at a lower risk of being NEET than native-born young people.[2] That year, the NEET rates for overseas- and Australian-born individuals aged 15 to 29 were 8% and 12%, respectively. In contrast, across the OECD (excluding Korea, Japan and Türkiye), the corresponding average rates were 18.8% and 13.2%. Other countries in which relatively fewer foreign- than native-born young people are NEET include Israel, Lithuania, New Zealand and the Slovak Republic (based on own calculations and *Education at a Glance 2021* (OECD, 2021[15])).[3]

Young people who are NEET are more likely to report limitations in their daily activities or poor health in both Australia and across the OECD. Pooling data for Australia from 2016 to 2020, the shares of 15-19 and 20-24 year-olds who reported poor health or limitations in activities were around two to three times as elevated among NEET as among non-NEET youth (Figure 1.5, Panel B). The degree of limitations also plays a role, as young people with more severe rather than moderate limitations are more likely to be NEET (OECD, 2016[10]). Young people who struggle with mental health disorders are likewise known to be at a higher risk of becoming NEET, as are young people with special education needs (Brussino, 2020[16]).

Young people who are NEET are also more likely to live with (a) parent(s) who did not complete upper secondary education or who were not employed at the time of the survey. The differences in particular for parental education are remarkably similar between Australia and the OECD on average: In both the 15-19 and 20-24 year-old categories, among young people still living with at least one of their parents, around 25% of NEET and 7-9% (in Australia) and 11-12% (OECD average) of non-NEET youth had parents whose highest education level was less than upper secondary school. For the group of young people still living with at least one parent, the share of those whose parent(s) are not working for pay is three times more elevated among individuals who are NEET than among those who are not.

Across the OECD as well as in Australia, other marginalised groups are also likely to experience more frequent periods of not being in education, training or employment, but reliable statistics may be difficult to find. These groups can include refugees, individuals who are currently or have in the past been in the child protection or out-of-home care system, who have been in contact with the justice system, who have substance abuse issues or who have been or continue to experience insecure housing or homelessness, or domestic violence. In a sample of young people aged 15-25 who first accessed services at one of the headspace centres (centres providing integrated mental health, substance abuse prevention and employment services to teenagers and young adults), Indigenous youth, young people experiencing homelessness and having substance use disorders had higher odds of being NEET rather than in education or working full-time as otherwise similar young people who did not share these characteristics (Holloway et al., 2018[17]).

1.3. The implications of NEET characteristics for potential preventive interventions

The reasons why a young person is NEET are often manifold and may be related to more than one factor. Some of the factors are related to the background of the young person, such as their socio-economic background, the level of engagement of their parents, whether they live in an urban or a rural area, how remote the location is from major urban centres, whether they have special education needs (i.e. learning

disabilities, physical impairments or mental health disorders), etc. Others are related to their behaviour (which in turn can be influenced by their social environment), such as whether they engaged in truancy from a young age. Yet others are related to their environment, such as the quality of schools, the affordability of further education, and current local economic conditions.

Some of the factors that can either raise or lower the risk of a young person becoming NEET, especially during their teen years and early twenties, can potentially be addressed through policy interventions aimed at children and teenagers of (lower) secondary school age. Accordingly, the following chapter will focus on educational interventions (which can, among other things, increase the chances that a student successfully completes upper secondary school), pre-employment interventions (which can improve the match between the chosen educational and training trajectories and boost motivation to perform), and interventions within vocational education and training (which can ease the school-to-work transition). Preventive interventions that lower the risk of a young person experiencing for example homelessness, substance abuse disorders and deteriorating mental health, could also have a beneficial impact on school and labour force participation. However, they generally fall outside the scope of this report, but would ideally be part of a comprehensive NEET prevention policy.

Other characteristics associated with being NEET can point towards high-risk groups that may need further targeted support. For example, the profile of boys and girls who are NEET differ, suggesting that some interventions may have to be adjusted to their specific needs. Young First Nations peoples, young people with physical impairments, learning disabilities or mental health disorders, and young people living in rural and remote areas or growing up in poverty, face structural disadvantages. These disadvantages can include attending schools with fewer means, struggling with hunger, or facing discrimination that can make it more difficult for them to thrive at school and to transition into the labour market, again suggesting that policy makers need to keep these factors in mind when designing preventative interventions. Different student characteristics can also intersect with one another to give rise to more diverse student needs and risks factors (Box 1.1). These intersections can be taken into account to better target the needs that students may have and prevent the risk that young people will enter the NEET status, though doing so is fraught with difficulties.

That being said, policy makers also need to be clear-eyed about the limits of pre-employment and education policies and interventions targeted at teenagers in their early to mid-teens in preventing later NEET spells. On the one hand, the labour market conditions young people encounter once they leave education can make it difficult for even the best-prepared person to find employment; and changing life circumstances such as newly emerging physical and mental health issues can lead to additional struggles. Labour market and social policies, the availability of early childhood education and care programmes for young parents, and access to (mental) health services all have an important role to play in addressing obstacles that could not be eliminated through preventive policies. In addition, overall economic and labour market policies can help maintain a favourable economic environment for hiring; and educational and financial aid policies can ensure that financial considerations do not keep otherwise interested and qualified young people from accessing higher education to the extent that they would wish to.

On the other hand, by the time that young teenagers reach lower secondary school, they have already been shaped by their earlier childhood experiences. Some unfortunately already carry a severe burden of disadvantage whose impacts targeted education policies can help lighten, but likely not eliminate entirely. Certain individual characteristics that influence academic and employment achievement, such as resilience, persistence, and a growth mindset, can be influenced by interventions up to a certain degree but are somewhat “hard-wired” based on genetic factors and (early) childhood experiences.

Box 1.1. Adopting an intersectionality lens in the design of preventative NEET policies

The term intersectionality has gained attention in research on social stratification because of Crenshaw's landmark study of the unique disadvantage experienced by African-American women (Crenshaw, 1991[18]). The term considers the fact that individuals' identities and experiences at school, work and society more widely are determined by a wide set of characteristics that interact with each other.

An intersectional approach to the analysis of why some individuals are at a higher risk of becoming NEET and how this risk can be reduced recognises that many individual and contextual factors shape outcomes and that such factors do not operate in isolation but depend on individuals' exposure to other risk and protective factors (Hancock, 2007[19]; Bowleg, 2008[20]). The adoption of an intersectional approach requires policy makers to develop and implement interventions that recognise the wide heterogeneity of individual experiences and are flexible and adaptable enough to address specific forms of marginalisation and disadvantage (Christoffersen, 2021[21]).

Dimensions typically considered in intersectional approaches include sex and gender identity, age, religiosity, socio-economic status, ethnic minority/Indigenous status, migration background, neurodiversity and health status. The adoption of an intersectionality approach further recognises the role played by the interaction of individuals with macro environments (Hankivsky et al., 2014[22]). For instance, while individual experiences of discrimination are often symptoms of non-mutually exclusive macro-level systems and structures of power, such as sexism and racism (Hill Collins and Bilge, 2016[23]).

Researchers and policy makers can find it challenging to apply the concept of intersectionality in their analysis and policy design, but without doing so, they are unlikely to be able to adequately identify and address individual needs (Hankivsky and Cormier, 2011[24]). Addressing the diverse needs of students' intersecting identities ultimately happens in individual classrooms by teachers and other school staff. Stakeholders in the education sector therefore need adequate resources and support to implement school-level interventions. Furthermore, attracting a diverse teaching force can have positive effects on student learning outcomes, and reduce absences, suspensions and dropouts (Brussino, 2021[25]). The representation of diversity among education professionals can help students identify congruent role models.

The adoption of an intersectionality lens to policy design and implementation can also improve the efficacy of policy outcomes. Policy approaches focused on single dimensions of diversity or taking an "additive" perspective can lead to marginalised groups competing with one another for limited amounts of available resources (Hankivsky and Cormier, 2011[24]). An intersectional approach can not only prevent "targeted" interventions that disproportionately benefit small groups but can also enable the development of more efficient and responsive policies. It also encourages considerations of micro- and macro-level influences that shape individuals' experiences (Bowleg, 2012[26]). Including socio-structural factors in an analysis can transform research to explicitly consider the role of systemic factors for individual outcomes. Such a focus on structural factors can also encourage interventions on a structural level, rather than just addressing issues on the individual or group level.

Finally, an intersectional perspective can incentivise the development of cost-efficient policies and interventions well-targeted at the populations with the highest needs (Bowleg, 2012[26]; Hancock, 2007[19]). Focusing on a single dimension of diversity ignores heterogeneity and may thus fail to address all members of the targeted group. An intersectional lens can help examine whether policies are having their intended effect and are reaching the full population of interest, encouraging policy success.

A challenge to the adoption of an intersectionality lens to evidence-based policy making is lack of adequate data and the inherent difficulty in effectively interpreting the multiplication of risk that arises from the intersection of several dimensions. Identifying the multiplicative rather than the cumulative nature of disadvantage and the heterogeneity of risk across several dimensions requires having data with information on all dimensions and large samples for very specific groups of young people. One possibility is to rely on administrative data across several policy domains and complement these with social survey containing information not typically collected in administrative sources, such as data on their perceptions, attitudes and aspirations. Crucially, the development and use of such data for policy making should be accompanied by robust data privacy infrastructures and ethical reviews. Not only certain dimensions that characterise individual experiences may be sensitive, but the very nature of intersectional research poses unique ethical challenges since it might lead to increased identifiability of individuals and the possible stigmatisation of specific population groups.

1.4. Reducing the shorter- and longer-term risks of becoming NEET

Lowering the chances that young people will become NEET through educational, training, and pre-employment interventions requires a collaborative approach across different policy areas and actors, including between educational and employment stakeholders and the local community. Preventive strategies can target either all students or specific groups who are at a higher risk of becoming NEET, such as students from disadvantaged backgrounds, students in remote geographic areas, students belonging to First Nations communities, and students with special education needs.

The remainder of this report presents educational, pre-employment, and vocational education policies and interventions intended to improve educational attainment and later labour market outcomes in place across OECD countries. For each of these areas, the upcoming chapters briefly list selected existing policies in Australia. An attempt was made to cover most applicable national-level policies, while any discussed state or local-level policies and interventions are included for illustrative purposes and do not necessarily offer a comprehensive overview of all relevant policies and interventions in Australia. This overview is followed by a more in-depth discussion of interventions across the OECD. Whenever possible, it discusses the strengths of the evidence on (a) how impactful the intervention is in reducing the shorter- and longer-term risk of young people becoming NEET; and (b) for which group the risk reduction typically occurs. Each chapter concludes with a set of key policy lessons.

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Notes

[1] Since the start of the project, the Department of Education, Skills and Employment has been superseded by the Department of Education and the Department of Employment and Workplace Relations.

[2] Identifying the underlying reasons for the difference in NEET rates would require further analysis.

[3] "Native-born" and "foreign-born" is standard OECD terminology and is retained here to enable comparability across countries and ensure consistency across publications.

2 Education interventions

This chapter discusses education policies and interventions that could reduce the rate of young people who are not in education, employment or training (NEET) by preventing early school leaving and dropout as well as by promoting labour market integration through increased achievement and attainment. The first section provides an overview of existing policies to prevent early school leaving in Australia. The second section summarises direct prevention interventions including early warning systems, the provision of additional support for at-risk students, and curriculum interventions. The last section reviews indirect prevention interventions focusing on promoting a whole school approach, supporting transitions between educational levels, and inclusive teaching environments. The chapter concludes detailing policy lessons.

Acting early while students are in compulsory schooling can help mitigate the chances that young people will become NEET in their late teenage years and early adulthood. This chapter summarises existing measures to reduce NEET rates in Australia through the education system at the junior secondary level, and then explores measures taken in other countries that might be relevant to the Australian context. Educational strategies aimed at preventing early school leaving and student dropout can cover a wide range of areas, including system-wide interventions, measures at the school level, and strategies implemented outside of schools (Lyche, 2010[1]). In addition, by promoting educational achievement and attainment, educational policies and interventions indirectly support transition into employment since education is a key predictor of labour market outcomes. The 12-16 year-olds age group is particularly important for early interventions as it includes students transitioning from primary to secondary school and entering adolescence. In these years, individual, social, and systemic factors can all affect the way young people are socialised, feel like they belong inside and outside of school, and progress in learning.

Supporting transitions between primary and lower secondary education as well as between lower and upper secondary education can improve educational attainment, chances in the labour market, and social inclusion. Ensuring that all students, including more disadvantaged students, feel included and supported is equally important. This can be done by strengthening students' achievement and early educational success through targeted academic support or tutoring and mentoring programmes. Moreover, supporting sports and extra-school activities gives students the opportunity to develop different talents and soft skills, which are not always taught at school, yet are just as important. These activities also promote positive physical and mental health as well as positive social relations and enhance parental engagement in their child's learning. For students who prefer practically oriented learning, attractive and equally valid vocational education and training (VET) programmes should be easily accessible (see Chapter 4). Preventing, identifying, and addressing risky behaviour can also be effective in preventing early school leaving and student dropout. This can involve the introduction of, among others, substance-abuse awareness in curricula as well as comprehensive sexuality education. As the causes of early school leaving and student dropout are often complex, preventive measures also require interrelated and simultaneous interventions within and outside of the school environment.

This section provides an overview of existing educational policies and interventions to prevent early school leaving and student dropout in Australia, followed by a review of effective and promising policies and practices implemented in OECD countries. As strategies can directly prevent early school leaving and student dropout or more indirectly prevent this by promoting student inclusion and learning, the section divides interventions into two broad categories: (i) direct prevention interventions and (ii) indirect prevention mechanisms. These interventions can be universal (addressing all students) or targeted (addressing at-risk students).

2.1. Background: Existing policies to prevent early school leaving in Australia

This section provides an overview of educational policies to prevent early school leaving and student dropout in Australia. The overview includes both national directives and policies as well as policies and practices at the State or Territory levels to prevent young people from experiencing NEET status. It is primarily the State and Territory Governments' responsibility to regulate schools within their states and territories, which includes, amongst others, funding, overseeing course accreditation, and student assessment (Australian Government Department of Foreign Affairs and Trade, 2018[2]).

2.1.1. Introducing youth participation requirements and conditional financial support

In 2009, the Council of Australian Governments (COAG)[1] agreed to implement a Compact with Young Australians to ensure that all individuals under the age of 25 have the education or training they need to successfully take part in the labour market (Ministers' Media Centre, 2009[3]). As part of the Compact, all

Australian States and Territories agreed to implement the National Youth Participation Requirement, which stipulates that all young people must participate in schooling, or an approved equivalent, until they complete year 10 (Council of Australian Governments, 2009[4]). Once they complete year 10, they are required to participate full time (defined as at least 25 hours per week) in education, training, or employment, or a combination of these activities, until the age of 17 (Australian Government, 2009[5]).

Under the Compact with Young Australians and the National Youth Participation Requirement, the Australian Government strengthened the requirements necessary to obtain financial assistance for young people and their families. Social security legislation is consistent with the agreement and stipulates that generally anyone under the age of 22 who does not have a year 12 or equivalent qualification, or who is not participating in 25 hours or more of education, training or other approved activities is not eligible for Youth Allowance (Other) (Australian Government, 2009[5]). Youth Allowance (Other) is a social security payment that provides financial support to young people aged 16-21 who are unemployed and looking for work or are temporarily unable to work, and who meet other parental or partner income tests (Services Australia, 2022[6]).[2] In addition, parents of young people aged 16-19 who do not meet the National Youth Participation Requirement are not eligible under family assistance legislation to receive Family Tax Benefit Part A for those young people (Australian Government, 2009[5]). Family Tax Benefit Part A is a family assistance payment to parents to help with the cost of raising children (Services Australia, 2022[7]).

Lamb et al. (2004[8]) found that in Australia, the United Kingdom, and the United States, students indicated that the desire to get a job and earn money was a major reason for leaving mandatory school early (Lamb et al., 2004[8]; Lyche, 2010[1]). At the same time, a study in the United Kingdom found that conditional cash transfers for staying in full-time education are effective in reducing the number of students that drop out of school (Dearden et al., 2009[9]). Therefore, making financial assistance conditional on engaging in education or training or other approved activities, as is the case with the Youth Allowance (Other) and Family Tax Benefit Part A, can help prevent Australian young people from disengaging from education to earn money.

A goal set out in the Compact with Young Australians was to lift the attainment rate of students in year 12 or equivalent to 90% by 2015 (Australian Government, 2009[5]). Through policies such as mandatory schooling and conditional financial support, retention rates did increase across Australia from 70% in 2010 to a peak of 79% in 2018 (Australian Institute of Health and Welfare, 2022[10]).

However, if financial support for at-risk youth is conditional on meeting school participation requirements and is not accompanied by programmes to screen for other underlying reasons for lack of participation, then such programmes may increase vulnerabilities. Screening is important because students may not go to school for reasons other than lack of motivation or lack of financial incentives. In such cases, removing funding could compound vulnerabilities. Students would then not be able to go to school due to underlying reasons, such as mental health issues, challenging family circumstances, chronic illness, lack of school supplies, or poor transportation to and from school, and, on top of that, they would have lost their financial aid, thereby increasing marginalisation.

2.1.1. Enhancing school and teacher quality

Across Australia, efforts are being made to improve school and teacher effectiveness because there is strong evidence that students' attitudes towards school, the value they ascribe to it, their relationships with teachers, and their sense of achievement at school strongly influence whether or not they will complete their education.

In an effort to provide more high-quality and equitable education to students, the Commonwealth, States, and Territories jointly developed the National School Reform Agreement that came into effect in 2019 (OECD, 2019[11]). The Agreement includes a requirement for States and Territories to report annually on their progress in implementing national policy initiatives (Council of Australian Governments, 2018[12]). In

addition, as part of the agreement, States and Territories have signed bilateral agreements with the Commonwealth that set out state-specific policies and actions that will be undertaken to improve student outcomes. As a result, States and Territories have different policies in place. For example, under the reform Direction A – Support students, student learning and achievement, Victoria has highlighted that it aims to strengthen teacher practice by "establishing a Digital Assessment Library, an online resource that will develop and make available new digital student assessment tools and teacher resources to improve student learning assessment" (Department of Education and Training, 2022[13]). New South Wales aims to "implement the refreshed curriculum post 2019 review, ensuring teachers are supported to implement a streamlined curriculum, including timely and formative assessments" (Australian Government: Department of Education, 2022[14]). In 2022, the Australian Government Productivity Commission undertook a review of the National School Reform Agreement and found that it does not include sufficient clear, measurable targets to drive reform and hold jurisdictions to account for their performance. The Commission recommended that the next agreement should feature firmer targets to strengthen the focus on achieving outcomes (Australian Government: Productivity Commission, 2023[15]).

Efforts have also been undertaken to improve the quality of the curriculum. In 2020, Ministers of Education asked the Australian Curriculum, Assessment and Reporting Authority (ACARA) to review the Foundation to year 10 Curriculum (The Australian Curriculum, Assessment and Reporting Authority, 2020[16]). The updated curriculum was endorsed by Education Ministers on 1 April 2022.

The Australian Institute for Teaching and School Leadership (AITSL) has worked to improve teacher quality by clarifying in the 2013 Australian Professional Standards for Teachers what constitutes teacher quality and what teachers should know and be able to do at different career stages (OECD, 2019[17]). Furthermore, in 2020, in an effort to increase quality teaching and leadership, AITSL reviewed the compliance and regulatory burden that teachers and principals face, strengthened the teacher accreditation system, and helped develop evaluation tools to measure teaching effectiveness (The Australian Curriculum, Assessment and Reporting Authority, 2020[16]).

There are also programmes that focus specifically on increasing the number of qualified teachers. With its High Achieving Teachers programme, Australia has put in place two alternative employment-based pathways to broaden the ways in which individuals who are committed to pursuing a career in teaching can enter the profession (Australian Government Department of Education, 2022[18]). Both pathways (Teach for Australia and La Trobe University's Nexus Program) proactively recruit high achieving university graduates with the knowledge, skills, and experience that schools need (Australian Government Department of Education, 2022[18]). Once selected, the participants are placed in teaching positions in secondary schools with teacher shortages and are given training as well as support while they complete an accredited teaching qualification. Independent evaluations of one of the pathways (Teach for Australia) have indicated that it produces high-quality teachers and has a positive impact on participating schools (OECD, 2019[17]).

2.1.2. Culturally responsive teaching and support for at-risk First Nations peoples youth

Studies have found that Australia's First Nations peoples population has considerably lower completion rates than non-First Nations peoples populations (Lamb et al., 2004[8]; Lyche, 2010[1]). As such, the Council of Australian Governments (COAG) has set out to close the gap between First Nations peoples and non-First Nations peoples for key socio-economic targets. In 2008, for example, COAG pledged to halve the gap in First Nations peoples youth's year 12 or equivalent attainment by 2020 (Gardiner-Garden, 2012[19]; The Department of Education, Skills and Employment, 2020[20]). In July 2020, there was a new National Agreement on Closing the Gap, which was developed in partnership between Australian Governments and the Coalition of Aboriginal and Torres Strait Islander Peak Organisation, so that together, the stakeholders can overcome the inequality experienced by First Nations peoples (Closing the Gap, 2020[21]). The Agreement has 19 socio-economic targets across areas that have an impact on life outcomes for First

Nations peoples, one of which deals specifically with youth engagement in education and employment. Target 7 lays out the goal to "increase the proportion of Aboriginal and Torres Strait Islander young people (15 to 24 years) who are in employment, education or training to 67 percent by 2031" (Closing the Gap, 2020[22]) from a 2016 baseline of 57.2% (Australian Government Productivity Commission, 2022[23]).

In an effort to close the gap, First Nations peoples Histories and Cultures have been introduced as a cross-curriculum priority, adding depth and perspective to what students learn in English, mathematics, science, arts and humanities, as well as health and physical education (Australian Curriculum, 2022[24]). Two distinct needs in First Nations peoples education are also being incorporated in the Australian Curriculum: (1) "that students are able to see themselves, their identities and their cultures reflected in the curriculum of each of the learning areas, can fully participate in the curriculum and can build their self-esteem"; (2) "that the Aboriginal and Torres Strait Islander Histories and Cultures cross-curriculum priority is designed for all students to engage in reconciliation, respect and recognition of the world's oldest continuous living cultures" (Australian Curriculum, 2022[24]). Furthermore, AITSL, in consultation with First Nations peoples education experts, students, families, and communities, developed a professional learning toolkit, which aims to help teachers become more culturally responsive in their teaching practices (Australian Institute for Teaching and School Leadership, 2022[25]).

The Australian States and Territories have also put in place different measures to provide additional support and guidance for First Nations peoples students. For example, in Victoria, schools and parents can contact Koorie[3] Education Co-ordinators (KEC) to obtain assistance with Koorie cultural inclusion and education guidance (Government of Victoria, 2022[26]). Furthermore, KECs can assign Koorie Engagement Support Officers (KESOs) – members of the local First Nations peoples community that are based in the same area and that have an understanding of First Nations peoples culture and history in the community – to go to schools where there are Koorie families. KESOs can provide advice to schools about culturally inclusive learning environments and co-ordinate services in order to improve the learning outcomes of Koorie youth.

Similarly, in New South Wales, the First Nations peoples community in Broken Hill invites new public school teachers in the area to join them for a day out in the bush so that these teachers can be introduced to local First Nations peoples culture and history (Volkofsky, 2019[27]). In addition to learning about the local culture, teachers can hear stories first-hand from First Nations peoples elders about the impact of government policies that "included separate education for Aboriginal children, lower wages for [Aboriginal people], and state guardianship of Aboriginal children". The idea behind this initiative is that by being exposed to First Nations peoples history and culture, new teachers can improve school experience of First Nations peoples children and be more culturally sensitive in their teaching.

Generally, efforts to halve the gap in First Nations peoples youth's year 12 or equivalent attainment by 2020 appear to be successful, but First Nations peoples attainment rates in very remote areas remain low. The 2020 Closing the Gap report (Australian Government: National Indigenous Australians Agency, 2020[28]) finds that the attainment gap between First Nations peoples and non-First Nations peoples narrowed from around 40 to 25 percentage points between 2008 and 2018-19. However, it is important to acknowledge that there are differential outcomes for metropolitan and regional First Nations peoples youth. The 2020 report notes that the proportion of First Nations peoples attaining year 12 or equivalent level of education decreases with remoteness – with year 12 attainment rates at 85 percent in major cities, compared to 38 percent in very remote areas. Low attainment rates in remote areas may be in part explained by the lack of job opportunities in remote areas and so individuals may find little purpose in obtaining a qualification unless the First Nations peoples student is willing to leave the remote community.

2.1.3. Supporting students with special education needs and disabilities

The Australian Government also works with the States and Territories to support students with special education needs (SEN) and disabilities. It does so by collecting data on students with disabilities (Nationally

Consistent Collection of Data on School Students with Disability) in order to better understand the needs of the students and how they can be best supported at school (Australian Department of Education, 2022[29]) as well as through programmes, such as Positive Partnerships that specifically support students with autism (Australian Department of Education, 2022[30]). Addressing disabled students' needs is also explicitly laid out in the Disability Standards for Education 2005 (Standards), which state that education providers must consult with the student or a career of the student to identify reasonable adjustments that allow the student with the disability to access and participate in education on the same basis as their peers (Australian Curriculum, Assessment and Reporting Authority, 2022[31]). The Standards are reviewed for effectiveness every five years, and the recommendations from the last review, held in 2020, are currently being implemented by the Australian Government in close partnership with states, territories and non-government education authorities.

2.1.4. Engaging parents in their children's educational outcomes

Research shows that parental involvement in middle school is positively associated with achievement (Hill and Tyson, 2009[32]). In fact, parental engagement in children's learning has been found to be a bigger predictor of how children do in school than a family's socio-economic background (Deloitte Access Economics, 2017[33]; The Smith Family, 2016[34]). As such, the Australian Government supports and promotes parental engagement through a number of initiatives, such as the Family-School Partnerships Framework. The initiative focuses on parent engagement in learning and aims to shift attitudes, so that school and families build a relationship where they see each other as allies in the education of students (Australian Government: Department of Education, Employment and Workplace Relations, 2017[35]; Family-School and Community Partnerships Bureau, 2022[36]; The Australian Government: Department of Education, 2020[37]).

The Smith Family, an Australian charity focused on eliminating educational inequality, has also worked to engage parents in their children's long-term educational outcomes. The Smith Family's Learning for Life Program is an early intervention, long-term approach that targets disadvantaged children and responds to their changing educational needs (The Smith Family, 2016[34]). One of the key features of the programme is that upon being recruited into the Learning for Life Program, families enter into an agreement with the charity, which formally acknowledges the value of parental engagement in children's learning and underlines a shared goal and mutual responsibility of supporting the student's long-term participation in education.

There are also organisations such as the ACT Council of Parents and Citizens Associations that represent parent and community views on public education in Australia by (1) consulting with public school parent and community groups to identify issues and ideas for improving public education and by (2) communicating with decision-makers and contributing to policy development (ACT Council of Parents and Citizens Associations, 2022[38]).

2.1.5. Preventing homelessness

Australia has adopted The Community of Schools and Services (COSS) model to prevent homelessness and simultaneously assist with school retention and completion. Interim outcome evaluations from Geelong, where the model was first piloted, found a 40% reduction in the number of young people entering homelessness services. The evaluations also showed that early school leaving was reduced by about 20% for the three pilot schools. The approach of the model is to have schools and community services identify students and families that may benefit from support, and, together, support these students and families (MacKenzie, 2018[39]).

2.1.6. The COVID-19 Pandemic

The number of youth not in education, employment or training (NEET) had been declining across OECD countries for a decade, however the pandemic and the resulting school closures and distance learning reversed that trend (OECD, 2021[40]). In Australia, "the proportion of young people not in education or employment rose from 8.7% in May 2019 to 12% in May 2020 and has since decreased to 11% in February 2021, a similar rate to February 2020 (10%)" (Australian Institute of Health and Welfare, 2021[41]). The return to pre-pandemic NEET levels may be due to the relatively short school closures in Australia (Patrinos, Vegas and Carter-Rau, 2022[42]), indicating that students were less exposed to distance learning and this may have prevented students from becoming disengaged. In addition, a McKinsey and Company survey of teachers in eight countries found that teachers in Australia found remote learning relatively effective – they rated the effectiveness of remote learning as 6.6 (compared to the average of 4.8) on a scale of 1 to 10, with 10 being 10 "most effective, and equal to in-person instruction" (OECD, 2021[40]). Australia also put in place several schemes in an effort to prevent a rise in youth not in education, employment or training. For example, Australia introduced the Coronavirus Supplement, which "provided income support for 16-21 year-olds receiving the Youth Allowance and looking for full-time work, studying part-time, or temporarily unable to work" (OECD, 2021[43]).

2.2. Direct prevention interventions.

Across OECD countries, a range of policies and interventions are being used to prevent early school leaving and student dropout. These include early warning systems, the provision of additional support to at-risk students, and curriculum interventions.

2.2.1. Early warning systems

Across OECD countries, a considerable number of students drop out early from education systems – meaning that they leave education without having completed upper secondary qualifications – or fail to reach academic milestones. Upper secondary education is seen as critical for a smooth transition of young people from school to work, but graduation rates vary strongly across countries. On average across OECD countries, by age 25, 80% of young people have completed upper secondary education. However, this 2019 attainment rate ranges from 53% in Costa Rica to 96% in Korea in 2019 (OECD, 2021[44]).[4] Among those who attained upper secondary education, 17% are neither employed, nor in education or training (NEET),[5] and 78% are employed[6] (OECD, 2020[45]; OECD, 2021[44]). In contrast, among those who did not obtain upper secondary education, 39% are NEET and just 61% employed, respectively.

Early warning systems have been implemented in various OECD countries to prevent students from dropping out early. These systems aim to identify students at risk of school dropout before completing their basic education and support them with targeted interventions (OECD, 2021[46]). While Box 2.1 explains one selected Early Warning Indicator System in more detail, a summary of the general key components of Early Warning Systems is provided in the following:

- *Quantitative indicators:* Risk assessment of students is based on selected quantitative indicators. Literature identified key indicators that are strongly associated with school dropout, while they remain malleable through school practices. Among these are academic achievement, behaviour, and absenteeism (Allensworth and Easton, 2007[47]; Allensworth, 2013[48]; Balfanz and Byrnes, 2019[49]; Mac Iver and Mac Iver, 2009[50]). There are examples where the primary source of data stems from administrative records on grades and absences (Sletten, Tøge and Malmberg-Heimonen, 2022[51])
- *Statistical model:* Statistical models are employed to assess the accuracy of indicators and calculate the risk level of students (OECD, 2021[46]). With advances in artificial intelligence and

machine learning, some studies rely on sophisticated models to predict at-risk students (Balfanz and Byrnes, 2019[49]; Plak et al., 2021[52]). This option illustrates well how digitalisation and technology can be applied in education systems.

- *Intervention:* The analytics of student learning and progress provide valuable information to schools that needs to be acted on (Vincent-Lancrin, 2022[53]). Upon identification of students at risk, schools need to take effective interventions (including the allocation of school resources) in form of different actions. Interventions vary by programme but are mostly determined locally by the school and tailored to the needs of students. Interventions implemented as part of an early warning system in the United States, for example, include conversations between school staff and at-risk students on their absenteeism (Mac Iver et al., 2019[54]), assignment to academic support if indications for class failure exist (Faria et al., 2017[55]; Mac Iver et al., 2019[54]), mentoring programmes, or provision of mental and physical health support (Faria et al., 2017[55]).

Early warning systems are among the policy efforts countries have taken during the COVID-19 pandemic to provide support for targeted groups of students to mitigate effects brought by school closures (OECD, 2022[56]). During the pandemic, upper secondary schools were closed longer than schools at other educational levels, raising concerns of interrupted pathways and non-completion of education (OECD, 2020[57]). In the school year 2021/2022, nine countries implemented early warning systems as a recovery policy to identify students at risk (Schleicher et al., 2022[58]). Among those countries are Chile, Colombia, and Costa Rica, representing the Latin American and Caribbean region (OECD, 2022[56]).

Box 2.1. Case Study: Massachusetts' Early Warning Indicator System

Massachusetts established an Early Warning Indicator System (EWIS) in 2011 to identify students in Grades 1 to 12 who do not meet certain academic milestones. As EWIS is not mandatory for districts and schools, efforts are made to spread the knowledge. For example, the Department of Elementary and Secondary Education publishes a monthly newsletter shared with districts and schools to increase general knowledge about EWIS and a website with resources about EWIS as well as how data can be used and accessed. Similarly, no strict rules on how districts should implement EWIS exist, although a six-step process is recommended, which is structured as follows:

Preparatory steps at the beginning of the school year.

- Step 1: Putting a team together.
- Step 2: Reviewing existing EWIS data at the beginning of the school year.

Repeated steps throughout the school year.

- Step 3: Combining information provided by EWIS data and the experience and knowledge of educators to explore underlying causes for the poor performance of a student.
- Step 4: Implementation of additional support measures for the specific student.
- Step 5: Evaluation of additional support measures.

Toward the end of the school year.

- Step 6: Summarising the successes and challenges of the early warning process and refining the process based on insights gained throughout the school year.

Various stakeholders are involved in the establishment, administration, and implementation of EWIS: at the state level, the Department of Elementary and Secondary Education (data collection and model development) and, at the substate level, school districts (decision on data access) and schools (implementation of early warning cycle).

During the early development, variables were identified using multilevel models that best predict the likelihood of students failing key academic benchmarks in collaboration with the American Institutes for Research (for a summary of results see (American Institutes for Research, n.d.[59])). Risk levels are calculated based on a regression model using different indicators. Three risk levels are provided (low, moderate, high), and student risk is organised by four grade levels (early and late elementary, middle grades, and high school). Academic requirements differ by grade level. For example, being able to read by the end of Grade 3 is a requirement for early elementary, while passing grades on all Grade 9 courses is a requirement for middle grades.

Based on EWIS data, schools identify appropriate interventions to support students, groups of students, or entire schools. The Early Warning Implementation Guide provided by the Massachusetts Department of Elementary and Secondary Education suggests a systematic approach to assigning interventions and support, following the Massachusetts Tiered System of Support (MTSS) (Massachusetts Department of Elementary and Secondary Education, n.d.[60]; Massachusetts Department of Elementary and Secondary Education, 2022[61]). MTSS offers a structure to provide students along a continuum of services that provides increasing levels of support organised in three tiers: Tier I (universal support to all students), Tier II (targeted support provided in small groups), and Tier III (intensive support occurring individually or in very small groups).

Source: OECD, (2020[62]), *Strengthening the Governance of Skills Systems: Lessons from Six OECD Countries*, https://doi.org/10.1787/3a4bb6ea-en.

Literature provides evidence that early warning systems show promise in supporting dropout prevention and, thereby, both directly and indirectly, of lowering the risk of a young person being NEET at the time of dropping out or later. However, the evidence on the impact of early warning systems is scarce, and findings are ambiguous, often lacking robust evidence. Table 2.1 provides an overview of rigorous evaluation of early warning systems, and Box 2.2 provides more details about the interpretation of rigorous impact evaluations. The last column of the table lists all outcome variables that are evaluated in each study, including an indication whether they differ significantly between control and treatment group. The overview in the table shows that positive effects are found on chronic absence (Faria et al., 2017[55]; Mac Iver et al., 2019[54]) and course failure (Faria et al., 2017[55]), while, for other outcomes, evidence is missing. However, the lack of clear empirical evidence on all outcome factors does not negate the potential usefulness of early warning systems.

Table 2.1 Selected rigorous impact evaluations of early warning systems

Intervention and Country	Study	Evaluation details	Evaluation Outcome
IKO model (IKO is a Norwegian acronym for identification, assessment, and follow-up) Norway	Sletten, Tøge, Malmberg-Heimonen (2022[51]), "Effects of an early warning system on student absence and completion in Norwegian upper secondary schools: a cluster-randomised study"	Evaluation took place two years after implementation. Evaluation of first year of upper secondary schools.	**Outcome indicators:** Grade point average (GPA), Completion, Absence, Days of absence. No significant effects found.
Diplomas Now model United States	Corrin, Sepanik, Rosen, Shane (2016[63]), *Addressing Early Warning Indicators: Interim Impact Findings from the Investing in Innovation (i3) Evaluation of DIPLOMAS NOW*	Evaluation took place two years after implementation. Evaluation of Grades 6 and 9.	**Outcome indicators**: Attendance, Behaviour (suspension), Course performance, ***ABC composite (combination of Attendance, Behaviour, and Course performance).** **Significant effects found for ABC composite indicator.**

Intervention and Country	Study	Evaluation details	Evaluation Outcome
Early Warning Intervention and Monitoring System (EWIMS) in 73 high schools across three states United States	Faria, Sorensen, Heppen, Bowdon, Taylor, Eisner, Foster (2017[64]), *Getting students on track for graduation: Impacts of the Early Warning Intervention and Monitoring System after one year*	Evaluation took place 14 months after implementation of an EWS system in grades 9 and 10.	**Outcome indicators: *Chronic absence, *Course failure,** GPA, Suspension. **Significant effects found for chronic absence and course failure.**
Early Warning Intervention (EWI) Team United States	Mac Iver, Stein, Davis, Balfanz, Fox (2019[54]), *An Efficacy Study of a Ninth-Grade Early Warning Indicator Intervention*	Evaluation conducted during the second year after the implementation of an EWS system in Grade 9.	**Outcome indicators**: Attendance, Course performance, ***Chronic absence (missing no more than 10% of school days)**, Course failure **Significant effects found for chronic absence.**

Note: Outcome variables marked by * and in bold denote that the respective variable differed significantly between control and treatment group.
Source: Own compilation of selected studies.

Box 2.2. Interpretation of results from rigorous evaluation of early warning systems

Randomised controlled trials (RCTs) are perceived as the most rigorous form of evaluation and often referred to as the gold standard when studying causal relationships. In RCTs, participants are randomly assigned to a control or to a treatment group, and differences in outcomes are attributed to the treatment they receive.

Early warning systems are complex, consisting of three different components. The studies mentioned in Table 2.1 evaluate early warning systems as a whole. From a policy perspective, the evaluation of a whole early warning system is sufficient to decide whether the system should be implemented or continued. Learning and understanding the effectiveness of single components would require cross-cutting designs to disentangle the effect of different components (Duflo, Glennerster and Kremer, 2006[65]).

The following points should be emphasised: First, each early warning system evaluated potentially differs in the three components mentioned above. It makes the comparison of different early warning systems complex. Second, ineffectiveness of an early warning system means that the system as a whole is ineffective. The underlying reasons for failure in the effectiveness of a system could therefore lie in the failure in any of the three components. Third, effectiveness of early warning systems reflect that the system and its components as a whole are effective.

2.2.2. Additional support to at-risk students

Providing additional support to students at risk of falling behind on key academic milestones and dropping out is an important direct preventive strategy to foster inclusive learning environments. There are different dimensions of diversity that can affect educational performance and thereby characterise students who are at risk of early school leaving and student dropout, resulting in an increased risk of being NEET. These dimensions include socio-economic characteristics, their identity (e.g. migrants, ethnic groups, First Nations peoples people, linguistics minorities, or gender identity), or students with special education needs (SEN) (Balestra and Fleischer, 2018[66]; Santiago and Cerna, 2020[67]).

The rate of students leaving education and training early is higher among foreign-born and ethnic minorities than among native-born students and majority populations in many European Union countries. For example, 64% of foreign-born students in Türkiye leave education and training early, compared to 32% of native-born students (European Education and Culture Executive Agency, Eurydice, 2019[68]). Among

Roma communities, forming Europe's largest ethnic minority, early school dropout rates are higher as well (Rutigliano, 2020[69]). In Portugal, for example, about 90% of Roma students were early school leavers, compared to 14% among the general population (OECD, 2022[70]).

While there is consensus on the importance of inclusive education, including for students with SEN, there are differences in the understanding and recognition of special education needs across OECD countries. The definition of SEN is controversial and far from consistent across OECD countries. While some countries provide only broad definitions (e.g. Austria and Norway), others provide more granular categories (e.g. the United States). In an effort of comparative analysis of policy approaches and practices, the OECD adopted an operational definition that includes three main areas of SEN: learning disabilities, physical impairments, and mental disorders (Brussino, 2020[71]). Evidence shows that students with SEN face considerably lower educational and labour market prospects. They lag behind in achievement in elementary school, have lower graduation rates, are more likely to be neither in employment nor in education, or training, and receive lower wages (Brussino, 2020[71]). Among students with SEN in Portugal aged 18 to 24, 20.3% were early school leavers compared to 9.9% for people without SEN (OECD, 2022[70]).

Across OECD countries, various policies and practices are implemented to assist at-risk students (see examples provided in Box 2.3). Approaches vary from governing diversity (e.g. how concerns about diversity, inclusion, or equity are influenced by education systems), to development of skills and competences to address individual at-risk students, and school-level interventions. One policy area linked to governance arrangements includes approaches to providing education to at-risk students and arranging their educational curricula. For example, individual education plans[7] (IEP) are one way to providing suitable education to at-risk students by making the necessary modifications, differentiations, and adaptations in the school context. IEPs set out short- and long-term learning targets for pupils and determine degree and type of adaptations to be made to the curriculum (European Commission, 2013[72]).

School-level interventions refer to the distribution of financial and human resources to support students, engagement of families and the local community, and the use of assistive technology. For example, the usage of information and communication technologies is one means to support the inclusion of students with SEN (Hersh, 2020[73]). Assistive technology can be designed with the aim of improving, increasing, or maintaining the capabilities of a person with disability (LD@school, 2014[74]; UNICEF and WHO, 2015[75]). Such technologies can help students learn how to complete a task, but they can also help the students navigate an area of difficulty (LD@school, 2014[74]). For example, products provide support on, among other factors, communication, mobility, vision, or hearing impairments. Concrete examples for technologies encompass text-to-speech or speech-to-text software (LD@school, 2014[74]). The effective use of information and communication technologies requires adequate training of educational staff (European Agency for Special Needs and Inclusive Education, n.d.[76]).

Box 2.3. Selected initiatives to provide additional support to at-risk students

Governing diversity through inclusive education curriculum

Early assessment of academic knowledge and individualised study plans is one of the pathways **Sweden** is taking to respond to the learning needs of newly arrived students. Upon arriving, and within two months after the start of school, the knowledge and language skills of refugees are assessed in the students' mother language. Principals and headteachers determine on the best educational trajectory. Individual study plans, for example, determine the extent to which students participate in regular teaching groups or preparatory language groups, including voluntary participation in mother tongue education or study guidance in their mother tongue before, during, or after lessons (Berglund, 2017[77]).

Since August 2018, it is mandatory to map students so that newly arriving students starting with Grade 7 all have an individual study plan (Cerna, 2019[78]).

In **Greece**, individual education plans are used to monitor the progress and development of students with SEN (European Agency for Special Needs and Inclusive Education, n.d.[79]). Local Diagnostic Assessment and Support Centres assess each learner's special education needs and develop individual education plans in co-operation with the learner's teachers and their parents or guardians (Van Hove, De Schauwer and Kasimatis, 2017[80]).

There are many other countries that use individual education plans for inclusive education and especially students with SEN, among these are **Portugal** (Alves, Campos Pinto and Pinto, 2020[81]) and **Norway** (Gøranson, Ochoa and Zoeller, 2020[82]).

School interventions through assistive technology

As part of **Portugal's** inclusive education strategy, 25 Communication Technology Resource Centres for Special Education (CRTICs) were created in 2007/2008 that assess student needs and provide adaptive technologies to students with SEN (European Agency for Special Needs and Inclusive Education, 2011[83]; European Agency for Special Needs and Inclusive Education, 2016[84]; Liebowitz et al., 2018[85]). The CRTICs serve as an example of how teachers in mainstream and inclusive settings can be supported in using specialist technology. The centres are located in mainstream schools and are responsible for schools in neighbouring district areas. The main task of the Centres is to recommend assistive technology for pupils. Besides this, the centres have a range of other responsibilities, such as the training of education staff in getting familiar using assistive technology to establish a routine in using them. In addition, the CRTICs are raising awareness of the benefits of assistive technology among schools and parents. As such, they serve as a platform for exchange of practices and resources among special education teachers.

2.2.3. Curriculum interventions

At its core, curriculum is defined as a "plan for learning" (Taba, 1962[86]; van den Akker, Fasoglio and Mulder, 2008[87]), i.e. it is a set of guidelines for what should be taught in schools and what students should take away from their studies (Gouëdard et al., 2020[88]). Curriculum interventions consist of measures or reforms that are implemented to modify such guidelines and, therefore, what students are expected to learn in class. More specifically, curriculum interventions involve changes in the objectives of learning, such as which competencies, knowledge, values, and attitudes students take away (Gouëdard et al., 2020[88]). Curriculum interventions can involve introducing new subjects, adding new content to old subjects, varying the sequencing or timing of courses, or changing how the students are taught (Kärkkäinen, 2012[89]).

Curricula can be thought of in various ways. A common distinction is between the intended curriculum, the implemented curriculum, and the attained curriculum (van den Akker, Fasoglio and Mulder, 2008[87]). The intended curriculum outlines the vision and rationale underlying the curriculum and is specified in the curriculum documents. The implemented curriculum is the way in which the curriculum is interpreted by its users and the way it is actually taught, while the attained curriculum is the learning outcomes of the students. The majority of interventions take place at the level of the intended curriculum, but efforts to change classroom practices to reduce disciplinary problems or the use of different pedagogical approaches could act on the implemented curriculum.

This section focuses specifically on intended curriculum interventions that have been introduced to prevent NEET status among young people. Such interventions can involve introducing new material to teach

students about risky behaviours and their subsequent impacts, introducing more information about mental health, or developing tailored curricula.

Introducing new subject material: Substance abuse, sexuality education, and mental health

Introducing subjects such as substance abuse and sexuality education in the school curricula of students who are transitioning from their late childhood to their teenage years can be particularly important to prevent and address risky behaviours. For children and young people, the two main networks for substance use prevention are the family and school (EMCDDA and ESPAD, 2020[90]). Similarly, family, school, and peers play an important role in how students learn about sexuality and relationships (Brussino and McBrien, 2022[91]). Studies have found that young people who are NEET are more likely to report smoking and using drugs, and NEET women are more likely to report unplanned pregnancies (Tanton et al., 2021[92]). As seen in section 1.2, in Australia in 2019, the share of teenage mothers was about 20 times as elevated among young people aged 15 to 19 who were NEET than among those who were not considered NEET. In addition, research from the United States has found that teenage pregnancy is the leading cause of dropping out of school for female teenagers (Freudenberg and Ruglis, 2007[93]). Introducing new or improved sexuality education could help prevent risky sexual behaviours, which can lower the likelihood that young women are NEET due to early pregnancy.

An example of a policy that introduces comprehensive substance abuse and sexuality education in the curriculum is the Social, Personal and Health Education (SPHE) in Ireland. In its junior cycle, SPHE includes four strands that tackle different but related areas of social, personal, and health education: “Who am I?” “Minding myself and others,” “Team up,” and “My mental health.” For each strand, the learning outcomes outlined in the SPHE curriculum can be used to support student learning and teacher planning. In particular, the SPHE focuses on promoting student agency and engagement in the learning process as key to supporting learning in the affective sphere (National Council for Curriculum and Assessment, 2016[94]). As part of the SPHE, there is a specific module on Relationships and Sexuality Education that provides students with the opportunity to learn and think about relationships and sexuality (National Council for Curriculum and Assessment, 2022[95]). Such additions to the curriculum appear to have led to tangible outcomes. For example, between 2002 and 2017, teenage pregnancies in Ireland fell by 64%, and changes made to the sexual health education curriculum were considered to be a factor leading to such decline (Ryan, 2017[96]).

Another example is the Physical and Health Education curriculum in New Zealand, which covers, among other matters, comprehensive relationships and sexuality education as well as mental health education, drug and alcohol education, and safety and violence-prevention education. To implement the Physical and Health Education curriculum, primary and secondary school teachers receive professional development in these areas and are often supported by specialised staff from the Ministry of Education when teaching Physical and Health Education in the classroom. The curriculum is developed and implemented taking into account diversity in the student population (e.g. ethnic diversity, Indigeneity, or gender) (New Zealand Ministry of Education, 2022[97]).

Many students who drop out before graduating suffer from mental health conditions (Freudenberg and Ruglis, 2007[93]). For example, research conducted in Denmark found that the dropout incidence was significantly higher among students with poor mental health (Hjorth et al., 2016[98]). At the same time, research from Canada found that teenagers who struggle with depression are more than twice as likely to drop out of high school in comparison to their peers who do not suffer from mental illness or who have recovered from depression earlier in life (Haynes, 2002[99]; Platzman Weinstock, 2017[100]).

The programme Breaking the Silence: Teaching the Next Generation About Mental Illness in the United States includes teaching packages with lesson plans, games, and stories on serious mental illnesses and was introduced to middle school students in 1999 (Wahl et al., 2011[101]). A study evaluating the impact of the curriculum found that students who were exposed to the programme and learned about

the warning signs of mental illness had improved attitudes towards mental illness and were more willing to interact with individuals with mental illness (Wahl et al., 2011[101]). Introducing programmes that consider mental health in the curriculum can help students with a mental illness feel more understood and accepted by their peers, and it can also help them gain greater self-understanding and acceptance (Haynes, 2002[99]; Wahl et al., 2011[101]). Moreover, it can help them feel less marginalised and isolated at school and potentially reduce the likeliness of them dropping out of education without clear plans for integrating into training or the labour market.

To successfully introduce substance abuse and sexuality education as well as mental health education in curricula and in teaching, teachers need to be appropriately trained and prepared to address the subject. The Teaching and Learning International Survey (TALIS) 2018 report found that, on average across OECD countries, 94% of teachers participated in at least one type of professional development per year (OECD, 2019[102]). However, although training participation is high, more emphasis needs to be placed on training teachers on how to teach diverse classes. The report indicates that among lower secondary teachers across the OECD, the highest levels of training needs are for "teaching students with special needs" (22%), "ICT skills for teaching" (18%), and "teaching in a multicultural or multilingual setting" (15%) (OECD, 2019[102]).

Developing tailored yet flexible curricula

When designing curriculum interventions, it is important to strike the right balance between depth (the amount of focus a certain subject/topic is given) and rigour, with flexibility embedded in the system to ensure that instruction takes into account individuals' learning needs and pace. On the one hand, if curricula are too rigorous, students, especially those of disadvantaged backgrounds, can be at risk of falling behind and dropping out because they lack pre-requisites to be able to keep up with the expected learning progress (OECD, 2020[103]). Mandatory curricula that are not designed with flexibility run the risk of forcing teachers who are not able to cover the intended material in class to assign homework and expect that such material will be covered independently by students at home. This can result in homework overload, which can have an adverse impact, and can also result in increased inequalities as students from socio-economically disadvantaged households may not be able to rely on the support of their parents or guardians if and when they struggle with the material because their parents may be working overtime (OECD, 2020[103]). Furthermore, if homework becomes too complex, students are more likely to become disengaged, especially those that do not have enough support at home (OECD, 2020[103]).

On the other hand, some students may drop out because they are not engaged and do not find the classes interesting. For example, a report released by the Bill and Melinda Gates Foundation in 2006 found that nearly half (47%) of dropouts surveyed said they left school because they were bored and disengaged from school (Bridgeland, DiIulio and Burke Morison, 2006[104]). In the same study, two-thirds of respondents said that they "would have worked harder if more was demanded of them" (Bridgeland, DiIulio and Burke Morison, 2006[104]). Similarly, Tony Wagner, the author of "The Global Achievement Gap," argues that the United States' system of multiple-choice assessments leads to student boredom and ensuing dropouts. He suggests teaching students how to reason and analyse in order to keep them engaged and interested in school.

Another reason why some students drop out of school is because they find the course material irrelevant – they do not see a connection between what they are learning and the skills they will need in the job market. In 2015, America's Promise Alliance and the Center for Promise at Tufts University surveyed nearly 3 000 young people, drawn from all 50 states, of which nearly 2 000 students took at least a semester off of school. Survey responses from those nearly 2 000 students revealed that 20.3% stopped going to school because they believed that "school wasn't relevant to my life" (America's Promise Alliance and its Center for Promise at Tufts University, 2015[105]). If students can see the purpose and relevance of what they are learning in the classroom and how that translates to real-world demands, they are more likely to feel

motivated to learn (OECD, 2020[103]). As discussed in Chapter 3, integrating career education components into different subjects can be one way to raise this sense of purpose and relevance among students.

Given that students are sensitive to the rigour, relevance, and focus of curricula, it is important for countries to give schools the flexibility to design and adapt their curricula to meet the learning needs of their students and to reflect changes in society and the subsequent skills needed, such as digital literacy, financial literacy, literacy for sustainable development. and computational thinking (OECD, 2020[103]; OECD, 2021[106]). In Estonia, for example, each school can design the content of its curriculum based on the national curriculum (International Bureau of Education (IBE-UNESCO), 2007[107]; OECD, 2021[106]). By allowing schools to design their own curricula while factoring in pre-defined guidelines, the schools can take into account the contexts that they are operating in, such as the region they are in, the skills of the teachers, and the demands of both parents and students.

Tailored curricula can go beyond the school level to the group level. In the United States, the School of Life Foundation (SOLF) curriculum was introduced to provide students who are deemed to be at-risk through information on their absenteeism or tardiness, grades, whether they have enough credits to graduate, and behavioural issues (Wayman et al., 2021[108]). The intervention includes two-hour sessions for four weeks, during which the selected students learn basic social and life skills with the goal of developing school connectedness and student motivation. Evaluations of the SOLF programme suggest that students who have participated in this intervention have seen positive results, including higher rates of graduation (Baggaley, 2015[109]; Wayman et al., 2021[108]).

Tailored curricula can also be implemented at the individual level. In Finland, for example, there is the National Core Curriculum, which is mandatory and provides the foundation for local curricula (Finnish National Agency for Education, 2022[110]). However, the syllabi can be personalised and adapted for individual students to allow for grade-independent studies and flexible basic education, which can help reduce dropout rates and prevent exclusion (OECD, 2021[106]). Finland's learner-centred approach, which focuses on students taking responsibility for their own learning, is considered one of the reasons why Finland's secondary school students are among the world's best academic performers (OECD, 2010[111]). Tailoring syllabi to individuals is also a practice in Norway, where both the Education Act and the National Curriculum contain a number of guidelines on how schools can develop individual learning plans (OECD, 2021[106]).

Research has found that personalising educational experiences and encouraging students to develop their interests and talents is important in order to keep them engaged and motivated in their learning and to improve both their educational attainment and performance (Redecker and Punie, 2013[112]; Schleicher, 2018[113]; UNESCO, 2019[114]). Personalising curricula can therefore help address some of the reasons why students drop out, notably because they are unmotivated, find the course material too challenging, or find the subject irrelevant. A 2013 foresight study, which involved a series of structured stakeholder consultations to predict how and what European citizens will learn in 2020-30, found that "future strategies to fight early school leaving include personalizing school education to better meet individual needs and interests" (Redecker and Punie, 2013[112]; UNESCO, 2019[114]).

2.3. Indirect prevention interventions

Several approaches and interventions can be implemented to promote student engagement, motivation, and learning and, therefore, decrease, at least partially, the chances that young people leave school early. These include promoting an inclusive whole school approach, which addresses the needs of all students and promotes active co-operation between the school, parents, and the community. Supporting transitions among school levels is equally important, as it can promote student learning and inclusion at the new educational level. Across educational levels, inclusive teaching is key, as the way students learn and are engaged in the classroom can support their inclusion and learning, especially for at-risk students.

2.3.1. Promoting a whole school approach

According to UNESCO (2022[115]), a whole school approach "involves addressing the needs of learners, staff and the wider community, not only within the curriculum, but across the whole-school and learning environment. It implies collective and collaborative action in and by a school community to improve student learning, behaviour and well-being, and the conditions that support these". Introducing a whole school approach also entails making sure that the academic and broader well-being of all students, including students belonging to diverse student groups, is promoted (Cerna et al., 2021[116]). The approach, therefore, recognises that all aspects of the community have an impact on learning and, as such, involves all parts of the school through partnerships between principals, teachers, school staff, parents, carers, and the wider community (Goldberg et al., 2018[117]; Mentally Healthy School, 2022[118]). Whole school approaches not only target all members of the broader school community, but they also use multiple components of policy and practice to create a positive and protective school environment, teach explicit social and emotional skills, engage parents, and develop targeted interventions for students with special educational needs (Pearce et al., 2022[119]).

The opposite of a whole school approach is a targeted policy that focuses on a specific group or issue. For example, in addressing mental health, a "regular" approach could focus on introducing mental health in the curriculum, training teachers to better understand and recognise the signs of mental health conditions, or providing training to parents. However, these interventions would operate in isolation – there would be no holistic action to tackle mental health. Targeted policies are not necessarily a problem. However, the evidence to date finds "that taking a whole school approach is more likely than individual classroom-based interventions to result in enduring positive change" (Goldberg et al., 2018[117]). In fact, a meta-analysis carried out in order to determine the effectiveness of adopting a whole school approach to enhance social and emotional development found significant but small improvements in participants' social and emotional adjustment, behavioural adjustment, and internalising symptoms (Goldberg et al., 2018[117]). Similarly, a report published by the European Commission indicated that interventions to promote students' mental health and well-being are more likely to be effective if they are organised as part of a systemic, whole school approach (Cefai, Caravita, and Simões, 2021[120]). Fundamentally, whole school interventions targeting social and emotional development tend to have long-term benefits on a range of mental health, social, emotional, and behavioural issues (Poulou, 2007[121]). Adopting a whole school approach to mental health and well-being not only helps decrease mental health problems, substance use, anti-social behaviour, and violence, but it also has positive impacts on students' sense of belonging in school, increases their motivation to do schoolwork, and enhances their academic performance (Cefai, Caravita, and Simões, 2021[120]; Durlak et al., 2011[122]).

In the context of NEET prevention strategies, a whole school approach requires taking a multi-dimensional and cross-sectoral approach and promoting tight co-operation with diverse stakeholders inside and outside of the school environment to ensure that students do not drop out of school early. A whole school approach is particularly important in the case of young people at risk of becoming NEET, as there are many factors that are intertwined, all of which can lead to students dropping out of school. These include mental health issues (Freudenberg and Ruglis, 2007[93]), pregnancies (teenage pregnancy) (Tanton et al., 2021[92]), curricula that are either too difficult or too boring (Bridgeland, Dilulio and Burke Morison, 2006[104]; OECD, 2020[103]), or household factors (Huisman and Smits, 2015[123]). For this reason, the solutions should involve all aspects of school and family life.

Evaluations of whole school interventions have indeed found that they can successfully address risk factors for early school leaving, such as mental health problems and absenteeism. By reducing these risk factors and, therefore, potentially the number of adolescents who leave school early, the interventions can thus boost educational attainment and lower the risk of older teenagers and young adults being NEET.

The whole school approach has been found to have a significant impact on reducing mental health conditions and bullying. For example, in Denmark, the Up intervention uses a whole school approach with

the goal of promoting mental health by strengthening social and emotional competence among school children (Nielsen et al., 2015[124]). Consisting of four components (namely, education and activities for students, development of staff skills, involvement of parents, and initiatives in everyday life at school), the intervention was successful in increasing "high" levels of social and emotional competence from 33% to 41% (Nielsen et al., 2015[124]). At the same time, seven out of ten studies found that a whole school approach decreased bullying across the board (Vreeman and Carroll, 2007[125]; Weare and Nind, 2011[126]).

In addition, the adoption of a whole school approach has been found to improve attendance. Studies have found that children's attendance difficulties are complex and often related to the child, family, and school factors, and, therefore, interventions are most successful when they rely strongly on collaboration between parents, school staff, and other agencies involved (Cunningham, Harvey and Waite, 2022[127]). In fact, findings indicate that family-school-community partnership practices predict an increase in daily attendance, a decrease in chronic absenteeism, or both (Epstein and Sheldon, 2002[128]). Therefore, a whole school approach could ensure that students who are prone to absenteeism attend school. Respondents to a study conducted in England recognised that some attendance difficulties could be related to school factors, such as learning difficulties, social issues, or anxiety about particular aspects of school, and, therefore, interventions are needed to address school-based factors instead of only emphasising the role of parents (Cunningham, Harvey and Waite, 2022[127]). Overall, these findings highlight the need to develop an approach that involves creating a community, making the school and staff accessible, and building relationships with families in order to prevent problems from materialising and also to make it easier to intervene if problems arise (Cunningham, Harvey and Waite, 2022[127]).

Whole school approaches have been adopted in several OECD countries. For example, the Portuguese Priority Intervention Educational Areas Programme (*Territórios Educativos de Intervenção Prioritária*, TEIP) is a programme first implemented in the 1996-97 academic year and currently in its fourth generation of implementation with 146 school clusters involved (about 18% of the total of Portuguese school clusters). The TEIP involves schools located in disadvantaged areas with high levels of poverty and social exclusion. With the support of the Ministry of Education, schools in the programme implement a three-year improvement plan focused on four main intervention areas: (i) improving teaching and learning; (ii) preventing early school leaving, absenteeism, and indiscipline; (iii) school management and organisation; and (iv) promoting the relationship between school, families, and the local community. Regional teams from the Ministry of Education support and monitor the implementation of the programme in schools (OECD, 2022[70]). A paper exploring the impact of the TEIP programme found that it has played an important role in "guaranteeing higher school achievement rates at the end of compulsory schooling (ninth grade)" and in reducing school dropout in Portugal (Dias, 2014[129]).

Similarly, Wales published a new framework in March 2021 that is intended to support schools in their efforts to embed their own whole school approaches (Welsh Government, 2021[130]). The framework recognises that a school alone cannot meet all the needs of young people or teaching staff, so therefore it provides instructions on how to promote collaboration between schools and key partners, such as parents or carers, local authorities, education groups, health and social care providers, as well as the police (Welsh Government, 2021[130]).

In addition, the School Education Gateway, an initiative of the European Commission, recently published the European Toolkit for Schools: Promoting inclusive education and tackling early school leaving, which outlines key intervention areas to prevent early school leaving: (i) school governance; (ii) teachers; (iii) support to learners; (iv) parental involvement; and (v) stakeholder involvement. These areas include systematic, within-school, and outside-of-school features. Along with these areas, the European Toolkit for Schools provides different examples of strategies implemented across European countries that can be effective in preventing early school leaving and student dropout, with evaluations of the projects (School Education Gateway, 2022[131]).

2.3.2. Supporting transitions between educational levels

The transition from primary to secondary school is considered to be one of the most stressful events adolescents experience (Chung, Elias and Schneider, 1998[132]; Coelho and Romaõ, 2016[133]; Zeedyk et al., 2003[134]). Children and adolescents often worry about finding their place in a new school setting, making friends, getting bullied, and coping with an increased workload. All of these factors can negatively affect their psychological well-being and academic achievement when transitioning to another educational level (Akos, Rose and Orthner, 2014[135]; Evans, Borriello and Field, 2018[136]; Zeedyk et al., 2003[134]). Adjustment to secondary education is often measured by assessing children's academic, emotional, and social adaptation (Duchesne, Ratelle and Roy, 2011[137]; Hall and DiPerna, 2017[138]). These three components tend to be interdependent, meaning that a deterioration in peer relationships is often associated with a decline in mental health, which, in turn, can result in lower academic performance. However, a causal relationship between these variables has not been established yet (Evans, Borriello and Field, 2018[136]; Mundy et al., 2017[139]; Rahman et al., 2018[140]; Reijntjes et al., 2010[141]).

Socio-economically disadvantaged students appear to be at higher risk of poor transitions between educational levels, mainly because they are less likely to receive the external support (e.g. at home, in school, or in the neighbourhood) they need. Moreover, as they often do not receive the same level of external support after transitioning (e.g. because classes become bigger, the student-teacher relationships become more anonymous, and family members might find it more difficult to help with school work), they are more likely to encounter problems when transitioning and stagnate in their academic progress (Cook, Shaw and Morris, 2020[142]; Evangelou et al., 2008[143]; Kim et al., 2014[144]). These socio-economic inequalities in educational attainment even seem to widen within the first three years of secondary school (Caro, McDonald and Willms, 2009[145]; Cook, Shaw and Morris, 2020[142]). Reasons for this increase in inequality include the disruption caused by the transition, a potentially negative influence of peer groups, or different learning environments at home but also because once fallen behind and missing the basics, the educational attainment gap is likely to rise over time (Cook, Shaw and Morris, 2020[142]). Moreover, data from the Millennium Cohort Study suggests that disadvantaged students tend to be less confident in their academic abilities, are less likely to receive support at home, and are more likely to have peers who are less hard-working (Cook, Shaw and Morris, 2020[142]; University of London, 2020[146]; University of London, 2020[147]; University of London, 2020[148]). Similarly, these gaps tend to either appear when transitioning to secondary education or widen within the first years after transitioning (Cook, Shaw and Morris, 2020[142]).

Helping students transition as smoothly as possible not only pays off for their well-being and learning success but can have longer-term impacts on their educational attainment and, as a result, their risk of being NEET as an older teenager or young adult. Students who fall behind academically or do not feel like they belong at their new school may be more likely to drop out of school several years down the line. This, in turn, lowers their chances of returning to education and of finding a stable job.

Questionnaires to measure students' adjustment

Whether students have successfully transitioned to the next educational level can usually be seen in how well they are academically and behaviourally involved in school and whether they feel a sense of belonging. One way to measure students' adjustment is the use of questionnaires. For instance, within the School Transition and Adjustment Research Study (STARS) based at the University College London (UCL) and Cardiff University, a Secondary Transition Adjustment Research Tool (START) questionnaire has been developed to predict how well students will settle into secondary school (Rice et al., 2015[149]). START is a four-item questionnaire designed for primary school teachers, which asks them how well they expect their students to adjust: i) academically, ii) socially (with peers), iii) socially (with teachers), and iv) to the new routine. In addition, primary school intervention questionnaires tailored to parents', students', and teachers' perspectives have been developed to assess the efficiency of interventions aimed at supporting all

students, including students with special educational needs. In order to evaluate commonly reported concerns about secondary school, STARS has designed a school concerns questionnaire for pupils, which has also been used by researchers in Australia and the United Kingdom (University College London, 2022[150]). The study has shown that the START questionnaire has been particularly helpful in predicting both students' adjustment in terms of academic and behavioural involvement in school as well as their sense of belonging while questioning parents has been valuable in estimating their children's sense of belonging to school (Rice et al., 2015[149]). All questionnaires, as well as transition support booklets for students, parents, and teachers, can be downloaded from the UCL website (University College London, 2022[150]).

Interventions to support a smooth transition

Different intervention programmes have been developed to smooth the primary-to-secondary school transition. Box 2.4 describes two examples in greater detail. While some of these interventions target students who are at the end of primary school, others focus on supporting them once they start secondary school or try to create a stronger link between primary and secondary schools. For instance, the implementation of "bridging units" between primary and secondary schools can uphold continuity between school levels and is associated with lowering children's school anxiety (Cook, Shaw and Morris, 2020[142]; Neal et al., 2016[151]; Rice et al., 2015[149]). Bridging units are usually projects or topics that start at the end of primary school and are continued in secondary school. They can also entail group projects with future classmates. Another strategy that allows primary school students to familiarise themselves with the language used in early secondary school work is the organisation of cross-phase visits or observations that also enable primary and secondary school teachers to exchange ideas on how to create a smoother transition for their students (Cook, Shaw and Morris, 2020[142]).

Box 2.4. Intervention examples in OECD countries

United States: School Transitional Environment Program

In the United States, the School Transitional Environment Program (STEP) has been created to support the transition from primary to lower secondary school by intervening in three areas: i) easing the adaption to complex and large school settings, ii) providing access to emotional and academic support and guidance from teachers and peers, and iii) promoting students' sense of belonging at school (Felner et al., 1993[152]). These areas cover within-school, outside-of-school, and systematic intervention features and include emotional counselling and academic guidance to students.

A key component of STEP is learning groups of various sizes that provide continuity in the learning environment and promote a sense of belonging. Learning groups of between 65 to 100 students are located in classrooms next to each other. Students remain together in the same learning groups to attend some core classes, including Mathematics and English, to avoid constantly changing classmates. STEP sub-groups of 20 to 30 students are assigned a homeroom teacher who takes on the roles of the students' teacher, counsellor and administrator. Homeroom teachers help students with their class selection and are available to discuss any personal problems the students may have. In addition, they act as the primary connection between parents and the school by explaining to their students' families how STEP works, following up with them on their children's absences, and generally promoting communication between their students' families and the school. STEP homeroom teachers regularly meet with other homeroom teachers and school guidance staff to exchange their experiences and discuss any concerns they might have (Felner et al., 1993[152]).

While STEP has originally targeted at-risk students from lower socio-economic statuses, it has since expanded to include at-risk students from all levels of socio-economic status. The evaluation of the

programme showed that the student dropout rate was halved compared to the control group and that teacher satisfaction and well-being increased significantly among participants in the programme (Felner et al., 1993[152]).

Italy, Portugal, and Spain: DREAMS – Fostering Diversity in Primary to Secondary School Transition to Prevent Early School Leaving

DREAMS, a project co-funded by the European Commission and implemented in Italy, Portugal, and Spain, aims at fostering diversity and inclusion in the primary-to-secondary school transition to prevent early school leaving. By putting a special emphasis on cultural diversity, gender, and minority groups and focusing on bullying, discrimination, and any type of violence, DREAMS wants to explore students' and the school communities' needs in relation to transition. Within the project, a new methodology based on Process Work and Theatre of the Oppressed[8] has been created, in which transitions are seen as opportunities to develop one's skills and in which diversity is understood as an asset in acquiring these skills (DREAMS, 2020[153]).

Through different activities (which include transnational partner meetings, staff and teacher training for them to learn the newly developed DREAMS methodology, pilot workshops at primary schools to try and evaluate the DREAMS methodology and further disseminate the resources, local open orientation fora as well as a conference to present project results, and continuous project quality and impact evaluations), the project is aimed at supporting students, their families, teachers, and the school community in ensuring a smooth primary-to-secondary school transition (DREAMS, 2020[153]). On the DREAMS website, one can access their Smooth Transition Toolkit, which includes different output products, such as several videos, a handbook for teachers and counsellors, a family booklet, a best practice report, and an online course for teachers, school staff, and educators (DREAMS, 2020[154]).

2.3.3. Inclusive teaching environments

The classroom environment is becoming increasingly diverse and heterogeneous (Brussino, 2021[155]; Forghani-Arani, Cerna and Bannon, 2019[156]). Developing an inclusive teaching environment is therefore critical to promoting equitable and inclusive learning opportunities by aligning education and school systems with students' needs. While the concept of inclusive education has traditionally been applied to promote the mainstreaming of students with special education needs, its understanding has gradually expanded to include other student groups, such as students with an immigrant background or ethnic groups, national minorities, and First Nations peoples (Brussino, 2020[71]). Inclusive teaching environments depend on how teaching is developed and carried out but also on building capacity of a diverse pool of teachers equipped with knowledge and skills to implement inclusive teaching.

Promoting inclusive teaching can help support the academic and broader well-being of all students, including at-risk students, and decrease the chances that students will leave school early and become NEET. Inclusive teaching can be conceptualised as the engagement of all students in learning through three key elements, which largely contribute to promoting or hampering diversity and inclusion in the classroom. These comprise the curriculum (what is taught), pedagogy (how it is taught), and assessment (how student learning is monitored). Inclusive pedagogies are important, as the way in which students are taught affects what and how students learn (Brussino, 2021[155]).

Teachers play a fundamental role in this by designing and implementing inclusive teaching practices that adequately meet diverse student needs and learning styles. Empirical evidence suggests that teacher-student congruence (e.g. shared belonging to ethnic groups and national minorities) is associated with higher academic performance as well as lower student absences, suspensions, and early dropouts (Brussino, 2021[155]). Yet, TALIS data from 2018 reveals that Australian classrooms are more diverse than the OECD average – they have "more students with special needs and migrant backgrounds, and more

non-native speakers and refugees than the OECD average" (Australian Council for Educational Research, 2019[157]) Therefore, designing and implementing policies and practices to build teacher capacity for diversity and inclusion is important. Attracting and retaining diverse teachers is one key area to counteract the misalignment of diversity among teachers as well as students in initial teacher education and training (ITET) (European Commission, 2016[158]). More diversity in the teaching profession can be promoted through awareness-raising campaigns of the profession, supportive environments for student teachers from minority backgrounds, or financial incentives. Furthermore, it is essential to prepare prospective teachers for inclusive teaching, for instance, by making diversity and inclusion central objectives within the ITET and embedding diversity and inclusion as competences in the ITET and part of the curriculum. Learning does not stop when teachers qualify for classroom teaching. Instead, teacher development should be acknowledged as a lifelong learning process through continuous on-the-job learning to adapt to the changing needs of students and schools.

There exist various programmes across OECD countries that serve as examples on how teacher capacity for diversity and inclusion can be fostered across the different key areas. In the following, examples on attracting diverse teachers (Box 2.5) and examples on preparing teachers for inclusive teaching and teacher development (Box 2.6) are provided.

Box 2.5. Case study: Building teacher capacity for diversity and inclusion in Germany

Attracting diverse teachers

Awareness-raising campaigns in Germany seek to attract teachers from diverse backgrounds (e.g. immigrant background). The aim is to attract a more diverse teaching workforce, which is seen as an important prerequisite for promoting diversity and inclusion among teachers and overcoming the widespread under-representation of diverse groups.

In 2008, the nationwide campaign, implemented in collaboration with local universities, "Campus for pupils – More immigrants become teachers (*Mehr Migranten werden Lehrer*)" provided information to upper secondary students having a migrant background on the teacher training programme and opportunities of the profession. The first campus for pupils was initiated in 2008 in Hamburg, one of the German states (*Länder*), and the last one in March 2015. During the existence of the programme, courses were organised in ten of the 16 German states, reaching more than 770 upper secondary students, of which many have enrolled in an initial teacher education and training programme.

As part of the campaign, a four-day workshop was organised to foster the exchange between students and educators, trainee teachers, student teachers, and teachers with a migration background. The workshop included, among others, individual and group activities as well as practical work experience in schools and information on the formal requirements needed to access study programmes or the expected salary. This allowed upper secondary students to explore the opportunities and requirements for becoming a teacher to make an informed career decision.

Source: European Commission (2016[158]), *Study on the Diversity within the Teaching Profession with Particular Focus on Migrant and/or Minority Background*, https://data.europa.eu/doi/10.2766/873440.

Box 2.6. Preparing prospective teachers for inclusive teaching

Embedding of diversity and inclusion competences in initial teacher education in Sweden

Sweden offers courses that prepare prospective teachers for teaching and learning in multicultural school environments. Malmö University, for example, offers the course Learning and Teaching in Multicultural Schools, which seeks to prepare student teachers for their professional task of teaching within the context of diversity in pre-schools and schools and is part of the teacher training programme. The course provides prospective teachers with strategies and methods for teaching and learning in multi-ethnic and multilingual settings, language and concept development, such as second language acquisition, and reflecting on teaching and learning with regard to the perspectives of ethnicity, gender, and social class. The course combines theoretical studies with practical learning experiences in school (Malmö University, n.d.[159]; Malmö University, n.d.[160]).

Sensitisation of pedagogy students for dealing with different students in Switzerland and Catalonia (Spain)

Nightingale is a mentoring project which aims to contribute to the integration of student mentees, for instance, of disadvantaged or under-represented groups, and provide social insights to mentors. It also fosters cross-cultural understanding and intercultural learning (Leutwyler, Meierhans and Aegerter, 2014[161]; The Nightingale Mentoring Network, n.d.[162]). It was established in 1997 at the University of Malmö, Sweden, but has expanded nationally and internationally. The University of Teacher Education in Zug, Switzerland, implements the Nightingale mentoring project as part of its teacher training. Prospective teachers are paired with 8- to 12-year-old children, most of them having an immigrant background. Mentors and mentees informally meet over a period of nine months, between two to three hours per week (Leutwyler, Aegerter and Meierhans, 2014[163]). Qualitative evidence of the Nightingale project implemented by the University of Teacher Education in Zug, Switzerland, stresses that the unique one-on-one setting is helpful in providing prospective teachers insights into the mentees' and their families' social and cultural contexts (Leutwyler, Meierhans and Aegerter, 2014[161]). The evaluation of a similar Nightingale mentoring project implemented in Catalonia, Spain, provides quantitative evidence of higher educational aspirations and expectations of mentees compared to students with a similar profile who did not participate in the mentoring project. In Catalonia, mentees between 10 and 16 years-old and of foreign origin as well as students from various universities participated in the Nightingale project with three-hour weekly meetings over a period of nine months. While in the Nightingale programme in Zug mentors were exclusively students in teacher training, this was not the case for mentors in Catalonia (Feu Gelis, 2015[164]).

Mentoring programmes for teachers in New Zealand

A comprehensive induction and mentoring programme is an essential part of New Zealand's teacher education to accelerate the learning and expertise of newly qualified teachers (Forghani-Arani, Cerna and Bannon, 2019[156]). The Guidelines for Induction and Mentoring and Mentor Teachers provided by the Education Council were developed to provide nationally consistent, high-quality, and comprehensive support to provisionally certificated early-stage career teachers in the first few years of practice. The guidelines also take into account guidelines for new teachers in supporting Māori students (Education Council, 2015[165]). Induction refers to all support and guidance provided to newly graduated teachers and comprises ongoing professional development and support, access to external professional networks, as well as evaluations of professional practice. The programme provides the opportunity for new teachers to receive formative and progressive feedback on their professional learning. The focus of the mentoring is educative based on a relationship of trust and collegiality, building on mentors being able to work comfortably and supportively in a co-constructive relationship with the mentee.

Key policy lessons on education interventions

Educational interventions can help lower the chances of young people becoming NEET by strengthening their skills, improving their attitudes towards school and learning, and lowering the chances they will leave school early and without viable pathways to enter employment or training. Educational interventions can cover a wide range of areas, including system-wide interventions, school-level interventions, and co-ordination between school and non-school actions.

Educational interventions can be universal and targeted to support and incentivise the participation in school of young people who are at an especially high risk of leaving education early or of having a difficult transition into the labour market or training. Direct prevention interventions include early warning systems, the provision of additional support for at-risk students, and curriculum interventions. Indirect prevention interventions include promoting a whole school approach, facilitating the transition between different educational levels, and inclusive teaching.

Direct empirical evidence on the impact that different types of educational interventions have on the likelihood of individual students becoming NEET in their late teens or mid-twenties is relatively limited. However, indirect evidence shows positive associations between such interventions and the channels through which they could impact either the likelihood of staying in school until obtaining an upper secondary degree or of effectively transitioning into employment and/or training. This suggests that these interventions can have a long-term preventative effect against being NEET through educational and non-educational pathways.

Ensure that students finalise their education pathway. School completion is comparatively high in Australia, but nonetheless, in 2017, the share of early leavers from education ranged from 6% to 16% of the 18 to 24 age group across Australian States and Territories. Supporting students to finish their education pathway is critical for ensuring a smooth transition from school to work and to reduce the share of students who are neither employed, nor in education or training. Monitoring and identifying students at risk of dropping out early from the education system and providing relevant support are important components to ensure that students reach academic milestones. In Australia, the state of Victoria introduced the “Student Mapping Tool” which helps teachers identify students at risk of dropping out, choose the appropriate intervention and programmes for the student, and then monitor their progress. Other Australian States and Territories could consider introducing similar monitoring tools.

Provide additional support to at-risk students. Taking into account various dimensions of students’ diversity, including their socio-economic and identity characteristics and special education needs, is important to ensure that no one falls behind on key academic milestones and drops out. Interventions should be put in place by taking into account increasingly diverse and heterogeneous classrooms by for instance providing inclusive education curricula, such was the case with the introduction of First Nations peoples Histories and Cultures as a cross-curriculum priority or by providing the necessary technological assistance. The new National Agreement on Closing the Gap is a key opportunity for stakeholders to work together to overcome the inequality experienced by First Nations peoples by putting forward new policies to provide support to First Nations peoples students.

Support teachers to create an inclusive learning environment. Teachers are a fundamental element of creating inclusive teaching environments that adequately meet diverse student needs and learning styles. Building teacher capacity for diversity and inclusion is key: attracting diverse teachers can be very helpful but needs to be accompanied by a general policy of fostering, preparing, and supporting teachers to develop diversity and inclusion competences. Efforts have been undertaken in Australia to enhance teacher quality, for example with the High Achieving Teachers Programme. However, more

emphasis could be placed on training teachers to teach diverse classes. For example, as part of the new National Agreement on Closing the Gap, States and Territories could be encouraged to develop formal programmes where teachers learn from Aboriginal Leaders about Aboriginal history and culture, thereby becoming more culturally sensitive in their teaching and improving the school experience of Aboriginal children.

Use questionnaires to predict who will struggle with the primary-to-secondary school transition. The transition from primary to secondary school is considered to be one of the most stressful experiences young adolescents have to go through. Whether students have successfully transitioned to the next educational level can usually be seen in how well they are academically and behaviourally involved in school and whether they feel a sense of belonging. One way to predict students' adjustment is the use of questionnaires tailored to primary school teachers, such as the Secondary Transition Adjustment Research Tool (START) questionnaire.

Support a smooth primary-to-secondary school transition. Interventions that are aimed at supporting students when they transition to the next educational level can target students who are at the end of primary school, focus on supporting them once they start secondary school, or try to create a stronger link between primary and secondary schools. For instance, the implementation of "bridging units" or the organisation of cross-phase visits or observations allow primary students to familiarise themselves with early secondary school work and potentially meet their future classmates, both of which are associated with lowering children's school anxiety.

Use "partnership brokers" to foster stronger partnerships among stakeholders and to support smooth transitions. Strong partnerships between education and training providers, business and industry, parents and families, and community groups are important to foster a strategic, whole-of-community approach to support young people's learning, development, and transition across grades and into the workforce. The Australian Government's School, Business and Community Partnership Brokers Program (2010-14) was one such programme that aimed to improve education and transition outcomes for all young people by using a national network of providers to broker sustainable partnerships between various stakeholders. Due to lack of funding, the programme was discontinued. However, with renewed political interest, such a programme could be reintroduced to enhance the whole school approach and support a smooth primary-to-secondary school transition.

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Notes

[1] In 2020, the Council of Australian Governments (COAG) was replaced by the National Cabinet and the National Federation Reform Council (NFRC) (The Australian Curriculum, Assessment and Reporting Authority, 2020[16])

[2] Note: financial support for young people undertaking full-time study is available via Youth Allowance (Student or Apprentice).

[3] Koorie is the name for Aboriginal Australians that come from the region of southern New South Wales and Victoria.

[4] Upper secondary first-time graduation rates of people younger than 25 years. A first-time graduate at a given level of education is a person who, during the reference school or academic year, successfully completed an education programme at the given level for the first time. First-time graduates only include those who have never graduated from programmes at the same ISCED level before. The number of first-time graduates is in general smaller than the total of all graduates in the reference year. First-time graduates normally graduate from the first degree or qualification level in the national degree structure. In

some countries, however, students may also graduate for the first time from second or further degrees (OECD, 2021[44])

[5] Referring to the age group 25-29.

[6] Referring to the age group 25-34.

[7] Policy interventions and the literature use various synonyms to refer to individual education plans, among these are the inclusive education plans, individual study plans, and individualised education programs.

[8] "Process work is a method which facilitates the transformation and growth of individuals and groups based on a deep understanding of diversity. It is used to redistribute power in groups, address conflict as an opportunity, challenge the hopelessness of achieving change, improve group processes, and transform conflict into spaces for reflection and action. (…) Forum Theatre is a basic tool within the Theatre of the Oppressed methodology. It seeks the staging of conflicts, so that the audience can propose alternatives and try them out on stage in order to rehearse real life situations. It provides a safe and participatory space for reflection and action with inclusion of all voices where diversity is a basic key for creation and searching for alternatives." (DREAMS, 2020[153])

3 Pre-employment interventions

This chapter provides an overview of pre-employment policies and interventions targeted at adolescent students. It discusses the potential impact of mid-teens participating in pre-employment interventions (like career education, career counselling and guidance, and employer engagement activities) on the likelihood that they will later experience periods of being not in employment, education or training (NEET). For each of the pre-employment policy areas, the chapter briefly outlines the availability of interventions in Australia, the existing empirical evidence on the link to NEET status, and illustrative examples from OECD countries.

Adolescents aged 12 to 16 are still in school and hopefully will remain there for a few additional years. Nevertheless, getting them to think about their career interests can be potentially beneficial for a number of reasons. First, once they reach upper secondary school, they have the opportunity to specialise, meaning that it would be desirable if students had a general idea of the career paths that might interest them. Second, even when comparing students that have similar school or standardised test performance results in their mid-teens, students who have more ambitious career aspirations are more likely to fulfil these later in life (OECD, 2018[1]; Schoon, 2001[2]; Sikora and Saha, 2011[3]). Being able to name a job expected at age 30 and having those plans align with their educational plans are likewise associated with positive later employment outcomes (Covacevich et al., 2021[4]; Thomson and Hillmann, 2019[5]). Helping students set realistic yet ambitious goals can therefore have real-life impacts, in particular for disadvantaged students whose goals are often not as ambitious as their academic potential (as measured through standardised tests) suggest they could be. Given that the range of possible occupations is expanding while the occupations teenagers state they are interested in are narrowing in some OECD countries (Mann et al., 2020[6]), and that around a quarter of students both in Australia and across the OECD are expected to work in occupations projected to decline (OECD, 2021[7]), pre-employment interventions that make students more familiar with different jobs and that can allow them to connect how they perform at school to later education and job opportunities appear warranted. Third, students with a more clearly defined idea about their later goals may be more engaged at school than others (Chung et al., 2022[8]), positively affecting their school performance and reducing the risk of dropout.

This chapter provides an overview of policies concerning three types of pre-employment interventions: career education, career counselling and guidance, and employer engagement. Moreover, it discusses how pre-employment interventions can be embedded in the wider community and strengthen social inclusion along with improving education- and work-related outcomes. Paid employment, in the form of part-time or summer work, can be another way for young people to gain first experiences with the world of work. Since finding a part-time job is a personal or family decision rather than driven by any official policy other than relevant child labour protection laws and tax rules, the evidence on the link between paid employment while being a young student and the likelihood of being not in employment, education or training (NEET) later on is discussed in Box 3.1.

Box 3.1. The link between paid employment in younger teens and later NEET outcomes

In Australia, about half of 15-year-old students work outside of school hours to earn money. This is considerably higher than the average across OECD countries, where about four in ten 15-year-olds work outside of school hours to earn money.

The impact of a part-time job during the school year or working during the summer vacation on the probability of becoming NEET could arguably be positive or negative, but empirical evidence suggests that work experience lowers the NEET risk. On the one hand, if paid work distracts students from their schoolwork, they may do worse at school and in the worst case do not complete their upper secondary and therefore be more likely to not continue post-secondary education. On the other hand, part-time jobs may allow students to learn more about the world of work and, most importantly, about what type of work they enjoy, or, equally importantly, do not enjoy. This experience could ease students' entry into the full-time labour market and increase their motivation to seek out appropriate educational options. An added confounding difficulty in evaluating the impact of paid employment is that students who work part-time or over the summer may have different characteristics than those who do not. In many countries, students from more disadvantaged educational backgrounds are more likely to work part-time, but in other countries such as Scotland, this is not true. In the Scottish case, there was also no difference in terms of the academic performance of working and non-working students.

Turning to the empirical evidence, Mann, Denis and Percy (2020[9]) find a largely positive association between having paid employment while at school and later-in-life employment outcomes in 14 out of the 17 studies with available data. Four studies on Australia from the late 1990s to the early 2010s found a positive association between working while at school and employment in the late teens to early twenties. Similarly, two studies on the United Kingdom found an association between teenage employment and lower later NEET rates; with up a halving of the NEET rate among 16-18 year-olds who worked prior to age 16 compared to those who did not.

Note: The evidence presented in this box is based on the Mann, Denis and Percy working paper.
Source: Mann, Denis and Percy (2020[9]), "Career Ready? How Schools can better prepare young people for working life in the era of COVID-19", https://doi.org/10.1787/e1503534-en.

3.1. Career education

For the purposes of this report, career education is defined to encompass classroom activities or programmes adopted by schools or teachers that are intended to prepare students for their entry into the labour market. For younger students in particular, it may simply involve teachers talking about the real-world application of certain parts of a lesson. They can also take the form of career-planning courses for students, the development of practical job-seeking skills, specific in-class activities such as career simulations or field trips to workplaces, or internships. Career education can occur in stand-alone courses or be integrated into other subjects. Career education and career counselling, which is discussed in the following section 3.2, are intimately linked. While career education allows students to discover different career options and explore their interests, career counselling through group or one-on-one sessions offers more individualised advice and guidance. School-based career counsellors can provide both general career education as well as career guidance. Career education often leverages contacts with employers and people in work, as discussed in section 3.3.

3.1.1. Career education in Australia and across the OECD

The current national career education strategy in Australia, Future Ready, was developed in 2019 and builds upon the 2013 National Career Development Strategy. It is aimed at building student's career orientation skills through a variety of measures. These include providing training to teachers and school leadership on career education; providing input to parents on how they can shape conversations about career options with their children; and strengthening school-employer interactions. The strategy sets very broad objectives for state governments, schools and employers to support high quality career education for school students, but schools decide on their own strategies (DESE, 2019[10]). The strategy is intended to complement the Australian curriculum. On the website of the Australian Curriculum, Assessment and Reporting Authority (Australian Curriculum, n.d.[11]), schools can access illustrations of good practices on career education. The National Career Institute's Blueprint for Career Development moreover provides a framework for developing and implementation career development activities for people of all ages, starting with young children (National Careers Institute, n.d.[12]).

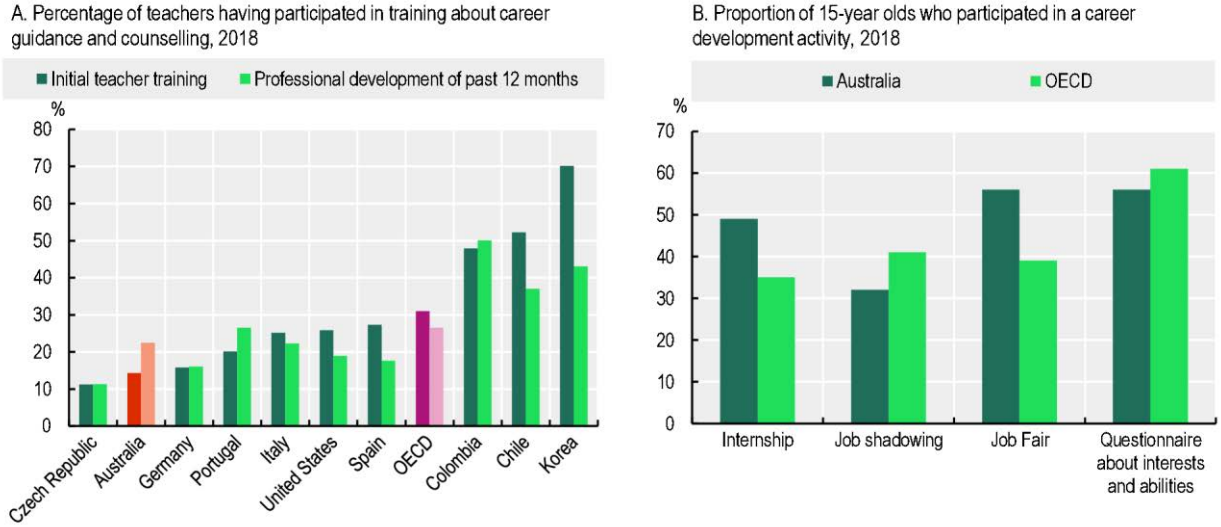
The national strategy is complemented by strategies and interventions at the state and local level. As explained in more detail in Chapter 2, States and Territories are responsible for providing schooling, and accordingly also for their curriculum (in line with national curriculum standards). A recent article by Groves et al. (2021[13]) notes that the framework for career education in Australia is "fragmented and ineffectual". Moreover, even within the same state, there can be wide variations in the time devoted to career education. For example, an analysis of career education in Victoria found that the range of hours of career education per student and year ranged from less than one to 12 hours, with the median at two hours. Moreover, the

evaluation found that more than 80% of career education hours are directed at students in year 10 and up, leaving less than 20% for the younger age group (dandolopartners, 2017[14]). Overall, access to career information can vary by the socio-economic composition of the student body and the background of individual students in Australia (Groves et al., 2021[13]; NCSEHE, n.d.[15]).

Little is known about how frequently teachers integrate career education organically into regular lessons rather than into lessons exclusively devoted to career education. The Programme for International Student Assessment (PISA) survey does not directly question participating students or teachers about this, but it does ask teachers whether their initial or continuous teacher training covered career guidance and counselling as a topic. In 2018, around one in seven teachers in Australia had received any training in student career guidance during their initial teacher training, the second lowest share among the ten countries with available data (Figure 3.1, Panel A). A higher proportion of teachers had received training on the topic in the course of the prior 12 months' professional development activities, but the share remains below the OECD average and well below the share in Chile, Colombia and Korea (see also Musset and Mytna Kurekova (2018[16]) on similar results for 2015).

Students, on the other hand, participate more frequently in several career development activities in Australia than on average in the 18 OECD countries that participated in the 2018 PISA survey. In particular, a higher share of students in Australia than the OECD average had completed an internship or attended a job fair. However, slightly fewer Australian students than overall OECD students had had the opportunity to shadow someone on their job/visit a workplace, or to fill out a questionnaire about their interests and abilities (Figure 3.1, Panel B). A few national data sources, some of which are now quite outdated, contained questions about whether students had talked to teachers about their career plans or future. In Australia, 59% said yes ("about their career plans"), compared to 36% in Canada ("to get information about work they may be interested in") and 64% in the United Kingdom ("an individual conversation regarding their future") (Covacevich et al., 2021[17]).

Figure 3.1. Despite relatively few teachers in Australia having received training in career guidance, an above-average share of Australian students have participated in career development activities



Note: Panel A: The OECD average refers to the ten OECD countries in which the questions on teacher training on career guidance and counselling were administered. Panel B: The OECD average refers to the 18 OECD countries that participated in the 2018 PISA survey.
Source: Mann, Denis and Percy (2020[9]), "Career ready? How schools can better prepare young people for working life in the era of COVID-19", https://doi.org/10.1787/e1503534-en, and the OECD PISA 2018 Database, https://www.oecd.org/pisa/data/2018database/.

3.1.2. Existing evidence on the impact of career education on NEET outcomes

Historically, the evidence on the impact of career education on later NEET outcomes has been scarce. Reviewing international literature, (Hughes et al., 2016[18]; Mann, Denis and Percy, 2020[9]) highlighted the lack of experimental and quasi-experimental data in the field. In the context of the OECD Career Readiness project, which seeks to provide evidence-based advice to governments, schools and other stakeholders on how to prepare young people for the transition to the labour market, OECD education specialists carried out a review on the impact of career education and guidance activities on education and employment outcomes. In particular, they reviewed longitudinal datasets in ten countries, including Australia. Such datasets typically ask students around age 15 to confirm whether they had participated in a range of different career development activities. Commonly, ten years later, the studies return to the same young people and collect data about their economic status, earnings (if in work) and levels of job satisfaction. Table 3.1 provides an overview of the evidence of the impact of career education activities on NEET status during the later teenage or mid-twenties years. Some found that participation in these activities was associated with lower NEET prevalence, while others found no statistically significant impacts. In most cases, the reductions in the likelihood were relatively modest. The identified studies did not disaggregate the impacts for different groups of students, and thus do not provide evidence on how the policies affect young people at higher risk of marginalisation more particularly.

Table 3.1. Selected studies on the association of career education and later NEET outcomes

Intervention and country	Study	Evaluation methodology	Evaluation outcomes
Teachers talking to students about future studies *United Kingdom*	Mann, Kashefpakdel and Rehilll (2017[19]), *Indicators of successful transition: Teenage attitudes and experiences related to the world of work*	Quantitative longitudinal: Logistic regression of NEET status at age 19-20 on interactions with teachers and control variables including socio-economic background, academic ability, learning environment and demographic characteristics; based on the Longitudinal Study of young People in England for the 1989-90 cohort (13-14 in 2004; 19-20 in 2009)	Teenagers who had talked to a teacher about their future studies at least once inside/outside of lessons were 24% and 13% less likely, respectively, to be NEET at age 19-20 than comparable peers.
Talking to a teacher about their future/work they might be interested in *Canada, the United Kingdom*	Covacevich et al. (2021[17]), "Indicators of teenage career readiness: An analysis of longitudinal data from eight countries"	Quantitative longitudinal: Logistic regression of NEET status at age 25/26 on indicator of whether student had talked to a teacher by age 15 and control variables including gender, socio-economic status and academic performance.	Teenagers who had talked to a teacher about work they might be interested in were 3 percentage points less likely to be NEET at age 25-26 than comparable young people in Canada. In the United Kingdom no statistically significant association was found.
Students participating in career education class *Canada, Germany, the United Kingdom, Uruguay*	Covacevich et al. (2021[17]), "Indicators of teenage career readiness: An analysis of longitudinal data from eight countries"	Quantitative longitudinal: Logistic regression of NEET status at age 25/26 on indicator of whether student had participated in a career education class by age 15 and control variables including gender, socio-economic status and academic performance.	In Canada, students who participated in a career education class were 3 percentage points less likely to be NEET a decade later. In Germany, the United Kingdom and Uruguay, no statistically significant association was found.

Intervention and country	Study	Evaluation methodology	Evaluation outcomes
Filling out a skills and interest questionnaire *Canada, Germany*	Covacevich et al. (2021[17]), "Indicators of teenage career readiness: An analysis of longitudinal data from eight countries"	See above	Teenagers who filled out a questionnaire by age 15 were 4 percentage points less likely to be NEET at age 25 in Canada. No significant association in Germany.

Source: Based on Covacevich et al. (2021[17]), "Indicators of teenage career readiness: An analysis of longitudinal data from eight countries", https://doi.org/10.1787/cec854f8-en.

3.1.3. Data and methodological difficulties contribute to a paucity of empirical evidence on the impacts of career education.

First, there are relatively few data sources that contain information about whether an individual had benefitted from career education during their early teenage years and about their educational enrolment and employment status at a later point in time. This means that the impact of career education policies on NEET outcomes can only be studied for a few countries and periods. Even in situations where longitudinal data are available, the NEET status itself may not always be confirmed, leading to difficulties in estimating a causal impact. For example, a recent study of the impact of English schools fulfilling the Gatsby Benchmarks of good career guidance (which include activities such as providing access to information, employer engagement and personal career counselling) on outcomes after leaving year 11 found a positive impact on students leaving into a sustained destination in employment, education or training. However, the contrary – that fulfilment of the benchmarks was associated with reduced NEET rates – could not be proven, possibly because some students' destinations could not be traced (Percy and Tanner, 2021[20]).

Second, even for countries in which such data sources are available, they suffer from a number of inherent shortcomings. In particular, the data sources – which often rely on the PISA study for the initial measurement of career education activities – do little to measure quality and intensity of these activities. Career education activities that are integrated into regular classes are unlikely to be captured by any of the available variables. Career development programmes delivered by schools assume a cumulative benefit for students. Data analysis has to date only been able to focus on statistical relationships between participation in individual career development activities or attitudes as recorded by participants and later employment outcomes. The data are also inevitably old, meaning that evidence on any new career education activities is not available. Finally, it is also rarely known whether a student was required to undertake the career education activity, volunteered to participate or was selected to participate, meaning that here can be a selection bias: more motivated students may be more likely to participate in a voluntary activity, leading to an over-estimation of the association between participation in career education and reductions in the likelihood of becoming NEET. In contrast, if students were selected into the activity for example because of poor grades, the association between participation and later NEET status could be under-estimated. The studies mentioned in Table 3.1 aimed to account for factors which might distort findings by controlling statistically for characteristics which are most confidently associated with post-secondary employment and education outcomes, notably academic achievement, gender and social background. Nevertheless, these adjustments cannot overcome all of the inherent weaknesses. Given these difficulties, the lack of clear empirical proof that career education is beneficial to later NEET outcomes does not negate its potential usefulness. In particular, certain studies provide indirect evidence that suggest mechanisms through which career education may affect future employment and education outcomes:

- *Prevent students from eliminating pathways prematurely:* Early career education can ensure that young students do not eliminate certain options prematurely, for example because they believe the occupation to "belong" to the other gender (Hughes et al., 2016[18]; Kashefpakdel, Rehill and Hughes, 2018[21]). In an evaluation of the Career-Related Learning Pathfinder pilot programme that sought to strengthen career education in selected English primary schools in deprived areas,

students, and particularly boys, saw stronger reductions in stereotypical thinking about suitable careers for men and women than students in comparison schools (Wade et al., 2010[22]). This could theoretically lead to a better fit between the educational choices of young people and their interests and skills.

- *Improve educational outcomes:* In the context of a randomised controlled trial of a career education-oriented teacher training programme in North Carolina, teachers started providing more career-relevant materials to their students, which boosted student scores in mathematics, though not in reading (Rose et al., 2012[23]; Woolley et al., 2013[24]). An early meta-analysis also found positive impacts of career education on student results in reading and mathematics, and particularly so for primary school students, but largely from programmes that devoted significantly more time to career education (Evans and Burck, 1992[25]). Students with better test scores and grades may be less likely to leave education early and to enter the NEET status. For example, a Norwegian study found that the grade point average in lower secondary school was more predictive of NEET status two years after taking the test of the Programme for the International Assessment of Adult Competencies (PIAAC) while the young people were in the 16-24 age group than the PIAAC score itself. The researchers found that increasing the grade point average by one standard deviation reduced the likelihood of being NEET by 7 percentage points (Barth et al., 2021[26]).
- *Increase career certainty and alignment:* School-based career education can positively influence career certainty and career alignment with their occupational ambitions (see in particular Table 6.2 in Covacevich et al. (2021[4])), which in turn have been found to be associated with positive outcomes later in life. Based on survey responses from 706 secondary students in New South Wales, students who had not participated in career education activities, such as talking to counsellors or participating in career education classes, were more likely not to know what they wanted to do when they finished with school (Galliott and Graham, 2015[27]). Students in their mid-teens who could formulate some expectation about their occupation as an adult were 6 percentage points less likely to be NEET in their mid-twenties in Canada; while there was no significant association in the People's Republic of China (hereafter "China"), Korea, the United Kingdom and the United States (Covacevich et al., 2021[17]). Having education and occupational goals that were aligned was associated with a 1.27 times lower NEET rate in Korea, while there was no significant association in Canada, China and Germany. Based on data from the British Cohort Study, boys with misaligned or uncertain career aspirations at age 16 were particularly more likely to be NEET during the following two years if they came from less advantaged socio-economic backgrounds. For girls, this heightened impact for those from less advantaged backgrounds did not occur (Yates et al., 2011[28]). The negative association persists over time, with young people with misaligned or uncertain career ambitions experiencing more months of unemployment between ages 16 to 34 and lower wages at age 34. However, women who overestimated educational requirements for their career aspiration did not experience lower wages once their educational attainment was controlled for (Sabates, Harris and Staff, 2011[29]).

3.1.4. Policies and interventions to strengthen career education across the OECD

Across the OECD, approaches to career education vary from creating dedicated career education classes to integrating career education into other subjects, and from delivering the education through specialised internal staff, in particular guidance counsellors, external partners such as dedicated public employment service employees, or through "regular" subject teachers. School staff may also involve parents and employers into their career education activities. While this section will focus on the role of teachers, the following section on career guidance and employer engagement will provide inputs on the role of internal and external guidance counsellors and of employers, respectively. Table 3.2 provides selected examples of career education interventions across Australia and other OECD countries. Programmes that were

implemented at only one school or that are commercial offers are not presented. The OECD's *Career Readiness* project website also provides many of these examples.

Career education should be adapted to the needs of different age groups and ideally progress over time in a coherent manner. For example, some primary and secondary schools on New Zealand's North Island have adopted the "WE3 Continuum and Activities" framework. During the exposure phase targeted at ages 10 to 14, teachers present concepts about the world of work to students. During the exploratory phase, from ages 13 to 16, students hear from people about their careers or can explore basic tasks of a particular trade they are interested in. From age 16 onwards, students can start with work experience activities. Online career education and planning platforms, such as the myBlueprint component of the Future Ready Learning K-12 programme, can complement classroom instruction through allowing students to explore career and education options that they are personally most interested in an age-appropriate way. Online platforms can also complement the information that teachers and career guidance counsellor offer to students with particular needs, such as on which workplace accommodations disabled individuals can count on.

Many countries include career education as a part of the curriculum, but the degree to which this results in mandatory classwork components, or even separate career education classes, varies. France, through its *Parcours Avenir*, takes an approach similar to Australia in that its curriculum mandates that schools help students explore the world of work, but leaves schools a wide latitude in how they want to achieve this. The focus of Korea's Free Learning Semester and the optional Irish transition year can vary from school to school and student to student but will in many cases include some type of work experience. On the other end of the spectrum, Norway's Educational Choice Subject mandates 110 hours of career education, leaving schools the choice of how to distribute these hours across the three years of lower secondary education. While leaving schools the option to shape career education can make activities more pertinent to the local context, it can also lead to unequal access in career education opportunities. In the case of the voluntary Irish transition year, for example, which has been found to be associated with better academic outcomes, the share of participating schools and students varied according to the socio-economic composition of the student body, and thereby potentially compounded existing disadvantages (Clerkin, 2013[30]).

Whole-of-school or even whole-of-community approaches to career education that combine the capabilities of counsellors, teachers, external partners, employers and parents are likely to be the most successful. In order to work well, however, teachers need the necessary skills to integrate references to the world of work within their regular lesson plans, and parents may need guidance on how to best talk to their children about their future.

One pathway to strengthen career education is to integrate it into the initial and continuing education curriculum for teachers. As previously mentioned, relatively few Australian teachers have received training in career education. Evidence suggests that the career education components within teacher training can be relatively short and nonetheless have an impact, suggesting that continuous training options can be an important ingredient to improve career education. For example, a five-module training for Turkish middle school teachers, who generally do not receive any training in career education during their initial studies, was able to raise the participants' perceived self-efficacy in providing career education, but did not impact their communication skills (Karacan Ozdemir et al., 2022[31]). In the previously mentioned North Carolinian randomised controlled trial of a career education-oriented teacher training programme, lower secondary teachers attended a half-day group training class and received sample lesson plans. This resulted not only in teachers presenting more career-related material, but improved students' grades (Rose et al., 2012[23]; Woolley et al., 2013[24]).

It may be possible to provide at least some of the continuous training for teachers in a digital format. This can be particularly attractive in a country with large remote rural populations. Programmes such as Future Ready Learning K-12 programme in New Brunswick, Canada are experimenting with providing the teacher

training through online modules but have not been evaluated yet. To be effective, digital offers for teachers should follow principles that are also good features of in-person learning. Yet they also need to take into account the digital skills of teachers and reflect the potential advantages of online offers, such as increased customisation. For example, the Gender4STEM programme's e-learning platform provides teachers with a self-assessment tool and teaching materials to increase girls' interest in Science, Technology, Engineering and Mathematics (STEM) subjects (Gender4STEM, 2018[32]). Digital tools may thus allow teachers to simultaneously identify and address any knowledge gaps and help them in providing better guidance for specific populations such as girls, students with disabilities and Indigenous students. Combining online and offline learning may be particularly beneficial (Minea-Pic, 2020[33]).

Providing teachers with appropriate materials on career education is another way to improve the quality of career education interventions. For example, teachers involved in teaching mandatory career education in Norway noted that they lacked appropriate teaching material and struggled with differentiating the career education according to the needs of students (Lødding and Holen, 2012[34]) cited in (Roise, 2020[35]). However, to be effective, the materials on career education need to be easy to access and integrate into lessons, and teachers need to be convinced of the importance of career education to devote time to it (Mahat et al., 2022[36]).

Creating a network between different stakeholders involved in career education, including parents, can be helpful. In Australia, the Belconnen Schools Network is a collaboration between public schools and colleges, community agencies, employers, further education providers, parents and staff from the Education Support Office, with the goal of improving career education for students. Services include supporting school students with leadership and guidance for career practitioners and careers administrative staff in schools. The Network also aims at increasing school students' knowledge about employment and careers through talks by professionally qualified career practitioners, educators from universities and employers from local businesses (Department of Education, Skills and Employment, n.d.[37]). In a number of interventions, schools provide information about career education to parents or involve them in career education activities. The empirical evidence about the effectiveness of these types of interventions, if it exists at all, is mixed, ranging from negligible to positive (Oomen, 2016[38]).

Well-developed career education can mitigate some of the disadvantages that certain groups may face in their career development capabilities. In general, students from socio-economically advantaged households are more likely to be able to rely on their parents' knowledge in considering different educational pathways; and can moreover benefit from their parents' social network to access information and potentially internship opportunities (OECD, 2021[7]). Well-implemented career education can compensate for some of the disadvantages this can entail for students from households with less educational and cultural capital. Research from Korea, for example, shows that students whose parents had higher educational levels had higher career development skills, as measured by such items as whether they knew how to explore different job options and how to prepare for job requirements, while parental income levels had no influence. Participating in a career education class reduced the association between parental education and career development skills; suggesting that career education can help students whose parents have lower educational attainment increase their career development skills (Lee et al., 2021[39]). Gibbons et al. (2019[40]) also suggest that career education programmes should adjust to a cultural group's unique strengths and values. For example, in the case of Rural Appalachia in the United States, they noted the need to incorporate considerations of the strong values of community connection and responsibility to family into how career educators communicated about possible pathways.

Table 3.2. Selected career education interventions

Intervention	Description	Objectives	Evaluation	Evaluation outcomes
Australia				
BECOME career education. 10+ year-olds. 2017- (OECD, 2021[41])	The programme consists of teacher-led classroom activities and a student app (that allows students to engage with and "collect" occupations) and a teacher app (that shows teachers what students are interested in)	Deepen students' understanding of themselves and the world of work	Case study on an individual school using pre- and post-programme surveys (Pennie and Bright, 2021[42])	Half of the surveyed students changed their future career plans. The evaluators conclude that this demonstrates that the programme leads students to think about the implications of their career choice and whether it is a fit for their personality in a deeper way. The programme also appeared to increase the range of occupations students were interested in.
Other countries				
Explore Your Horizons. Manitoba and New Brunswick, Canada. 16-18 year-olds. 2003-	Voluntary after-school workshops on exploring different post-secondary paths (e.g. VET, university) [Combined with an enrollment incentive in New Brunswick]	Reduce barriers to attending postsecondary education that underrepresented students face, including a lack of information	Quantitative analysis of the intent-to-treat effect based on administrative data including tax records	The workshops increased post-secondary enrollment in New Brunswick, but not in Manitoba, nor did it increase university completion in either province. Similarly, young people who were offered participation in the workshop had a higher income at age 23-24, while in Manitoba, there was no impact.
Future Ready Learning K-12 programme. New Brunswick, Canada. 4-18 year-olds. 2019- (OECD, 2021[43])	Online modules for educators on instructional strategies for career education, including a course to increase teachers' abilities in working with migrants and non-native English speakers. Online career planning tool (myBlueprint) for students aged 9 to 17 including labour market information and information about preparing job applications. The platform also offers custom guides for vulnerable groups, such as students with disabilities, newcomers, Indigenous students and LGBTI+ students (The Learning Partnership, 2020[44]). Personal development and career planning course in grade 9 or 10.	Equipping all school staff with the skills to help students think about careers; offering everyone including students from marginalised backgrounds the same access to career thinking.	None	N.A.
Parcours Avenir (Path for the future). France. 11-18 year-olds. 2015-	The French curriculum requires schools to help students explore the world of work in a whole-of-school approach, but they have latitude about how to accomplish this. Activities can include short internships, employer presentations and enterprise competitions (Ministère de l'Education Nationale de la Jeunesse et des	Provide students a sense of ownership over their educational and career pathways	None	N.A.

Intervention	Description	Objectives	Evaluation	Evaluation outcomes
	Sports, 2015[45]). In science classes in one school, students were for example provided with a list of occupations related to the water industry, after which they pick the job that interests them the most and are invited to reflect on which skills were necessary for the job (OECD, n.d.[46]).			
Free Learning Semester. Korea. 12-14 year-olds. 2016- (2013 pilot)	A semester with reduced curriculum load (21 versus 33 hours) and no standardised tests during which students can spend 12 hours on activities such as community engagement, sports or arts programmes or internships (ICCDPP, 2017[47]). The Ministry of Education assisted schools in creating community ties by arranging partnerships for example with the Forest Service and the SME Business Administration. Organisations can become Educational Partners for Career Exploration to offer learning opportunities during the free semester.	Help students explore their capabilities and interests (OECD, 2021[48])	Various studies on for example the impact on the use of tutoring and on the interaction with the regular semesters	No studies could be identified in English-language sources that investigated the impact of the FLS on student education or employment outcomes
Transition year. Ireland. 15-year-olds. 1994- (First selected implementation 1997-)	The optional transition year focuses on non-academic subjects, sports, volunteering and work experience.		Qualitative studies on the level of satisfaction of students and teachers with the programme and non-causal quantitative studies on the educational attainment of students who participated (see (Clerkin, 2012[49]) for an overview)	Participating students tend to perform better in their final upper secondary exams. However, the studies do not account for the fact that the students who participate in the programme are not necessarily comparable to those who do not. In the early 2010s, there was a gap in the share of participating schools and students with a higher or lower level of educational advantage (at the school and individual level) (Clerkin, 2013[30]) Moreover, everything else being equal, participating students are a year older than non-participating students by the time they take their leaving certificate exams.
Educational choice subject. Norway. 13-15 year-olds. 2008	110 hours of career education that can be distributed across three years of lower secondary school according to the school's preferences (Roise, 2020[35]).	The subject's goal is to contribute to students gaining competence in making career choices based on their wishes and the job's demands.	Qualitative analysis (interviews with students, teachers and school leaders)	Teachers struggled with a lack of appropriate teaching material and with differentiating the career education according to the needs of students (Lødding and Holen, 2012[34]), cited in (Roise, 2020[35])

Source: Own compilation of selected studies

3.2. Career counselling and guidance

Career counselling and guidance ideally allows students to identify career pathways that match their skills and interests, as well as opportunities for work and learning, through one-on-one or group counselling sessions. While career education may be delivered by non-specialised teachers as well as guidance counsellors, and involve the support of parents, employers and the community at large, dedicated experts have a primary role in providing career counselling. The counselling may be delivered at school, in dedicated youth employment centres or in public employment service offices.

3.2.1. Career counselling and guidance in Australia

In Australia, the resources for career guidance for younger students and their parents appear somewhat limited. The report of the review of senior secondary pathways into work, further education and training noted that even for senior secondary students, high-quality career advice in schools appeared to be the exception rather than the rule, though precise data on this topic is lacking (Education Council, 2020[50]). For younger students, such advice is likely to be even less common. The National Careers Institute, part of the Department of Employment and Workplace Relations, is a resource for careers information and support for people living in Australia. Among their priorities are the provision of tailored career support for school leavers and young people aged between 15 to 24. They also administer the Partnerships Grants programme to encourage businesses, industry, schools and community organisations to collaborate to improve career outcomes (Department of Education, Skills and Employment, 2022[51]). However, this once again leaves out younger students.

The requirements for guidance counsellors can vary by states and school type. In a literature review on career development learning, Austin et al. (2020[52]) note that for example New South Wales does not have a clear job description for career advisors; and that counsellors may not have the necessary skills. The problem may be more acute in remote and isolated schools that often suffer from high staff turnover. The Maximising Engagement, Attainment and Successful Transitions (MEAST) programme provided states and territories with funding for specific initiatives supporting multiple learning pathways, career development and mentoring. Frequently, this funding went to study grants for career education qualifications. Funding was also used to lead professional learning workshops for teachers and youth workers on how to use pathways planning as part of the Career and Transition Framework (Dandolopartners, 2014[53]).

Despite the relatively negative judgement on the availability of career guidance from Australian sources, the actual availability compared to other OECD countries is in fact not that low. According to PISA 2018 student responses, 64% and 23% of Australian students had spoken to a career advisor at or outside their school by the age of 15-16, with two-thirds having spoken to an advisor either within and/or outside their school. This compares favourably to the OECD (18-country) average of 50% and 24%, respectively. The share of students who have spoken to an in-school advisor is only larger in Denmark (84%), Iceland (72%) and the United Kingdom (66%) (Mann, Denis and Percy, 2020[9]). However, the less positive judgement could reflect that support is perceived as insufficient. As in other countries, there are also differences in the availability of career counselling by students' socio-economic background, with the availability ranging from 63% for those from the quartile with the least advantaged and 72% for the most advantaged socio-economic quartile. In part, this is driven by variation of in-school provision.

3.2.2. The association between career guidance in secondary school and later NEET outcomes

As is the case with the evidence on the link between career education and later NEET outcomes, the direct evidence on the impact of career guidance is limited, but indirect evidence suggests that career guidance may lower the chance of a young person becoming NEET.

Table 3.3 summarises results from existing selected longitudinal studies of the association between career guidance activities and NEET status in the late teenage years or mid-twenties. The first study focuses on the association between NEET status by age 25 and participation in career guidance at age 15 (talking to a career counsellor according to responses to the PISA student survey). In Canada, having participated in these activities was associated with a three percentage point lower probability of being NEET in the mid-twenties, while there was no statistically significant relationship in Germany and in the United Kingdom. However, it needs to be noted that these studies do not prove that participating in career guidance causes the NEET probability to drop, as the same constraints mentioned in the career education evidence section apply. A second study that sought to establish a causal link between talking to a career counsellor and not being unemployed during the first five years after completing school is based on the differential roll-out of job information centres around Germany. The study found that students at all schools or at lower and intermediate level schools (whose terminal degree does not lead to an upper secondary degree) were eight and ten percentage points less likely, respectively, to experience unemployment during the first five years since graduating from school if they had lived in a district where a job information centre opened. However, these effects appeared to be larger for earlier cohorts before the widespread availability of the Internet, suggesting that they would now be smaller. Moreover, the results are only statistically significant at the 10% but not the standard 5% significance level.

Table 3.3. Selected studies on the impact of career guidance on NEET outcomes

Intervention and country	Study	Evaluation methodology	Evaluation outcomes
Talking to a career counsellor about their future/work they might be interested in *Canada, Germany, the United Kingdom*	Covacevich et al. (2021[17]), "Indicators of teenage career readiness: An analysis of longitudinal data from eight countries"	Quantitative longitudinal: Logistic regression of NEET status at age 25/26 on indicator of whether student had talked to a teacher by age 15 and control variables including gender, socio-economic status and academic performance.	Teenagers who had talked to a career counsellor about work they might be interested in were 3 percentage points less likely to be NEET at age 25-26 than comparable young people in Canada. In Germany and the United Kingdom no statistically significant association was found.
Opening job information centres in the district *Germany*	Saniter (2014[54]), "The Effects of Occupational Knowledge: Job Information Centers, Educational Choices, and Labor Market Outcomes"	Quantitative longitudinal: Difference-in-difference estimation based on the availability of job information centres (JIC) in the district at the time of school attendance	Students who went to low- or intermediate-track school when a JIC was available in their district were more likely to graduate with a degree necessary to study at university; to not be unemployed and to not involuntarily lose their job during their first five years on the labour market.

Source: Based on Covacevich et al. (2021[17]), "Indicators of teenage career readiness: An analysis of longitudinal data from eight countries", https://doi.org/10.1787/cec854f8-en.

The evidence from these few direct studies is bolstered by other studies that show a positive association between career guidance and education outcomes on the one hand and career guidance and career aspirations or career readiness on the other hand:

- *Education outcomes*: The previously mentioned study by Saniter (2014[54]) on the impact of Job Information Centres concluded that for students who attended a lower- or intermediate-level school, being exposed to a centre boosted their probability of attaining the highest-level school leaving certificate (*Abitur*) and a university degree by seven and five percentage points,

respectively. Tomaszeski, Perales and Ning (2016[55]) concluded that in Australia, listening to a talk by a career guidance professional (but, interestingly, not talking to a guidance counsellor) was associated with an increased likelihood of enrolling in university. This increase was even larger for young people from a low socio-economic background but smaller for those who came from a non-English speaking background. Mann et al. (Mann et al., 2020[6]) also cite several US studies that found a positive relationship between the ratio of career counsellors to students and the likelihood of students enrolling at university. Higher educational attainment can lower the likelihood of being NEET both directly and indirectly. First, during any time that a young person continues to be enrolled in formal education, they are by definition not NEET. Second, in many countries, higher-educated young people are less likely to be NEET; and even in those countries where the relationship is inversed and highly educated young people at a higher risk of being NEET, their risk of remaining NEET over the long term is usually low.

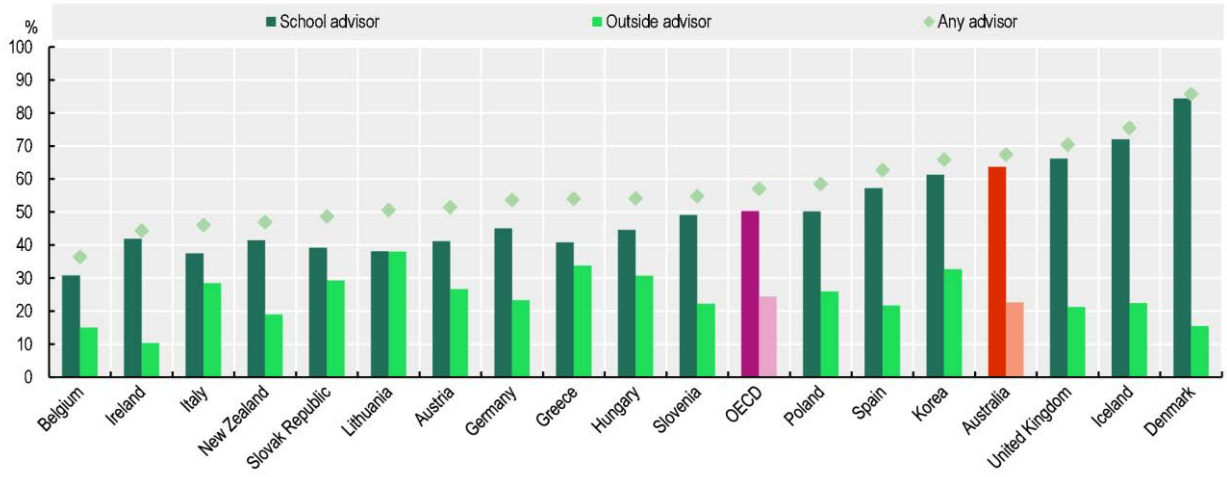
- *Career aspirations and readiness:* Having access to career guidance appears to reduce the share of young people who are uncertain about their career aspirations. For example, among students who performed relatively poorly in the PISA 2018, 28% who did and 33% who did not have access to career guidance at school were uncertain about their career aspirations; and this access also appears to slightly reduce career misalignment (i.e. having too low or high educational aspirations for the career that one aspires to) (see also Table 6.2 in Covacevich et al. (2021[4])). However, PISA data provide no insight into the intensity and duration of participation in career development activities or on whether participation was compulsory (Mann, Denis and Percy, 2020[9]). As discussed under the career education section, having clear career aspirations, even if these continue to evolve in different directions over time, can be associated with a reduced likelihood of becoming NEET.

3.2.3. Career counselling and guidance policies and interventions

Career guidance can be provided by counsellors working both within and outside of schools, with different countries choosing a different balance. Figure 3.2 shows the balance of working with school-based and outside advisors in selected OECD countries that participated in the 2018 PISA survey. In general, countries that rely more on an outside rather than school-based advisor appear to have a lower coverage of career guidance. However, it is certainly also true that it would be possible to design a career guidance system using outside advisors that reaches high coverage. Moreover, if outside advisors visit schools for one-on-one or group guidance sessions, students may perceive them to be school rather than outside advisors. Switching from one mode of delivery to another can be an issue: in the United Kingdom, the responsibility for career guidance for young people used to lie with local entities, and often provided through dedicated career services. In other cases, the external career services were included in the Connexions Centres, whose mission was predominately dedicated to assisting at-risk young people and which were not always as well equipped to provide career guidance (Watts, 2008[56]). In 2010, the responsibility was switched to schools, which appeared to lead to a reduction in guidance for many students (Moote and Archer, 2017[57]). Table 3.4 provides an overview of selected career guidance interventions.

Figure 3.2. The share of young Australians who have met with a career advisor is relatively high

15-year-olds who have seen a career advisor, 2018



Note: The OECD averages are equal to the unweighted average of the listed countries. Countries are sorted in ascending order of the percentage of students who met with any advisor.
Source: (OECD, 2021[58]), *Investing in Youth: Slovenia*, https://doi.org/10.1787/c3df2833-en, based on OECD PISA 2018, http://www.oecd.org/pisa/data/2018database/.

Some countries favour within-school career guidance. Hiring specific staff for guidance and counselling can increase the quality of the service provided to students. In-school counsellors may be particularly effective at providing guidance for younger adolescents and those most at risk of dropout. In order to prevent career guidance to be "swallowed" by other guidance functions (such as for students' personal, mental or behavioural problems), several countries such as Poland and Norway have separate career and other guidance counsellors (Watts and Sultana, 2004[59]). Special Education Needs Co-ordinators (SENCos) may co-operate with career counsellors in providing targeted career and education guidance to students with special education needs (Brussino, 2020[60]).

In-school career guidance requires adequate resources (European Training Foundation, 2020[61]). In Korea, the Ministry of Education recruited a sufficient number of career counsellors to cover more than 95% of schools by 2014. These career guidance teachers are required to have a full teaching degree as well as an additional 570 hours of training in guidance; and post-graduate degrees in career counselling for primary and secondary school counsellors exist (OECD, 2019[62]). In Finland, school guidance counsellors are obliged to check up on students at the conclusion of lower secondary education at age 16 and make sure that they enrol in either upper secondary education or vocational education. In Tasmania, year 10 students similarly now need a transition statement, but this is not related to a mandatory check-in with a guidance counsellor (Tasmanian Government Department for Education, n.d.[63]). Following parliamentary recommendations, the ratio of students to guidance counsellors in the country is around 250 to 1. These counsellors are full-time salaried members of the school staff who provide individual career guidance to students, oversee the mandatory career education compulsory hours, and liaise with employers (Toni and Vuorinen, 2020[64]). The latter has been found to be instrumental in providing effective guidance to students (CEDEFOP et al., 2021[65]), as will be discussed more in the following section.

Other countries also provide career guidance at school, but through outside experts rather than in-school guidance counsellors. For example, in Scotland, schools can ask staff from Skills Development Scotland to deliver career services at school, including one-on-one and group activities, and to link up with employers for outreach activities. Similarly, Northern Irish schools have partnerships with the careers' service (Holt-White, Montacute and Tibbs, 2022[66]). Through the activities of the National Career Institute,

Australia is likewise following a model that complements in-school career guidance resources with external ones.

In other countries, career counselling in school is complemented by out-of-school guidance centres. These can be focused solely on career guidance, as is the case with the Youth Career Centres in Slovenia or the Croatian Employment Service's CISOC centres. The CISOC centres are administered by the Croatian Employment Service and address school children, university students and individuals who are NEET. For secondary students, activities include workshops where students fill out interactive questionnaires and participate in exercises and discussions with the aim of improving their awareness of personal strengths and weaknesses, interests and objectives (OECD, n.d.[67]). In other cases, outside services combine career guidance with other services, such as in Finland's "one-stop guidance centres". In 2019, such guidance centres were operating in over 100 municipalities in Finland (Kettunen and Felt, 2020[68]). Digital tools can also be helpful, especially so for young people living in remote rural areas. The OECD will launch an Observatory on the use of digital technologies in career guidance of youth in spring 2023 that will collect good practice examples.

Table 3.4. Selected career guidance interventions

Intervention	Description	Objectives	Evaluation
National Careers Institute. Australia. 2019-	Offering individualised career guidance sessions for 15-24 year-olds as well as workshops at schools that discuss the available services but also job search strategies, career exploration, key resources. Currently running a pilot programme for schools that lack a career integration professional.		In progress
Recruitment of school-based career counsellors. Korea	The Ministry of Education recruited more than 5 000 career counsellors. These career guidance teachers are required to have a full teaching degree and an additional 570 hours of training. Post-graduate degrees in career counselling for primary and secondary school counsellors exist at ten graduate schools.	Ensure that all lower and upper secondary schools are covered by a career counsellor.	N.A.
Compulsory career counselling. Finland. Age 16. 2021-	Since 2021, school guidance counsellors are obliged to check up on students at the conclusion of lower secondary education at age 16. The ratio of students to the full-time in-school guidance counsellors is around 250 to 1. Counsellors provide individual career guidance, oversee the mandatory career education, and liaise with employers (Toni and Vuorinen, 2020[64]).	Ensure that students enroll in upper secondary or vocational education.	N.A.
KomposyT Information System. Slovak Republic. 2015-	An online advisory tool (https://www.komposyt.sk/) for career counsellors, parents and students, including 34 diagnostic tools available to counsellors. There are multiple guides targeted towards students with different special educational needs.	Ensure that students with SEN and their parents have access to tailored information.	N.A.

Source: Own compilation of selected studies.

3.3. Work-based learning and employer engagement

Contacts with employers and work-based learning can allow young people to get a taste for what being in a workplace feels like, explore whether they might be interested in a particular occupation and rule options in and out, increase their confidence, start to build their professional network and potentially even strengthen their soft skills (Jones, Mann and Morris, 2016[69]). Integrating contacts with employers but also with workers into career education can make the lessons "come alive" and thereby increase students' interest in thinking about their future occupation. In general, work-based learning includes activities such as employer outreach, job shadowing, service learning, internships and school-based apprenticeships (see Chapter 4) (Kis, 2016[70]). For the younger age group that this report focuses on, the most common forms of employer engagement and work-based learning include career days at school with employer

presentations and workplace visits and job shadowing; as well as short internships for those reaching the end of lower secondary education.

3.3.1. Employer engagement and work-based learning in Australia

Industry-school partnerships exist at all school levels, but activities appear stronger in upper secondary school. A 2010 report on school-business relations found that all surveyed secondary schools that co-operated with employers did so on transition and employability programmes, and almost all offered activities to enhance student engagement with industry, such as workplace visits, and supporting student aspirations, such as through leadership and skills development. The reported statistics did not distinguish between offers for lower and upper secondary students. Around 60% of primary schools also offered activities to enhance student engagement with industry and supporting student aspirations, respectively (PhilippsKPA, 2010[71]). In an overview of 14 case studies illustrating the guiding principles for school-business relationships developed following the recommendation of the 2012 Business-School Connections Roundtable, two case studies explicitly mentioned working with younger students. These include a solar car competition for year 8 and 9 students that involves company mentors; and a leadership programme for year 5 and 6 students that includes a visit to a management consulting company (Department of Education, 2012[72]).

In the past, the Australian Government also supported connections between education and training providers, businesses, families and the wider community through the School, Business and Community Partnership Brokers programme. The programme's national network of brokers was meant to set up sustainable partnerships between the different parties to support young people's learning and development.

Despite these efforts, PISA 2018 results show that fewer Australian students than in the OECD on average have taken part in a workplace visit or work shadowing, while a higher share have completed an internship (Figure 3.1). The largest barriers to employer engagement are insufficient time or resources to host students (Knight and Mlotkowski, 2009[73]). Work-based learning opportunities appear more plentiful for upper compared to lower secondary students. At the upper secondary stage, students can enter Australia's vocational education and training system, in which work-based learning is an integral part. This option is described in more detail in Chapter 4 on vocational education. Other upper secondary students can complete an internship that counts as an elective course (OECD, 2020[74]). That said, lower secondary students may also complete internships.

3.3.2. The association between employer engagement and later NEET outcomes

There exist few empirical studies on the relationship between employer engagement and work-based learning (beside formal VET programmes) for younger students (see Table 3.5). Job shadowing appeared to be associated with a reduction in the incidence of being NEET for girls but not boys in the United States; and likewise with a modest reduction in Canada and a less modest one in Korea. For Germany, the United Kingdom and an alternative US study, there were no statistically significant relationships found. Internships were associated with a reduction in the NEET status of young men in the United Kingdom, and particularly those whose characteristics suggested they were less likely to attend university, while there was no such association found for young women. In the same study, mentoring was not associated with any impacts. A different study, also for the United Kingdom, found much more positive associations between employer engagement activities (employer career talks, enterprise competitions and work experiences) and reductions in the likelihood of being NEET at age 19 to 24. Another British study found that the perceived quality of the employer engagement activity – in this case, a career talk by an external speaker – can matter as well. While career talks attended at age 14-15 were associated with higher wages at age 26, the same was only true for 15-16 year-olds who rated the talk as helpful (Kashefpakdel and Percy, 2017[75]).

A weakness of the literature on the impact of employer engagement activities on NEET outcomes is that few studies focus on the characteristics and quality of the work experience or provide evidence that distinguishes between the impacts of job shadowing and mentoring for lower and upper secondary students. More contacts with employers are however positively associated with increased earnings and reduced NEET risks (Percy and Mann, 2014[76]; Mann and Percy, 2014[77]).

Table 3.5. Selected studies on the association of employer engagement activities and later NEET outcomes

Intervention and country	Study	Evaluation methodology	Evaluation outcomes
Job shadowing Mentoring Internship *United States* High-school students	Neumark and Rothstein (2005[78]), "Do School-To-Work Programs Help the "Forgotten Half"?"	Quantitative longitudinal: Linear probability model of NEET status three to four years after high school on whether the individual participated in job shadowing, mentoring and internships/apprenticeships while in high school; based on the 1997 National Longitudinal Survey of Youth. Distinction between the impact on the half of students most and least likely to attend post-secondary education based on their observed characteristics.	Participating in job shadowing is associated with a lower probability of becoming NEET for girls less likely to attend post-secondary education, but not for boys. Doing an internship or apprenticeship lowered the risk of becoming NEET for boys in general, but most particularly for those less likely to attend post-secondary education; and had no observed association for girls. Participating in mentoring had no observed relationship with NEET outcomes for either girls or boys.
Workplace visits or job shadowing *Canada, Germany, Korea, the United Kingdom, the United States*	Covacevich et al. (2021[17]), "Indicators of teenage career readiness: An analysis of longitudinal data from eight countries"	Quantitative longitudinal: Logistic regression of NEET status at age 25/26 on indicator of whether student had participated in a workplace visit by age 15 and control variables.	Students were 4 percentage points/1.23 times less likely to be NEET by their mid-twenties than those who did not do any workplace visits or job shadowing in Canada/Korea. No significant association in Germany, the United Kingdom and the United States.
Employer career talks Enterprise competitions Work experience *United Kingdom*	Mann et al. (2017[79]), *Contemporary Transitions: Young Britons reflect on life after secondary school and college*	Quantitative using retrospective data: Regression analysis of NEET status at age 19-24 on recalled activities at ages 14-16 and 16-19	Young people who participated in career talks/enterprise competitions/work experience at ages 14-16 were 81%/75%/45% less likely to be NEET than peers who did not. The more activities an individual recalled, the less likely were they to be NEET.
Career talks or job fairs *Canada* *Germany* *Korea* *United Kingdom* *Uruguay*	Covacevich et al. (2021[17]), Indicators of teenage career readiness	Quantitative longitudinal: Logistic regression of NEET status at age 25/26 on indicator of whether student had attended a career talk or job fair by age 15 and control variables.	Young people who attended a talk were 3 percentage points less likely to be NEET in their mid-twenties in Canada and the United Kingdom. No significant association was found in other countries.

Source: Based on information found in Covacevich et al. (2021[17]), "Indicators of teenage career readiness: An analysis of longitudinal data from eight countries", https://doi.org/10.1787/cec854f8-en.

3.3.3. Policies and interventions to strengthen employer engagement and work-based learning

Employer involvement in career education can be organised by individual schools, as a region- or country-wide initiative, or by employers themselves. Several initiatives can have dual goals, such as raising the profile of the employer within their community as well as breaking down occupational gender stereotypes (Table 3.6).

In Austria, the French Community of Belgium, Germany, the Netherlands and Switzerland, the Girls' day (and more recently Boys' day) takes place once a year and is organised on a country-wide basis, with individual schools deciding whether they will offer their students from fifth grade onwards the opportunity to participate. During this day, companies carry out information events on industries and occupations that fall outside the "traditional" image of a woman's or man's career choice, such as engineering for girls and nursing for boys. Evaluations of the long-term impact of participation in a girls' or boys' day on educational and occupational choices, and let alone on later NEET outcomes, do not appear to exist. Instead, existing reports simply concluded that a good share of participants stated that the day introduced them to interesting occupations that they might consider for themselves (see for example (Wentzel and Funk, 2014[80])).

Table 3.6. Selected employer engagement and work-based learning interventions

Intervention	Description	Objectives	Evaluation	Evaluation outcomes
Australia				
Workplace engagement pilots. *New South Wales.* 15-18 year-olds	Eleven schools developed projects to workplace engagement activities for year 9 and 10 students that included workplace visits and learning.	Find an alternative model to internships at the end of year 10 that worked better for students and employers.	Student surveys to find out which workplace experiences seventh graders and pilot participants wanted; but no evaluation of longer term outcomes.	Students perceived their participation in the pilots positively and stated that they had changed their resumes and were more focused on their studies.
Other OECD countries				
Girls'/Boys' Day. *Various countries including Belgium, Germany, the Netherlands and Switzerland.* 11+ year-olds. 2001-	Introduce occupations to girls/boys in which women/men are under-represented and which are perceived as traditionally male/female. During the day, employers and universities open their doors and provide presentations and workplace visits.	Enlarge the range of occupations that girls/boys consider going into.	No specific evaluations beyond participant and employer satisfaction surveys.	
DigiGirlz. *Various countries including Costa Rica, the United States.* 11-17 year-olds	An initiative organised by Microsoft Education. During the one-day DigiGirlz Day and the multi-day High Tech Camp, girls can create games or apps, talk to employees and see technology demonstrations.	Engage girls in technology career training.	No evaluation has been identified.	
Introduction-to-working life periods (TET). *Finland.* 13-16 year-olds	A week in 8th and 9th grade during which students explore workplace skills in the real world. Guidance counsellors, students and parents can use the online tool TET-tori to find a placement.	Increase labour market awareness among students.	Mayer et al. (2022[81]), *Työelämään tutustumisjaksojen toteutus, yhdenvertaisuus, tasa-arvo ja saavutettavuus perusopetuksen aikana* [Implementation of introduction periods to working life – Equality, equity and accessibility during basic education]: The evaluation used quantitative and qualitative methods but analysed access and experience during the programme rather than its longer-term impacts.	The access to and experience with TET can vary strongly by student and family background as well as school resources.

Source: Own compilation of selected studies.

Local governmental organisations and partnership brokers can also play a role in strengthening employer engagement in schools. Aside from the previously mentioned School, Business and Community Partnership Brokers programme, another example is the English Local Enterprise Partnerships. The programme brings together local authorities and businesses. They may include representatives from local educational institutions on their board and have served as a vector to involve employers in schools' career education in a targeted way.

Employers can also run their own engagement programmes. Among one of these programmes that targets both younger and older teens is Microsoft's DigiGirlz programme that offers both one-day workplace visits as well as multi-day workshops.

Several countries mandate that lower secondary students participate in job shadowing or short internships (Brussino and McBrien, 2022[82]). For example, within the context of the mandatory *Educational Choice* subject in Norway aimed at eight to tenth graders, students typically complete a one-week internship, along with "trying out" different courses in upper secondary schools. Similarly, Finnish students complete one-week Introduction-to-working life periods, usually in both eight and ninth grade, that are supposed to give a first taste of the world of work but also be linked to the learning in academic subjects at school. A recent evaluation (Mayer et al., 2022[81]) concluded that access conditions were not equal and recommended the establishment of a national monitoring system and of programme co-ordinators at the national and local level. An ongoing project is moreover developing guidelines and training materials for companies and young people so that they can make the most of the experience (Alma Media, 2022[83]).

3.4. Social inclusion and community interventions

The usage of the concept of social exclusion to describe risk factors and consequences of becoming or being NEET is relatively new. Therefore, it is uncommon to find social integration as an aim of interventions to address NEET rates. This "blind spot" is an occasional criticism of both the NEET concept as such, and of interventions whose operational goal is to reduce the NEET rate (Hargie, O'Donnell and McMullan, 2010[84]; Phillips, 2010[85]). Moreover, when used, it is mostly applied to older youth, and may be seen more as an outcome of the state of being NEET rather than as a contributing factor. Despite this absence of specific research (and therefore of evidence on the impact of social inclusion related interventions on NEET rates), it stands to reason that social connectedness can have positive effects on an individual's well-being, and thereby indirectly on their chances of completing school and having the necessary endurance to overcome obstacles during their school-to-work transition. One area where the relationship between social ties and a NEET-related outcome has been studied is with regards to school completion. Adverse social experiences at school, such as bullying and rejection by other students is a risk factor for dropout, while having "school-oriented" friendships and support from other students are a protective factor (Johansson, 2019[86]).

Community and social inclusion related interventions can be hypothesised to support NEET prevention in a number of ways.

An example of an innovative community programme is the Harlem Children's Zone, a non-profit organisation in Harlem, New York City. The project combines community programmes with charter schools, publicly funded schools run by private organisations. The schools are intended to offer students and their families a wide range of services, including benefits assistance, and other social services. A 2010 study found that while the Children's Zone's middle schools managed to close the racial attainment gap in selected test scores, the offered community programmes had no further impact on academic achievement (Dobbie and Fryer, 2010[87]). However, the paper did not investigate whether the further community services may have other positive impacts aside from academic results, and therefore does not demonstrate that further community services have no use.

As discussed in the career education section, involving the broader community of parents and employers in career education can make career opportunities come more alive for students, and thereby raise their interest. Programmes to raise community involvement in career education are likely to be substantially cheaper than larger, more ambitious programmes such as the Harlem Children's Zone. Inspiring the Future programme, run by the British Education and Employers charity, connects secondary schools to volunteers willing to share stories about their career experiences. On the programme's website, volunteers can list their sector and occupation, and teachers can identify volunteers that would fit best with their career education objective and invite them to talk to students about their work, including through speed networking events (Education and Employers, 2022[88]). A similar programme under the same name now exists in New Zealand and parts of Australia. The Route to VET programme of the Danish Vocational and Technical School Students Union likewise connects volunteers with schools. In this case, the volunteers are current VET students and recent graduates. An evaluation estimates that out of each 100 students visited, an additional six people would consider a vocational education pathway (Rambøll, 2021[89]).

Offering young people more options on how to pass their free time in enjoyable and productive ways can strengthen friendships and lower the risk of substance abuse, which in turn might increase educational attainment and thereby lower NEET risks. The Icelandic prevention model brings together researchers, schools, parents, sports clubs and youth workers to strengthen the prevention of substance abuse in teenagers. In the context of the model, more activities were proposed to parents, to strengthen their social connections and make it more likely that potentially harmful teenage activities, such as staying out too late, were reduced. Teenagers increased their participation in organised activities, such as sports, spent more time with their parents, and reduced their use of drugs and alcohol (Sigfusdottir et al., 2008[90]). While it was not possible to identify a study that investigated the impact of the Icelandic model on the likelihood of becoming NEET, it is likely that such a positive relationship indeed exists given the reduction in risky behaviours that can contribute to worse educational outcomes.

Early interventions that prevent mental health issues from worsening can likewise reduce the risk that a young person will become NEET, given the strong link between mental health problems and inactivity. Australia has made mental health a central component of its 2021 Youth Policy. Headspace, the National Youth Mental Health Foundation, provides integrated services to 12-25 year-olds to address their mental health, alcohol and drug and work concerns (Department of Education, Skills and Employment, 2021[91]). An evaluation of the programme concluded almost half of Headspace's clients experienced a decrease in mental distress, which was clinically significant for 13.3% of service recipients. For this group of young people who showed significant reductions in mental distress, the number of days per month that they were unable to study or worked dropped from an average of 7.6 to 3.1 days. While the evaluation did not follow prior participants longitudinally, it can be hypothesised that if the benefits on young people's mental health persists, this might also be associated with a decrease in the likelihood of remaining in or entering the NEET status.

Key policy lessons on pre-employment interventions

Pre-employments interventions can help lower the chances that young people enter the NEET status by familiarising students with the world of work and the relevance of their education; helping them make informed choices about upper and post-secondary educational pathways; let them develop social connections of value and guiding them to develop realistic yet ambitious career aspirations that are ideally oriented towards in-demand occupations with development potential.

Pre-employment interventions can take the form of career education, career counselling and guidance, and employer engagement. While career education in stand-alone classes or integrated into regular subject lessons allows students to discover different career options and explore their interests, career

guidance and counselling complements career education with more individualised advice and guidance about educational and occupational options. Ideally, pre-employment interventions involve parents, employers (employer engagement) and the broader community.

Direct empirical evidence on the impact of different types of pre-employment interventions in the mid-teens on the likelihood of an individual being NEET in their late teens or mid-twenties is relatively limited. However, indirect evidence that shows positive associations between such interventions and the channels through which they could impact education and employment outcomes does make a case for the potential preventative role they could play.

Integrate career education in the initial teacher training. Career education can help students figure out how their interests and abilities fit with potential career pathways, and potentially even boost their performance in academic subjects. The integration of career education into classwork appears a potential boon. But teachers cannot be expected to accomplish this integration successfully, let alone to tailor career education to students with different needs, if they themselves have not been equipped with the necessary knowledge and skills necessary. Offering more courses on career education within the undergraduate or graduate teacher education would not only allow future teachers to gain these necessary skills and knowledge base, including on career development theory, but also stress the importance of this transversal topic within an already heavily solicited school curriculum. Given the high degree of independence of Australian universities to set their own curriculum, federal and state education departments may have to attempt to persuade university education departments of the importance of this integration, for example through engaging in dialogues or hosting relevant conferences and workshops.

Offer continuous training and teaching material to teachers. Strengthening the availability and quality of career development and guidance related training in the professional development offers available to teachers can increase the availability of career education to students more quickly than integrating it into initial teacher training alone. Teachers should have access to diverse continuous training options that address topics such the integration of career education into regular classes, subject-relevant labour market developments and tailoring career education to students with special educational needs or from marginalised backgrounds. In addition, teachers should be able to access model lesson plans with teaching materials for different grade levels that can show different subject teachers how they could integrate career education into their regular classes.

Ensure that access to career education is equitable. In Australia as well as in other countries, teenagers attending schools in a socio-economically more advantaged area on average have access to more career education activities and resources. Monitoring this access and, if necessary, adjusting local offers are an important component to ensuring equity in access. Combining mandatory minimum career education components, as defined in the curriculum, with additional voluntary options, such as the Explore your Horizons workshops in the Canadian provinces of Manitoba and New Brunswick, could be one avenue to ensure that all students obtain the most important pieces of information while giving those who would like to go further the option to do so.

Strengthen in-school career guidance and complement with outside expertise. One-stop-shop centres with integrated career and other guidance services might be especially beneficial to vulnerable students who may be more likely to need multiple services, both while they are still at school but also once they leave them. While the positive effects may be more concentrated among older young people, integrating the service of career counselling within schools might prove more effective for younger teenagers. Such one-stop-shop career guidance centres can ease the challenge of fragmented services and eliminate the duplication of services.

Make education and career guidance mandatory at key transition points. Australian students already benefit from a comparatively high access to in-school and outside career counsellors. By

mandating that all students and, at the younger ages also their parents, speak to guidance counsellors at a sufficient time prior to key transition points (such as the entry into upper secondary education), it can be ensured that no student fails to benefit from this availability.

Connect with employers to offer more workplace visits for younger teens and integrate internships into the curriculum for older students. A lower share of young Australians than the OECD average have participated in workplace visits or work shadowing, while a higher share have completed an internship and participated in a job fair. Making workplace visits and job shadowing more prevalent for younger students would be helpful for their career exploration development process. To do this, primary and lower secondary schools likely have to strengthen their links with employers. For students who are approaching the end of their lower secondary schooling, internships could be helpful. Making these a mandatory part of the curriculum could lessen access gaps to these internships across different student groups. However, it's important that internship opportunities are at inclusive, safe and culturally appropriate workplaces for students to thrive. School involvement in the internship search process is key to ensure that the quality of the internship a student has access to does not depend on his or her parents' professional and personal contacts.

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4 Preventive interventions in vocational education and training

This chapter discusses different interventions within vocational education and training (VET) that aim at helping young people who are at risk of becoming NEET (not in education, employment, or training). In particular, the chapter presents examples of strategies in OECD countries that smoothen access to VET programmes, ensure successful programme completion through adequate support, and improve the effectiveness of VET teachers and trainers. In addition, the chapter looks at broader intervention areas to improve the awareness of VET pathways among students and their caretakers as well as the image they might have of VET and discusses how the industry can get more involved in VET development and provision. The last section of the chapter considers key policy lessons for Australia.

Vocational education and training (VET) can be an efficient way to improve labour market outcomes of young people. This is especially the case for students following an apprenticeship, since these include significant work-based learning that help young people develop labour market relevant skills (OECD, 2018[1]). VET programmes can also foster motivation and engagement with education and learning among students who prefer more practically oriented learning than the learning that generally occurs in academic programmes. VET programmes can allow learners to transition more easily into employment and find a learning context that suits their needs and expectations by ensuring that students are able to develop the right skills demanded by the labour market and by providing an environment that differs from academically oriented schools. Realising the benefits of VET requires that VET programmes, which often commence in upper secondary school, are known and are considered to be an attractive option to lower secondary school students and their parents.

After briefly presenting the Australian upper secondary VET system and the challenges it faces, this chapter discusses NEET prevention strategies that have been implemented in OECD countries aimed at making the transition into vocational programmes smoother by providing vocational preparatory programmes, making VET programmes more accessible, ensuring that students successfully complete their programmes by providing them with the additional support they need, and by supporting VET teachers and trainers. In addition, this chapter looks at broader intervention areas to make VET pathways known to students and improve the image they might have of VET. Finally, the chapter discusses different ways in which a range of stakeholders, in particular businesses, can be more involved in VET development and provision. The engagement of employers is crucial to increase the quality of VET and ensure that the skills taught in vocational programmes are labour market relevant.

4.1. Background: Upper secondary VET in Australia

4.1.1. Upper secondary VET varies across and within states and territories in terms of form, content, and quality

Education in Australia is compulsory between the ages of six and 16 (year 1 to year 9 or 10) (Australian Government: Study Australia, 2023[2]), yet almost all students do 12 years of schooling, which is longer than in many other OECD countries. As significant differences exist between jurisdictions (the Australian States and Territories), schools and individual students, one cannot speak of a single education and training system. Unlike in many other OECD countries, there is no separate vocational pathway in upper secondary schools. Rather, students put together individualised programmes by choosing their classes that can be both general or vocational. Ideally, this option enables them to discover their interests and strengths while broadening their set of skills and allowing them to make a more informed decision of whether they want to continue with post-secondary VET, enrol in a higher education programme, or directly enter the labour market after graduating from secondary school (Department of Education, Skills and Employment Australia, 2020[3]; OECD, 2020[4]).

Upper secondary VET is delivered in partnership with registered training organisations (RTOs). It usually takes place at schools that also act as qualified RTOs or at external RTOs. Students interested in taking part in VET in Australia can either participate in VET courses in their eleventh and twelfth years of school or opt for a school-based apprenticeship, a school-based traineeship, or a certificate course. In 2021, around 8% of students who credited their upper secondary VET studies to their Senior Secondary Certificate of Education (SSCE) were apprentices or trainees (20 505 apprentices or trainees out of 251 235 students pursuing some form of upper secondary VET within their senior secondary school education) (NCVER, 2022[5]).[1] School-based apprenticeships and traineeships as well as certificate courses include a component of paid employment and, at best, allow students to graduate from secondary school with a certificated VET qualification (in addition to their SSCE), while in other instances, they will have made important progress towards one. In case students do not obtain the full qualification, the VET

regulatory framework stipulates that they should receive an attainment statement for the successfully completed units of competence (Australasian Curriculum, Assessment and Certification Authorities, 2020[6]; Australian Skills Quality Authority, n.d.[7]; Department of Education, Skills and Employment Australia, 2020[3]).

Vocational qualifications at all levels (including upper secondary VET) are subject to the national regulatory framework and are regulated by the Australian Skills Quality Authority (ASQA). Some states, like Victoria or Western Australia, for instance, have their own regulatory bodies. Yet, secondary education, which includes school-based vocational programmes, and funding of upper secondary VET are regulated at the state and territorial levels, while it is up to the schools to integrate VET in their curricula. The Australasian Curriculum, Assessment and Certification Authorities (ACACA) are in charge of senior secondary education certificates, including the recognition of upper secondary VET achievements. However, each State and Territory has its own legislation that defines its ACACA agency's responsibilities, which explains upper secondary VET quality differences across States and Territories. Moreover, while some schools are able to provide an extensive and high-quality VET offer, others struggle to do so because of timetable conflicts, limited resources, or the lack of an established school-industry network, for instance (Australasian Curriculum, Assessment and Certification Authorities, 2020[6]; Department of Education, Skills and Employment Australia, 2020[3]).

At the same time, employers often do not have sufficient information on upper secondary VET and do not have enough time to supervise apprentices and trainees. Moreover, students' young age and the limited time they can spend at the workplace constitute additional barriers. Due to inconsistency of VET quality across schools, some employers doubt the efficiency of upper secondary VET, especially regarding the industry experience of students. Therefore, they are sometimes reluctant to employ recent secondary school graduates and question whether vocational qualifications obtained in secondary schools can be recognised as equal to post-secondary VET qualifications despite all VET qualifications having to meet the same VET Quality Framework standards (Australasian Curriculum, Assessment and Certification Authorities, 2020[6]; Department of Education, Skills and Employment Australia, 2020[3]).

In comparison to higher education, VET is still seen as a less prestigious pathway. Instead of being perceived as an equally valid choice, VET is often considered to be an alternative for students who are less academically oriented and struggle with more traditional subjects. Moreover, many people have only limited knowledge of the breadth and variety of VET and are not fully aware that VET entails more than trades training. In 2020, a panel reviewed senior secondary pathways in Australia and revealed that many students find it challenging to understand and navigate VET that is provided at the upper secondary level as they consider it to be incoherent and not well integrated into the school curriculum (Department of Education, Skills and Employment Australia, 2020[3]).

4.1.2. Supporting students at risk of leaving school early

Legislation at the state and territorial levels allows students – under specific circumstances – to leave school following their tenth year to transition into secure employment or further studies. Though the approved reasons for students to do so vary by state and territory, they usually encompass the student's participation in school- and employer-based apprenticeships and traineeships, tertiary education programmes, vocational programmes at RTOs, or full-time employment. Alternatively, students can also finish their eleventh and twelfth school years in a non-school setting while still obtaining a secondary school diploma. They can do so at technical and further education colleges (including at TAFE colleges), yet will often have to pay upfront costs, which they would not need to pay if they decided to finish secondary school in a traditional school setting. Switching to a secondary school specialised in VET, such as technical colleges, trade training centres, or schools offering the Australian Government's Pathways in Technology (P-TECH) Program, or enrolling in a Flexi School like the one in Toowoomba (discussed below), are other

alternatives for students struggling with or not interested in completing traditional upper secondary school (Department of Education, Skills and Employment Australia, 2020[3]).

While State and Territory Governments are developing or have already implemented measures aimed at improving the quality of upper secondary VET, national government agencies have conducted several studies on how to best support early school leavers or students at a high risk of dropping out of school. For instance, an expert panel convened by the Australian Education Council in 2020 reviewed senior secondary pathways into work, further education, and training and developed 20 recommendations. The recommendations are aimed at helping senior secondary students better understand the different pathways and make a more informed decision about which pathways are most appropriate, considering their interests and strengths. The panel paid specific interest to the struggles that disadvantaged students face (Department of Education, Skills and Employment Australia, 2020[3]). Moreover, the government has been working on a National VET for Secondary Students Strategy to support improvements to the quality and relevance of VET provided at upper secondary schools. Through consultations with different key stakeholders, including industry representatives, employers, RTOs, schools, and students, it wants to make sure that the strategy aligns with their respective expectations and needs (Australian Government, n.d.[8]).

Several secondary schools across Australia focus on VET and work closely with industry, with some schools specifically aiming at helping students with low levels of academic achievement and engagement. The Australian Government supported the establishment of partnerships between schools and industry to improve upper secondary VET quality and previously invested in the above-mentioned P-TECH Program pilot. Through effective school-industry collaboration, tailored and trade-focussed curricula are developed that enable students to integrate VET in their Senior Secondary Certificate of Education. As of 2021, 16 schools in Australia offer a P-TECH Program, providing a total of 11 pathways[2] and involving 16 college partners and 40 industry partners (P-TECH, 2021[9]). A first-phase independent evaluation of the P-TECH pilot was conducted in 2018/19. The stakeholder interviews and surveys revealed significant benefits for students, schools, industry partners, and tertiary education partners.[3] While the pilot appeared successful in its starting phase, it remains to be seen how sustainable the P-TECH Program is beyond the Australian Government's seed funding. The programme's sustainability will be the focus of the second-phase evaluation (Social Compass, 2019[10]).

In order to support students who struggle with traditional pathways, schools like the Toowoomba Flexi School in Queensland employ intensive case management. This involves organising learning around small and flexible classes and ensuring that educational opportunities are adapted to the individual students, alongside career advice. Furthermore, the school collaborates with the students' parents, caretakers, as well as community groups to support its students in their post-school transitions. The school's staff members regularly exchange with parents to hear about their and their children's experiences with the Flexi School (Toowoomba Flexi School, 2022[11]).

Other schools focus on helping one specific group of disadvantaged students, such as the Canberra College in the Australian Capital Territory, which provides an alternative education programme for students who are pregnant or already a parent. Their CCCares (Canberra College Cares) programme allows students to take up to five years to obtain a Senior Secondary Certificate of Education (SSCE) or gain vocational qualifications. In addition to developing personalised learning plans for each student, the programme supports students in finding apprenticeships, traineeships, and work placements. Moreover, the programme organises transport to and from the school for its students and their children and provides childcare onsite. Students finishing school, finding employment, developing life skills that help them with housing and bills, and feeling that they can contribute to their community are some of the positive outcomes that point towards the programme's success (Canberra College, n.d.[12]).

As outlined in Chapter 1, young First Nations peoples are still more likely to be at risk of becoming NEET compared to non-First Nations peoples in Australia. Reasons for this include, amongst others, the higher

likelihood of living in remote areas, living in poverty, or suffering from poor mental health while being exposed to social and cultural exclusion and discrimination (AIHW, 2018[13]; National Indigenous Australians Agency, 2022[14]). For these reasons, both First Nations peoples and non-First Nations peoples students, teachers, and trainers are strongly encouraged to undertake a cultural competency training to ensure that VET institutions are culturally safe for their First Nations peoples students (who represented at least 5% of students who credited their upper secondary VET studies to their SSCE in 2021, compared to non-First Nations peoples students whose share was 77% and students whose First Nations peoples status is not known (18%) (NCVER, 2022[5]) but also their First Nations peoples teachers and trainers. The Centre for Cultural Competence Australia (CCCA) offers courses that aim at teaching its participants to better understand First Nations peoples cultures, which, in turn, should enable them to provide better services and programmes for First Nations peoples and create an improved working culture. Several First Nations peoples stakeholders (an First Nations peoples Advisory Panel, the First Nations peoples Directorate at TAFE, and the First Nations peoples Directorate at the Department of Education and Training) were involved in the two-year-long development period of the course curricula, which are updated annually. In order to increase learning outcomes, the courses are delivered online, which allows participants to follow the training at their own pace and in a non-confrontational environment. By doing so, participants feel more prepared for face-to-face training as they are provided with the necessary confidence, context, and knowledge (Centre for Cultural Competence Australia, n.d.[15]).

According to the CCCA's website, more than 750 client organisations and more than 50 000 employees have completed their cultural competence training (Centre for Cultural Competence Australia, n.d.[15]). The learning outcomes have been rated highly successful with 90% of course completers considering the overall course content as good or excellent, 99% stating that their learning needs were met, and 96% indicating that the course was relevant to their professional role. Moreover, on average, learners reported a 48% increase in overall knowledge of First Nations peoples, a 54% increase in knowledge of policies affecting First Nations peoples, a 44% increase in their understanding of current First Nations peoples affairs, a 52% increase in the knowledge of the effects of these policies, and a 20% increase in their confidence when it comes to engaging and working with First Nations peoples (Centre for Cultural Competence Australia, n.d.[16]).

4.2. Vocational preparatory programmes

Considering the cost-benefit balance of hiring an apprentice or trainee in a work-based setting, employers can be reluctant when it comes to taking on young people who may struggle with learning on the job. For this reason, it is crucial that employers are confident that these young people have obtained the necessary skills that they can further develop into productive skills during their vocational training with the employers. While financial incentives made available to employers represent a short-term solution for struggling youth to remain in the system, mechanisms that enhance these young people's knowledge and skills tend to be more effective, as those who did not receive such support might not be ready to complete an apprenticeship or traineeship (Kis, 2016[17]; Kuczera, 2017[18]).

Preparatory programmes, such as pre-apprenticeships or pre-vocational programmes, can support the successful integration of young people into education and employment by helping them secure an apprenticeship placement. Preparatory programmes can help young people build their literacy and numeracy skills, identify an occupation that fits their interests and skills, and be and feel ready to engage and learn in a real work environment, thus improving their chances of securing an apprenticeship placement. Moreover, having followed a preparatory programme, apprentices will start with higher productivity and make progress quicker than if they had not pursued such a programme, making them attractive to potential employers (Kis, 2016[17]; OECD, 2018[1]).

Preparatory programmes usually focus on developing three sets of skills: i) general skills, ii) vocational skills, and iii) soft skills. General skills include literacy and numeracy instruction and, in some cases, foreign language courses. Whereas in some programmes the development of vocational skills means that young people acquire skills related to an occupation or industry, other programmes provide career exploration opportunities in which participants get to discover different occupations and industries. If the preparatory programme offers work-based learning or work experience, these young people get the chance to try a trade before committing to an apprenticeship. In addition, those pursuing a preparatory programme learn how to find, secure, and successfully complete an apprenticeship. These skills typically encompass job search, CV writing, and interview skills but also timekeeping, teamwork, and resilience skills (Kis, 2016[17]; OECD, 2018[1]).

There exist many programmes across OECD countries that serve as a bridge to work-based learning (see Box 4.1). Usually, they have been implemented with specific policy goals like reducing upper secondary school dropout rates or reducing youth unemployment rates (Erixon Arreman and Dovemark, 2017[19]; Landert and Eberli, 2015[20]).

Box 4.1. Preparatory programmes: Country examples

Austria: Supra-company training (*Überbetriebliche Ausbildung*, ÜBA)

In Austria, young people who were unable to secure or complete an upper secondary apprenticeship can pursue supra-company apprenticeship training (*Überbetriebliche Ausbildung*, ÜBA). Unlike in in-company apprenticeships, in ÜBAs, the training contracts are concluded with a training institution and not with a company. Students attend theoretical lessons at a vocational school and practical lessons at co-operating companies or the training institution. While the goal is to switch to an in-company apprenticeship during ÜBA, students unable to do so can also complete a supra-company training programme and receive an ÜBA qualification that is legally considered equal to an in-company apprenticeship qualification. Moreover, students who are struggling or have special needs may extend the ÜBA period or receive a partial training qualification (oesterreich.gv.at, 2022[21]).

In 2020/21, 11 447 young people pursued ÜBA, which is more than in the previous year (10 842 in 2019/20) but less than in the year before (12 531 in 2018/19) (Dornmayr, 2021[22]). The long-term decline of 15-year-olds pursuing an apprenticeship as well as the rising number of available apprenticeship placements explain the decrease in supra-company training participants from 2018/19 to 2019/20. In contrast, the increase of ÜBA participants from 2019/20 to 2020/21 resulted from a reduction of available apprenticeship placements due to the SARS-CoV-2 outbreak (Dornmayr, 2021[22]).

An ÜBA evaluation study conducted in 2011 found that approximately one-third of ÜBA participants switch to an in-company apprenticeship within six months after leaving ÜBA (Bergmann et al., 2011[23]). In 2016 and 2017, a partial report on the background analysis of company-based apprenticeship promotion effectiveness as well as an evaluation of Austria's Public Employment Service's (*Arbeitsmarktservice*, AMS) apprenticeship promotion analysed the medium- and long-term success of ÜBA. 55% of ÜBA graduates who completed the programme in the period from 2008 to 2014 were employed, whereas 22% were unemployed and 8% were in an AMS qualification measure (Dornmayr, Litschel and Löffler, 2017[24]; Dornmayr et al., 2016[25]).

Germany: Preparatory traineeships (*Einstiegsqualifizierung*, EQ)

Germany's preparatory traineeships (*Einstiegsqualifizierung*, EQ) target young people who do not find an apprenticeship by the end of their lower secondary education. The EQ is a long-term work placement that typically lasts between six and 12 months. In EQs, participants are introduced to the basics of a

recognised training occupation at a company while simultaneously attending theoretical classes at a vocational school. Ideally, the company keeps EQ participants as apprentices following the completion of the preparatory traineeship. While EQ does not replace an apprenticeship qualification, it broadens the participants' social and professional networks. Moreover, it enables them to file an application for a shorter apprenticeship duration (Bundesagentur für Arbeit, n.d.[26]).

According to an evaluation study published in 2012, more than 40% of EQ participants could stay as an apprentice at the company at which they completed the EQ. Almost 70% of all EQ participants found an apprenticeship within half a year following the completion of the traineeship, while only 10% were unemployed during this period[4] (Popp et al., 2012[27]). Three factors have been identified that contribute to EQ's success (Cedefop, 2022[28]). First, the low-cost "trial period" for employers allows them to see whether these young people could become potential apprentices and, therefore, increases the likeliness of them offering EQ participants to stay at their companies. Second, collaboration with industry and trade chambers guarantees the promotion of EQ among companies and, thus, a wider provision of EQ placements. Third, EQ closely collaborates with other support programmes to ensure that at-risk participants receive additional support if needed (Cedefop, 2022[28]).

Switzerland: Vocational preparation year at a "career choice school" (*Berufswahlschule*, BWS)

In Switzerland, lower secondary school graduates who find themselves without an apprenticeship can opt for a "tenth school year" (*zehntes Schuljahr*) – a vocational preparation year – at a "career choice school" (*Berufswahlschule*, BWS). These kinds of schools deepen students' literacy and numeracy skills and offer targeted career guidance to help students, who are unsure about the profession they would like to choose, find an apprenticeship that corresponds to their interests and skills (ausbildung-weiterbildung.ch - Das Schweizer Bildungsportal, n.d.[29]; berufsberatung.ch, 2022[30]).

There are usually four types of vocational preparation years – one that is school-based, one that is practical, one that is work-based, and one that is integration-oriented. In the school-based, practical, and integration-oriented vocational preparation years, students spend five days per week at school and complete a short internship (*Schnupperpraktikum*). The practical training component makes up 20-40% of the school-based and integration-oriented vocational preparation years and 40-60% of the practical vocational preparation year. In the integration-oriented vocational preparation year, students also focus on developing their local language skills (German, French, or Italian, depending on the canton) and get more accustomed to Swiss culture, the professional world, and society. In the work-based vocational preparation year, students usually spend one to two days per week at school and three to four days per week at a company (Kanton Zürich, 2022[31]).

During the two school years of 2021/22 and 2022/23, the canton of Zurich is running a pilot project aimed at integrating special needs students. The "vocational preparation year plus" (*Berufsvorbereitungsjahr plus*, BVJplus) supports the individuals' development processes, particularly concerning their personal, professional, and social skills. The programme co-ordinates different support measures and provides career choice and apprenticeship search coaching. The students gain insights into the world of work and can choose an occupational profile, which determines their programme's share of school- and work-based learning (Kanton Zürich, 2022[31]).

According to a 2021 online survey commissioned by the Swiss State Secretariat for Education, Research and Innovation (SERI), 9% of 14-16 year-olds who were about to graduate from lower secondary school decided to pursue a tenth school year – a number that has been stable over the past years. Almost half of them chose a school-based vocational preparation year. The most frequently mentioned reason students enrolled in a tenth school year was that they were unable to find a suitable apprenticeship. However, compared to previous years, this reason has been cited less and less (28% in 2021, 37% in 2020, 43% in 2019, and 60% in 2018). Around one fifth answered that they wanted to get better grades, catch up on missed school material, or improve their local language skills (German,

French, or Italian). While the share of students who want to find an apprenticeship after completing the tenth school year has declined (from 69% in 2020 to 47% in 2021), the share of students who want to pursue a general upper secondary education, which will grant them access to higher education studies, has increased (from 11% in 2020 to 32% in 2021) (gfs.bern, 2021[32]).

Successful preparatory programmes often share a set of key characteristics that usually include labour market relevance, engagement of social partners, work-based learning, strengthening of general skills, and provision of career guidance (Jeon, 2019[33]). Generally, the programmes are developed in labour market shortage areas to smoothen participants' transition into the labour market. Moreover, employers, professional organisations, and trade unions are often involved in the programme's design and implementation to make sure that it corresponds to skills demand. Work-based learning helps young people connect to employers and get a better idea of the occupation (Jeon, 2019[33]).

As preparatory programmes tend to be expensive, it is crucial to evaluate different programmes to identify the ones that are efficient. However, multiple challenges occur when wanting to obtain solid evaluation evidence. For instance, average evaluation results of preparatory programmes within a country or region might not accurately represent the quality of individual programmes due to significant differences in terms of content, duration, funding, and delivery mode between the programmes. Moreover, measuring the transition rate into an apprenticeship as well as the apprenticeship completion rate is difficult as one has to compare these indicators with indicators about struggling youth that did not participate in a preparatory programme. However, given that young people pursuing such programmes tend to be more disadvantaged and have weaker general skills, apprenticeship dropout rates might reflect either these obstacles, inefficient preparatory programmes, or a combination of the two. Another evaluation challenge concerns alternative pathways following the preparatory programme completion. While participants can choose to pursue an apprenticeship, another education or training programme, or enter the labour market, the success of a pre-apprenticeship is measured by whether the participants start an apprenticeship or not, meaning that other pathways are deemed a "negative" outcome. Therefore, one should compare the costs and benefits of preparatory programmes with those of alternative scenarios (like a higher chance of relying on unemployment benefits), which, however, are difficult to estimate (Kis, 2016[17]; OECD, 2018[1]).

4.3. Increasing the accessibility of VET programmes

Another way to prevent young people from becoming NEET is by making VET programmes more accessible. Providing more flexible modes of VET, such as different programme durations and intensities that suit a wider range of potential VET students, can thus lower entry barriers and promote engagement with training. Examples of barriers that potential apprentices and trainees can face are associated with distance and the accessibility of training for those living in or based in regional and remote Australia. Moreover, as many apprenticeship placements are filled through informal contacts or networks, students who lack a social network tend to have more difficulties in securing an apprenticeship position or may be reluctant to take up positions outside their networks. In addition, some employers' hesitation in taking on disadvantaged students as well as students' hesitation in taking up positions outside the range of positions they see adults in their communities being engaged in, not only reduce the attractiveness for struggling students of pursuing a VET programme but also discourage young people from even applying for an apprenticeship position (Bergseng, Degler and Lüthi, 2019[34]; Jeon, 2019[33]).

4.3.1. Addressing struggling learners' and employers' needs by tailoring VET programmes

Offering tailored VET programmes can serve the need of both learners as well as employers, thus reducing the rate of young people who are NEET by promoting their short- and medium-term engagement in

education and training and their long-term labour market integration. Creating opportunities to tailor experiences can improve the alignment between young people's study experience with their needs and expectations but also improve the programmes' cost-benefit balance by increasing the fit with employers' business objectives. Adapting programmes to learners' needs can be done through the provision of different programme durations and intensities, different time arrangements, hybrid or online training modules, part-time programmes, or by offering additional courses for students to catch up on basic skills, for instance (Jeon, 2019[33]; Kis, 2016[17]).

Several OECD countries, such as Austria (see Box 4.2), Sweden, and Switzerland, provide tailored VET programmes. In Switzerland, apprentices can opt for a two-year-long vocational programme leading to a Federal Certificate of Vocational Education and Training (*Eidgenössisches Berufsattest*, EBA), which is designed for lower-performing students and in which they receive publicly-funded coaching and remedial courses (Staatssekretariat für Bildung, Forschung und Innovation, n.d.[35]), while, in Sweden, young people can obtain a partial qualification through vocational packages (*yrkespaket*), which allows them to combine different courses (that can be both school- and work-based), delivered at different educational levels (Kuczera and Jeon, 2019[36]).

Box 4.2. Case study: Austria's special VET arrangements for disadvantaged youth

Austria offers special vocational training programmes to disadvantaged students, including those who have not finished lower secondary school. These upper secondary vocational programmes are designed to help young people with learning difficulties. Typically, learners have poor educational outcomes and do not need to have finished lower secondary school to participate in this kind of programme. Young people who want to follow a vocational programme according to § 8b BAG have to visit a counselling centre of the Public Employment Service (*Arbeitsmarktservice*, AMS), where the AMS checks their eligibility. Once approved, learners are offered support during their on-the-job training and at school and are allowed to extend the programme duration by a year or, in some instances, two years. If the apprentices wish, they can also choose to obtain a partial qualification.

Vocational training assistants, which are commissioned by the AMS or the Social Ministry Service, constitute an essential element of vocational programmes according to § 8b BAG. They continuously support the apprentices and training companies in socio-pedagogical, psychological, and didactic aspects. In addition, they conduct the final examinations together with the respective occupational field experts (Unternehmensservice Portal, 2022[37]).

At the end of December 2020, 7.7% of all apprentices in Austria were pursuing a vocational programme according to § 8b BAG. Out of these 8 314 apprentices, 83% were opting for an apprenticeship period extension (6.4% of all apprentices in Austria), while 17% were completing a partial qualification (1.3% of all apprentices in Austria) (Dornmayr, 2021[22]). As vocational programmes according to § 8b BAG are designed for young people in disadvantaged situations, they are less likely to be completed than mainstream vocational programmes. However, considering that disadvantaged learners might not have been able to complete a mainstream vocational programme, them completing a vocational programme according to § 8b BAG should be seen as a success. Approximately two-thirds – 63% of apprentices choosing an apprenticeship period extension programme and 70% of apprentices going for a partial qualification – of disadvantaged learners from 2010 to 2017 completed their training. Moreover, 51% of those opting for an apprenticeship period extension successfully passed the national apprenticeship-leave exam one would obtain following the completion of a mainstream vocational programme (*Lehrabschlussprüfung*, LAP), while 54% of those choosing a partial qualification successfully passed their final examination (Dornmayr, 2021[22]).

An evaluation study on vocational programmes according to § 8b BAG conducted in 2012 (Dornmayr, 2012[38]) as well as more recent background analysis studies on the effectiveness of company-based apprenticeship promotion (Dornmayr, 2016[39]) and AMS apprenticeship promotion (Dornmayr, Litschel and Löffler, 2017[24]) find that vocational programmes according to § 8b BAG lead to improved labour market integration of disadvantaged students. Programme graduates are considerably more likely to be employed in both the short- and long-term than programme drop-outs. Moreover, the studies revealed that those who have completed their vocational programme according to § 8b BAG at a company tend to be significantly better integrated than those who completed it at a training institution even five years after graduating from the programme (Dornmayr, 2021[22]).

Notes: The reason why the drop-out rates for partial qualifications are lower than for apprenticeship period extension programmes is the much shorter duration of the partial qualification programmes.

4.3.2. Enhancing networks can help reduce VET entry barriers

As some employers might be hesitant to take on young people in disadvantaged situations (which can include lower socio-economic or migrant backgrounds, learning difficulties, or care responsibilities) as apprentices, and as these young people might perceive and even expect hiring discrimination against them, it is crucial to build mutual trust between employers and potential apprentices. By establishing direct contact between young people and employers through measures such as transitional programmes (including pre-apprenticeships), internships, class visits by employers, or VET fairs, for instance, initial prejudices can be reduced. Direct contact with employers gives young people a chance to showcase that they are ready and motivated to complete an apprenticeship while helping them understand the employers' expectations of them as potential apprentices. Increasing familiarity is especially important for smaller firms, which provide a large share of apprenticeship placements, as they might be more concerned about potential risks and high costs of hiring young people with a higher risk of underperforming or dropping out (Jeon, 2019[33]).

Training company networks provide additional help in reducing VET entry barriers by creating more available apprenticeship placements, supporting training companies in delivering VET, and shifting or dividing the responsibility over the apprentices, which takes off the pressure and can reduce employers' initial doubts over hiring young people in disadvantaged situations. For instance, in Norway, many firms benefit from institutional support provided by training offices (*opplæringskontor*). Training offices aim at increasing available apprenticeship placements by recruiting and supervising training companies and training prospective apprentice supervisors. In addition, they deal with administrative tasks, such as apprenticeship contracts that they sign on behalf of the companies, and often organise the theoretical part of training (Norwegian Centre for International Cooperation in Education (SIU), 2016[40]). In Switzerland, the creation of training networks (*Lehrbetriebsverbünde*) allows for the collaboration of firms that are highly specialised yet might not fulfil all criteria to be eligible as a stand-alone training company or might not have the resources to take care of administrational matters. By working together, firms can offer more apprenticeship places, while apprentices can discover and rotate between diverse professional and learning environments (berufsbildung.ch, 2015[41]).

4.4. Supporting students as well as vocational teachers and trainers

It is important to provide support to both students as well as vocational teachers and trainers to successfully prevent at-risk students from dropping out of a VET programme and becoming NEET. As young people with lower academic proficiency might lack relevant hard or soft skills or might be slower in developing these skills, they likely need to participate in remedial courses, get more instruction time, or receive

personalised training assistance, all of which can be costly for employers (Kis, 2016[17]; OECD, 2018[1]). Moreover, socio-economic instability may further prevent apprentices from investing the necessary time and effort to complete a vocational programme, particularly when unemployment is low and the labour market is tight providing opportunities for unskilled labour. For young people who are struggling to financially support themselves or their family, finding a low-skilled position might be more attractive in the short run as they would earn more as an unskilled worker than they would as an apprentice, potentially leading to leaving or not even starting the programme and not fulfilling their potential (Jeon, 2019[33]; Kis, 2016[17]).

Considering all the struggles that disadvantaged young people face, they are more likely to drop out of a vocational programme than the average apprentice. Employers who invested time and resources in finding and training the apprentice are left with the initial costs that will not be compensated through future productive work. Therefore, it is crucial to not only provide support to struggling apprentices through coaching or mentoring, for instance, but also help vocational teachers and trainers by enhancing their capacities to offer apprenticeships to young people in disadvantaged situations through an additional teacher or trainer training or external support on conflict mediation, for example (OECD, 2018[1]).

4.4.1. Supporting students at school and at the workplace

In order to support students with learning difficulties, schools can help these students complete their coursework and pass exams by providing remedial after-school classes and/or offering more flexible conditions, such as giving them more time, adapting the curriculum difficulty, or conducting more exams on less material instead of asking them to pass large end-of-semester exams whose results count for most if not all of the semester's end grades. In addition, the availability of mentors or coaches can help struggling students with planning and completing their coursework. Moreover, mentors or coaches can provide advice and support to disadvantaged students in solving everyday problems and act as mediators if issues between the apprentices and their employers or schools arise (Jeon, 2019[33]; OECD, 2018[1]).

Germany has developed several initiatives to support young people at risk of becoming NEET, many of which focus on helping them begin and complete their apprenticeship. One of them – supported by the Federal Ministry of Education and Research – is aimed at preventing apprenticeship drop-outs (*Verhinderung von Ausbildungsabbrüchen*, VerA) by bringing struggling apprentices and experienced senior experts together. These senior experts are volunteers who are familiar with the concerns young apprentices might have and can help them on an individual basis. They support apprentices at risk of dropping out by helping them with their personal development, self-organisation skills, social competencies, and motivation to learn. Apprentices and even training companies and vocational schools can contact the Senior Expert Service that launched VerA to receive free guidance. Moreover, VerA's senior experts also support apprentices who have already dropped out by helping them figure out what to do next or find a new training position if they desire to do so (Bundesministerium für Bildung und Forschung, 2022[42]). Because of its 1:1 principle – meaning that each struggling apprentice gets appointed one senior expert – the VerA initiative is considered highly successful, with 75% of apprentices at risk of dropping out being able to finish their apprenticeship (VerA, n.d.[43]).

4.4.2. Supporting vocational teachers and trainers

An important factor for students to succeed is their sense of belonging within a school or workplace. It is, therefore, crucial for vocational teachers and trainers to create an inclusive learning environment in which everyone feels accepted for who they are and in which disadvantaged students are not faced with discriminatory preconceptions coming from teachers, employers, or fellow students. Introducing simple measures, such as buddy schemes, mentor programmes, or student counselling, is associated with improved learning outcomes for struggling students (Jeon, 2019[33]; OECD, 2018[1]).

Preparing vocational teachers and trainers to recognise students' diverse learning needs and to be able to provide struggling students with the necessary support throughout the programme should be included in their initial teacher and trainer training and in further education programmes. Moreover, if teachers and trainers encounter difficulties with their apprentices, they should be able to ask for advice and exchange their experiences and struggles with other teachers and trainers through established networks or fora. Close collaboration with external organisations that specialise in supporting young people in disadvantaged situations might also help them better understand their apprentices' point of view and resolve conflict situations (Jeon, 2019[33]; OECD, 2018[1]).

For instance, Germany's public employment service supports training companies and apprentices by commissioning a training provider to implement assisted training (*Assistierte Ausbildung*, AsA) at the firm through a training facilitator serving as a permanent contact person for both apprentices and training companies before and throughout the programme duration. AsA supports apprentices and companies in various ways. Learners can benefit from remedial classes and receive personal guidance to develop their knowledge and skills and improve their relationships with their employers. Training companies are supported in their search for fitting applicants as well as in the administration, organisation, and implementation processes of the training (e.g. drawing up in-company training plans, providing information on and helping apply target group specific training methods, or supporting the implementation of individual training sessions). Moreover, in case of apprentice-employer conflicts, AsA provides socio-pedagogical support to mediate between the two parties (Bundesagentur für Arbeit, 2022[44]; Bundesagentur für Arbeit, 2021[45]).

An accompanying study on assisted training in Germany, published in 2018, analysed interviews conducted with more than 100 people in late 2017. It found that 57% of interviewees, which included employees of job centres and agencies, training service providers, AsA participants, and companies, considered AsA to successfully achieve content-related goals. One-third thought that the goals were partially achieved, while around ten percent only saw a low degree of goal achievement, mainly due to strategic reasons or lack of AsA awareness. The most cited reasons for the perceived success of the programme were apprentices' successful programme starts as well as the stabilisation of their performance and motivation, leading to lower apprenticeship drop-out rates. Training companies appreciated the reliable socio-educational support they received and stated that their apprentices' performance improved and that they managed to successfully pass their examinations. While four in five respondents indicated that they would like AsA to continue, about half of these respondents with a positive attitude towards its continuation nonetheless wanted it to become more flexible and to have less of a content overlap with other measures, such as the vocational preparation training measure (*berufsvorbereitende Bildungsmaßnahme*, BvB) or assistance during training (*ausbildungsbegleitende Hilfen*, abH), for instance (Conrads, Freiling and Ulrich, 2018[46]).

4.5. Making VET a well-known and attractive alternative to general education

4.5.1. Lack of information and resulting misconceptions explain young people's opinion on VET

In some countries, VET systems still suffer from being looked down upon or not receiving adequate attention. While poor VET quality or the lack of progression opportunities may explain the reputation of VET in some countries, in most cases, students' preference for general education over VET is due to a limited understanding of what VET entails and misconceptions of what opportunities it provides (Jeon, 2019[33]; OECD, 2018[1]). Considering the ever-growing number of available education and training opportunities, it is not surprising that young people often feel overwhelmed and do not have sufficient or accurate information about how to navigate less prominent pathways than general upper secondary education. Young people, and in particular early school leavers, often consider the overall VET system,

including its associated costs and benefits, the range of work-based and school-based learning, qualification opportunities, as well as subsidy and entitlement regimes, complicated and confusing (Dommers et al., 2017[47]).

In 2017, the European Centre for Development of Vocational Training (Cedefop) published the results of an opinion survey involving more than 35 000 interviewees (aged 15 and over) to analyse how VET is viewed across countries of the European Union (EU). The study revealed that VET and its opportunities are generally poorly understood. Despite the diversity of VET programmes and jobs they lead to, 70% of survey respondents associated VET only with manual work (Cedefop, 2017[48]). Furthermore, those who followed a general education programme considered VET to have a poor reputation compared to general education, even though only half of them indicated having received information on VET prior to opting for general education. In contrast to these opinions of the general population, nine out of ten VET graduates were satisfied with the work skills they had gained during their apprenticeship (Cedefop, 2017[48]).

Students are not always aware that apprenticeships cover many different fields, including the public sector, information and communication technology, or banking. They are often also not informed about progression opportunities through diverse routes that can lead to business ownership, management positions, or university studies, for instance (OECD, 2018[1]).

4.5.2. The same goes for parents and other caretakers

Gender, socio-economic factors, and identity characteristics can influence young people's career aspirations. For instance, PISA data shows that regardless of academic abilities or proficiency levels, students coming from a higher socio-economic status family are more likely to be interested in working as a professional. In contrast, students from a lower socio-economic status family are more likely to express interest in a technician career (Musset and Mýtna Kureková, 2018[49]). If adults that students look up to or are easily influenced by, such as parents or other caretakers, do not recognise the value of VET, students might be less inclined to even consider VET as a potential pathway. Sometimes the VET system is too complex for parents or other caretakers to understand compared to the general education system. This might be especially true if they have another first language spoken than the country's official language or if there is no sufficient or easy-to-find information on VET. For students with a migrant background, poor VET quality in their country of origin might lead to family members being more sceptical of having their young relatives choose a vocational programme (Jeon, 2019[33]). 2018 PISA data showed that students with a migrant background tend to have higher yet less realistic career aspirations than their native-born peers (OECD, 2018[50]).

4.5.3. Easily accessible and understandable information is crucial, yet it might not be enough

For all of these reasons, it is important to ensure that not only students but also their parents or other caretakers can easily access information about VET, that this information is accurate and easy to understand, and that students and their caretakers are aware of the diversity of available VET programmes as well as the benefits and future opportunities that they provide. Moreover, to overcome negative misconceptions that some might attach to VET, it is crucial to promote VET as an equal pathway to general education that can be suitable for anyone, not just students who are performing less well academically.

Raising awareness of VET as an attractive alternative to general education should start at an early stage of children's education to ensure that young people can form an objective and informed opinion of different education and training pathways. For adolescents, this awareness-raising and information provision is particularly pertinent: With the transition to upper secondary education, most of them and their caretakers are – for the first time in the educational trajectory of the young person – faced with taking major decisions about the content of their academic timetable. While most educational systems, including the Australian

one, provide plenty of options for flexibility, these decisions can nonetheless influence the further educational and later career trajectory of young people.

In addition to information provision, career education and guidance should also include interactive elements, such as career events, job shadowing, or work placements, to give students a better idea of the different paths they can go for. Furthermore, in order to ensure that information also reaches students who might be less likely to participate in such activities if not mandatory, it is important to proactively and systematically provide guidance to all students, especially disadvantaged students, through case management systems, for instance. Chapter 3 of this report explains the importance of and provides an overview of the main characteristics of effective career education and guidance, especially for students at risk of dropping out and becoming NEET.

The simple availability of information on VET might not be enough for young people to understand the benefits and opportunities that VET provides. For this reason, additional awareness-raising campaigns, like the annual European Vocational Skills Week, or high-profile skills competitions, such as the *WorldSkills*, are likely to help improve students' and parents' or other caretakers' perceptions of VET (see Box 4.3).

Box 4.3. Example of VET awareness-raising campaigns: The European Vocational Skills Week

The European Vocational Skills Week is an initiative launched in 2016 by the European Commission (EC) within the framework of the New Skills Agenda for Europe. Through activities and events across Europe, local, regional, and national organisations and other VET partners present what VET has to offer, while VET stakeholders across and beyond Europe exchange ideas and good practices. The week is aimed at demonstrating the benefits and opportunities of VET to young people, their caretakers, and employers. In 2022, the European Vocational Skills Week focused on the role of VET in the green transition, involved more than 1 000 events (e.g. competitions, conferences, employers' days, exhibitions, fairs, information campaigns, interviews or magazine articles, online meetings, open door events, press conferences, seminars, webinars, workshops, etc.) in over 30 countries, and reached more than 850 000 people (European Commission, 2022[51]). Moreover, to recognise and celebrate organisations', schools', and other VET stakeholders' best practices, VET Excellence Awards are given out each year. Participants can apply for the awards and are pre-selected by a jury of independent members. In order to reach out to and actively involve citizens, winners are determined through online voting (European Agency for Special Needs and Inclusive Education, n.d.[52]).

A study conducted from October 2019 to July 2020 analysed the achievements and impacts of the European Vocational Skills Week by assessing its relevance, coherence, effectiveness, efficiency, and EU-added value. It found that the initiative's activities helped increase stakeholders' awareness and improve the image they had of VET. Most interviewed stakeholders highly valued the pan-European events as international networking opportunities, while organisers of the local, regional, and national events were satisfied with the reported engagement levels of the primary target audience (e.g. learners, parents, teachers, employers, and education and training providers). In order to meet the needs of the different target audiences, a large variety of activities were organised. However, due to the number of diverse events, there appeared to be a disconnect between pan-European and local, regional, and national events. Therefore, the study recommended an increase in the internal coherence of activities and the engagement of national co-ordinators in doing so. Stakeholders had a positive perception of the effectiveness and efficiency of the Skills Week. They considered the different events, the VET Excellence Awards, and the European communication campaigns effective in changing the target audiences' perception of VET and in increasing their motivation to take action (Javorka et al., 2020[53]).

VET4EU2 (an umbrella under which four European associations of VET providers and two associations for academic and professional higher education work together) is currently conducting a survey to analyse the visibility of the European Vocational Skills Week 2022 and to what degree organisations within and outside VET4EU2 wish to be involved and why (VET4EU2, 2022[54]).

4.6. Strengthening school-industry partnerships

In many countries, there is a lack of interaction between schools offering VET courses and industry. Even in countries with well-established apprenticeship systems, employers might not actively co-operate with VET schools. For instance, in Germany's Bremen (one of its federal states), 93% of companies indicated in an employer survey that they did not or that they only rarely co-ordinated with their apprentices' VET schools (Gessler, 2017[55]). To apprentices' disadvantage, a weak collaboration between school and industry might lead to a discrepancy between the theories taught in school and practice at work. This is in line with a survey conducted within the EU Partnership-Project on Work-based Learning and Teaching (2016[56]), according to which students often mentioned that they wished for a better alignment of learning at school and the workplace.

Moreover, many employers that would be open to train apprentices might not be too familiar with the upper secondary VET system and, therefore, not even consider taking on an apprentice. In addition, due to the lack of companies' involvement in the VET system, they might not be aware of the benefits that come with training apprentices. Furthermore, in countries where vocational programmes are predominantly school-based, future employers of upper secondary VET graduates might be sceptical of the quality of upper secondary VET programmes and sometimes doubt that theoretical skills learned in school can actually be directly applied in a work setting (Australasian Curriculum, Assessment and Certification Authorities, 2020[6]; Department of Education, Skills and Employment Australia, 2020[3]; Jørgensen, 2015[57]).

Regulations are needed that ensure that all apprentices benefit from high-quality work-based learning. First, there should be established standards determining what skills apprentices should acquire during the programme. Second, employers should be able to deliver the training needed for apprentices to develop these skills. Employers should fulfil certain criteria before they register as a training company and, if needed, should receive administrative or mediation support via an established training company network or government entity. If unable to fulfil all criteria by themselves, they should be allowed to work together with other companies to still be able to at least partially train apprentices. Third, apprentices' skills need to be rigorously assessed at the end of their apprenticeship to verify whether they have acquired the skills described in the standards mentioned before.

As companies are able to identify and teach labour-market-relevant skills, their contribution to the development and implementation of VET programmes is highly valuable. There are different ways in which companies can get involved in upper secondary VET that may vary in length and intensity. Yet, all of them will likely contribute to an improved school-industry relationship and, therefore, result in apprenticeships of higher quality and higher labour market relevance. Some of the potential engagement areas include the introduction of company-based VET components, participation in the development of programme curricula, examinations, and certifications, the training of vocational teachers and trainers, and being consulted in the VET legislation decision-making (Euler, 2018[58]; Swiss Agency for Development and Cooperation, 2016[59]).

4.6.1. Work-based learning at companies

Work-based learning at both schools and companies is associated with positive outcomes (Musset, 2020[60]). The workplace, in particular, is considered an effective learning environment for young people to

develop soft transferable skills, such as communication skills, information management skills, problem-solving skills, time management skills, and respect for work values. In addition, regularly interacting with adults as their work colleagues can increase students' confidence and maturity (Lasonen, 2005[61]; Neyt et al., 2018[62]; Symonds and O'Sullivan, 2017[63]). Students who do not feel as engaged in school-based learning as they struggle academically or do not consider theory or workplace simulation as a learning experience that is valuable or useful in a real-world context might also feel more motivated to acquire their skills directly at a workplace (Aarkrog, 2005[64]; Musset, 2020[60]). Research suggests that on-the-job learning is often easier than putting theoretical knowledge acquired at school into practice (Aarkrog, 2005[64]; van Woerkom, Nijhof and Nieuwenhuis, 2002[65]). In the longer term, company-based learning seems to help both VET graduates and general education graduates transition into the labour market more smoothly compared to students who did not benefit from work-based learning (Arum and Way, 2004[66]; Eurostat, 2016[67]; Polidano and Tabasso, 2014[68]; Quintini, Martin and Martin, 2007[69]; Smith, Ferns and Russell, 2014[70]).

Companies can play different parts in providing work-based learning to apprentices. Their degree of involvement can range from i) providing glimpses into the world of work (e.g. allowing company visits, offering internships, or teaching specific skills through practice projects or lectures at schools); over ii) providing training modules students can participate in; to iii) being an actual contractual apprenticeship partner. In addition, work-based learning can also have different degrees of frequency and intensity, meaning that, in some cases, the focus lies on work processes, with learning being considered a by-product, while, in other cases, the emphasis is on the learning processes at or near the workplace taking place through direct supervision or coaching (Euler, 2018[58]; Gopaul, 2013[71]).

4.6.2. Company-based learning for vocational theory teachers and training programmes for in-company trainers

In most countries, prospective vocational theory teachers are required to follow initial teacher education training (ITET) at a higher education institution before teaching at a VET school. While this training prepares them well for teaching theories to vocational students, they often receive little practical industry training at a company. For this reason, they tend to lack specific and up-to-date industry knowledge, making it more difficult for students to link what they have learned at school to the world of work. In order to strengthen vocational theory teachers' understanding of the industry, companies could collaborate with ITET providers (either directly or through an umbrella organisation) to include a company-based practical experience component in prospective vocational theory teachers' ITET. Short work placements or company visits could also be incorporated into further education programmes for vocational theory teachers (Marobe, Chakroun and Holmes, 2015[72]; OECD, 2022[73]).

In Germany, for instance, the ITET of vocational theory teachers includes, on average, 52 weeks of practical work, of which typically 42 weeks take place at companies and 10 weeks at vocational schools. The organisation of this practical work training varies across federal states in terms of duration and programme timing (it could be during the Bachelor's or Master's programme or both). In addition to vocational theory teachers, German VET schools also have teachers of vocational practice who teach practical and technical subjects in practice offices, teaching kitchens, or training workshops. In contrast to vocational theory teachers, they do not complete their training at a higher education institution but have a vocational qualification (e.g. Master craftsperson or technician examination) and have to pursue a continuing training programme to obtain pedagogical skills (OECD, 2022[73]).

At the same time, in most countries, in-company trainers are not required to have completed a programme that prepares them for their role as apprentice instructors. This means that they might not have a clear idea of what skills to teach or how to relate these skills to the theories the apprentice learns at school. In addition, they might also not be too familiar with the pedagogical practices necessary to supervise young people. For this reason, (prospective) in-company trainers should be able to easily access pedagogical

training and learning material. They should also receive training on all relevant aspects of in-company training (from the beginning to completion of the apprenticeship). When training programmes are optional rather than mandatory, it is important to provide attractive incentives that encourage (prospective) in-company trainers to participate in such preparatory programmes by either granting them more responsibilities, upward mobility, or a higher salary when they take on and train apprentices (OECD, 2022[73]).

In Australia, where most vocational students also follow general education courses at a senior secondary school, it might be beneficial to encourage vocational theory and general education teachers who have vocational students in their classes to complete a company-based practical experience, ideally in the industry that their students are working in. Doing so, could allow teachers to improve their understanding of the industry and ensure that their teaching provides students with more context and connection between what they learn at work (at a real or simulated workplace) and what they learn at school.

The OECD (2022[73]) recently published a report describing and comparing the initial training and preparation of vocational teachers and in-company trainers across five OECD countries: Canada, Denmark, Germany, the Netherlands, and Norway. Table 4.1 provides an indicative summary of the VET teacher qualification requirements in these five countries as well as in Australia, while Table 4.2 describes a very broad overview of the qualification and training requirements for in-company trainers. It should be noted that the general requirements listed in the tables refer to the most common or standard requirements and that alternative requirements may exist. In order to have a more detailed description of the requirements, it is recommended to look into the case study chapters of the report (OECD, 2022[73]).

Table 4.1. Indicative summary of upper secondary VET teacher qualification requirements in six OECD countries

	General requirements			Alternatives
	Vocational/subject-related qualification	Pedagogical qualification	Relevant work experience	
Australia	A subject-related vocational qualification	A vocational teaching qualification (at post-secondary non-tertiary level)*	Multiple years of experience*	It is possible to teach under supervision without a vocational teaching qualification*
Canada	Specific requirements vary across provinces and territories			
Denmark	Typically, a journeyman's certificate or a Bachelor's degree in a relevant subject	Diploma in VET pedagogy	Multiple years of experience	
Germany	Vocational theory: two state examinations following a university teacher training at the Master's level and a preparatory service		University training at the Master's level includes a work placement	Side entrants have access to shortened and tailored training leading to a teaching qualification (varies across federal states)
The Netherlands	A bachelor- or master-level teaching qualification for a specific VET field			A specific side-entry pathway exists for individuals with work experience in the industry; they are required to obtain a pedagogical certificate within two years
Norway	A subject-related qualification (including vocational)	A teaching qualification (pedagogics and didactics) at the Bachelor's level	Teachers for vocational practice need a certain number of years of work experience	

* Unless an exemption from this requirement is required, typically in the case of an auspicing arrangement.
Source: OECD (2022[73]), *Preparing Vocational Teachers and Trainers: Case Studies on Entry Requirements and Initial Training*, https://doi.org/10.1787/c44f2715-en.

Table 4.2. Qualification and training requirements for in-company trainers in five OECD countries

Germany (Regulated through an examination)	Denmark, the Netherlands, and Norway (With vocational qualification or company requirements)	Canada (With vocational qualification or provincial approval)
At least one qualified trainer is required in a training company, which means that the trainer has to pass the trainer aptitude examination (assessing vocational and pedagogical skills)	No specific pedagogical qualification or training requirement is defined	No specific pedagogical qualification or training requirement is defined, but, usually, a person with a trade certificate and years of experience can train apprentices; yet this varies across provinces
Skilled workers can also train and support apprentices (no training or qualification requirement)	Trainers are usually vocationally qualified skilled workers with years of experience	Some provinces approve "designated trainers", i.e. experienced workers without a trade certification who are allowed to supervise, train, and mentor apprentices
Existing training courses for trainers are not mandatory	Companies are accredited based on the availability of well-prepared trainers in Denmark and the Netherlands	
	To be approved, companies in Norway should have a qualified training supervisor (who typically has a trade certificate, Master craftsperson certificate, relevant higher education, or usually six or more years of work experience) and skilled workers with a vocational qualification and work experience	

Source: OECD (2022[73]), *Preparing Vocational Teachers and Trainers: Case Studies on Entry Requirements and Initial Training*, https://doi.org/10.1787/c44f2715-en.

4.6.3. Including industry in curriculum development and VET examinations and qualifications

In countries where it is not too common for upper secondary students to pursue an apprenticeship or in which vocational programmes are predominantly school-based, employers can question the quality and efficiency of upper secondary VET programmes. In order to ensure that the skills students acquire in vocational programmes are not only labour market relevant but also recognised by employers, industry representatives should be involved when VET curricula and VET examinations and qualifications are at the development stage. Including the industry in the development of VET curricula, examinations, and qualifications will also help improve the reputation of VET, which, in turn, will incentivise more young people, particularly students at risk of becoming NEET, to consider VET as an attractive alternative to general or higher education.

Engaging the industry in VET curricula development can be done in various ways that differ in scope and duration. For example, industry representatives can take on consulting roles, directly suggest initiatives or proposals, or be granted a voting or even a veto right in decision making. They might also advise on qualification requirements, provide feedback on proposals, be consulted for agreement on the final curricula versions, or participate in curricula evaluations. However, to avoid conflicting interests when involving individual firms, representatives from umbrella organisations could be consulted to integrate a wide spectrum of businesses (Euler, 2018[58]).

Involving industry representatives in the development of VET examinations can also strengthen the credibility of VET qualifications. Vocational programmes often target a wide range of skills, some of which might be expensive or difficult to test objectively, such as specific practical or technical skills. As a result, these skills are not always appropriately assessed in end-of-course examinations of vocational programmes, leading to some employers doubting the credibility of VET qualifications. Establishing standards and procedures for skills assessment is one way to increase the perceived reliability of vocational qualifications. These standards and procedures should determine which skills are to be

assessed, how the assessment should be carried out, and who would conduct the assessment. The full range of skills taught in vocational programmes should be assessed – not only those that can be easily assessed through traditional written or oral examinations. Moreover, to ensure consistency, there should be mechanisms in place to regularly evaluate if assessments across different parts of the country are in line with established standards (OECD, 2018[1]).

Training companies can engage in different ways, such as developing examination tasks for the apprentices, being consulted on task proposals, partaking in task decision making, or being directly involved in examination evaluations. They might also help test a wider range of VET target skills by allowing learners to complete practical or technical exams at their company or by issuing reports or certificates that confirm the company's recognition of the apprentices' working skills. In order to ensure the credibility of the latter, the practical final examinations can be monitored by other company representatives who also train apprentices (Euler, 2018[58]). Box 4.4 discusses the role of professional organisations in upper secondary VET examinations and describes what qualification procedures in Switzerland entail.

Box 4.4. Upper secondary VET qualification procedures in Switzerland

In Switzerland, the federal government, the cantons, and the professional organisations closely collaborate in VET, which is particularly evident in the VET programme design and qualification procedures. While the State Secretariat for Education, Research and Innovation (SERI) regulates the core elements of VET programmes, which include the framework conditions of the qualification procedures (e.g. form, duration), the professional organisations decide on the structure of the qualification procedures, and the cantons enable the procedures' implementation (Fahmy, 2019[74]). Examination boards are elected by the cantonal secondary education and vocational training offices and comprise people from the world of work, representatives from professional associations, and vocational schoolteachers. Each canton has several examination boards, each of which is in charge of at least one profession and whose number of board members depends on the number of qualification examinations that will be conducted each year (Kanton Zürich, 2022[75]).

In order to ensure high-quality and comprehensible qualification procedures, the network partners, in collaboration with SERI, published an orientation guide with principles and recommendations (Eidgenössisches Departement für Wirtschaft, Bildung und Forschung, 2019[76]).

Typically, there are four qualification areas, each of which is concluded with an examination, which, in turn, can comprise several parts. The four qualification areas include i) a partial examination (*optional*; practical exam), ii) practical work (*mandatory*; oral exam: technical discussion related to the practical exam; practical exam), iii) vocational skills (*optional*; written exam and oral exam), and iv) general education (*mandatory*; written or oral exam, a final project including presentation, experience grade). In most VET programmes, general education is taught independently of practical or technical skills and is, therefore, tested separately. In order to avoid overlaps, general education examination experts and practical examination experts co-ordinate to ensure that they do not assess the same learning content twice (Eidgenössisches Departement für Wirtschaft, Bildung und Forschung, 2019[76]).

In the remaining qualification areas, written exams can include multiple choice questions, short answer tasks, tasks with extended answers, case studies, portfolios, or projects, whereas oral exams can take the form of structured conversations, technical discussions, role play, presentations, or forms of simulations. Practical work is either tested through pre-set practical work (*vorgegebene praktische Arbeit*, VPA) or individual practical work (*individuelle praktische Arbeit*, IPA). In the VPA, professional organisations define standardised tasks for all examination candidates in Switzerland. Usually, the examination is carried out centrally and assesses the apprentices' competencies as a whole. In contrast, the IPA tests practical skills in everyday working life at the training company or with customers

through a work assignment or service provision. The apprentice executes the assignment and presents the results to a team of experts. During the subsequent technical discussion, the apprentice then answers additional questions related to the task (Eidgenössisches Departement für Wirtschaft, Bildung und Forschung, 2019[76]).

Key policy lessons on vocational education and training

Vocational education and training (VET) can play a key role in ensuring reduced school dropout rates and facilitating the school-to-work transition. In particular for young people who prefer more practically oriented learning and who may have developed negative experiences with academically oriented educational environments, VET programmes can boost their motivation and engagement with education and learning. Through school-based and work-based learning, VET is also an efficient way to ensure that students are able to develop the set of skills that are demanded by the labour market and, thus, improve their labour market outcomes.

In Australia, unlike in many other OECD countries, there is no separate vocational pathway in upper secondary schools. Instead, students put together individualised programmes by choosing classes that can be both general or vocational. This option enables them to discover their interests and strengths while broadening their set of skills and allowing them to make a more informed decision of whether they want to continue with post-secondary VET, enrol in a higher education programme, or directly enter the labour market after graduating from secondary school. This setup can be a strength to the extent that individuals have accurate information about VET classes and that the reputation of VET classes is on a par with that of academically oriented classes. It can also promote access and availability. At the same time, it can be more challenging for VET teachers and trainers to develop the content and pedagogical knowledge that is unique to VET classes and to create strong connections with the industry.

Four key areas of improvement can ensure that VET programmes can help reduce the likelihood that young people will become NEET. These are: i) improving the reputation of and general knowledge people have about VET; ii) promoting industry involvement; iii) supporting vocational teachers and trainers; and iv) supporting young learners. The first two areas help improve the overall VET system and how it is perceived, making it an attractive alternative compared to higher or general education, while the latter areas are crucial to ensure that students have a good learning experience and receive the appropriate support they need.

VET reputation.

Provide easily accessible and understandable information on VET to counter misconceptions. The Australian VET system still suffers from being looked down upon or not receiving adequate attention. In many cases, students' preference for general education over VET is due to a limited understanding of what VET entails. It is therefore crucial that students, but also their parents or caretakers, can easily access information about VET; that this information is accurate and easy to understand; that they are aware of the diversity of available VET programmes as well as the benefits and future opportunities that they provide; and that the information available builds aspirations for students to undertake further studies. Raising awareness of VET as an attractive alternative to general education should start at an early stage of children's education to ensure that young people can form an objective and informed opinion of different education and training pathways and potentially make decisions on school and subject choices. In particular, VET awareness-raising campaigns and skills competitions are ways to make VET a well-known and attractive alternative to general education, as

the simple availability of information on VET might not be sufficient for young people to understand the benefits of VET.

Industry involvement.

Strengthen work-based learning opportunities in collaboration with the industry. Work-based learning at both schools and companies is associated with positive outcomes. The workplace in particular is considered an effective learning environment for young people to develop soft transferable skills, and on-the-job learning might be easier than putting into practice theoretical knowledge acquired at school. Companies can have different degrees of involvement in providing work-based learning to apprentices, ranging from: i) providing glimpses into the world of work (e.g. allowing company visits, offering internships, or teaching specific skills through practice projects or lectures at schools); to ii) providing training modules students can participate in; and iii) being an actual contractual apprenticeship partner. While work-based learning is an integral part of school-based apprenticeships in Australia, this is not necessarily the case for other school-based VET programmes. In some jurisdictions, like New South Wales or Western Australia, for instance, work-based learning is mandatory; however, in others, it is only optional, and, therefore, its implementation often varies between jurisdictions and even schools. Considering its associated positives outcomes, it is recommended to make work-based learning a mandatory, integral component for VET programmes.

Involve the industry in the development of VET curricula, examinations, and qualifications. Australian employers can question the quality and relevance of upper secondary VET programmes and sometimes hesitate to recognise upper secondary VET qualifications and, therefore, hire upper secondary VET graduates. This could lead to poorer labour market outcomes among VET graduates, thus increasing the rate of young VET participants who are NEET because they do not find employment and potentially also lowering participation in education and training among students with little interest in academic programmes. To ensure that the skills students acquire in vocational programmes are not only labour market relevant but also recognised by employers, industry representatives should be involved when VET curricula, examinations, and qualifications are at the development stage. For instance, industry representatives can take on consulting roles, directly suggest initiatives or proposals, develop examination tasks, or participate in decision making. They might also help test a wider range of VET target skills by allowing learners to complete practical or technical exams at their company or by issuing reports or certificates that confirm the company's recognition of the apprentices' working skills. To ensure the credibility of the latter, the practical final examinations can be monitored by other company representatives who also train apprentices. Moreover, representatives from umbrella organisations could be consulted to integrate a wide spectrum of businesses. Including the industry in the development of VET curricula, examinations, and qualifications will also help improve the reputation of VET, which, in turn, will incentivise more young people, particularly students at risk of becoming NEET, to consider VET as an attractive alternative to general or higher education. Between November 2020 and April 2021, the Department of Employment and Workplace Relations consulted with stakeholders through surveys, online workshops, webinars, meetings, and responses to a discussion paper in order to understand how industry and employers can better engage with the VET system (Department of Employment and Workplace Relations, 2022[77]). Such efforts to bring industry to the table to understand how they view the programme and the effectiveness of current arrangements as well as where they see room for improvement in the system itself and in the collaboration between the government and industries is an important step in encouraging industry to participate in VET programs and to be more invested in the system.

Enhance networks to reduce barriers to apprenticeships. Some employers might be hesitant to offer apprenticeship positions to young people in disadvantaged situations, and some young people may, in turn, not consider positions outside the realm of the employment opportunities they recognise among adults in their communities. By establishing direct contact between young people and employers

through measures such as transitional programmes, internships, class visits by employers, or VET fairs, these initial hesitancies may be reduced. Direct contact with employers gives young people a chance to showcase that they are ready and motivated to complete an apprenticeship. Moreover, training company networks, as seen in Norway or Switzerland, provide additional help in reducing VET entry barriers by creating more available apprenticeship placements, supporting training companies in delivering VET, and shifting or dividing the responsibility over the apprentices. The Government-funded Australian Apprenticeship Support Network undertakes many of the above-mentioned activities. Therefore, it is recommended to continue or even increase funding to bolster and maybe even expand support for both learners and employers. Moreover, to strengthen partnerships between the different stakeholders, it is worth considering re-introducing new versions of programmes implemented in the past in Australia, like the School Business Community Partnership Brokers (2010-14) (see key policy lessons on education in Chapter 2).

Support provided to vocational teachers and trainers.

Support vocational teachers and trainers. An important factor for students to succeed is their sense of belonging within a school or workplace. It is, therefore, crucial for vocational teachers and trainers to create an inclusive and culturally safe learning environment. Preparing vocational teachers and trainers to recognise students' diverse learning needs and to provide struggling students with the necessary support throughout the programme should be included in their initial teacher and trainer training (ITET) and in further education programmes. Moreover, in the Australian context, teachers and trainers are encouraged to complete a cultural competency training to ensure a culturally safe learning environment within a VET institution for their First Nations peoples students but also teachers and trainers. Ensuring the learning environment at the institution is inclusive for students, teachers, and trainers and free from discrimination and racism is imperative for success, while acknowledging that teaching approaches may need to change based on the students' needs. Moreover, teachers and trainers should be able to ask for advice and exchange their experiences and struggles with other teachers and trainers through established networks or fora.

Provide company-based learning for vocational theory teachers and training programmes for in-company trainers. The more vocational theory teachers' industry knowledge is up to date, the easier it becomes for students to link what they have learned at school to the world of work. Therefore, to strengthen vocational theory teachers' understanding of the industry, companies could collaborate with initial teacher education and training (ITET) providers to include a company-based practical experience component in prospective vocational theory teachers' ITET. Short work placements or company visits could also be incorporated into further education programmes for vocational theory teachers. At the same time, (prospective) in-company trainers should be able to easily access pedagogical training and learning material. They should also receive training on all relevant aspects of in-company training. When training programmes are optional rather than mandatory, it is important to provide attractive incentives that encourage in-company trainers to participate in such preparatory programmes. In Australia, where most vocational students also follow general education courses at a senior secondary school, there might sometimes be a lack of connection between what they learn at work (at a real or simulated workplace) and what they learn at school. While, under Australia's Standards for Registered Training Organisations (2015), all trainers and assessors are required to ensure that the industry skills they are teaching, are up to date, it might be wise to invite vocational theory and general education teachers who have vocational students in their class to complete a company-based practical experience to improve their understanding of the industry.

Support provided to learners.

Provide vocational preparatory programmes. Not all students who would like to pursue a vocational programme are ready for it. For those who need more time to catch up on literacy and numeracy skills or decide on what occupation would fit their interests and skills, VET preparatory programmes, such as pre-vocational programmes or pre-apprenticeships, would help them secure a work placement (in case of an apprenticeship), start with higher productivity, make progress quicker, and rely less on additional support during the programme to cope with their initial weaknesses (e.g. literacy or numeracy skills). While vocational preparatory programmes, like pre-apprenticeships, exist in Australia, their definition and outcomes vary across jurisdictions and occupations. It is therefore recommended to decide on a nationally consistent definition of what pre-apprenticeships entail and ensure that all students can access high-quality preparatory programmes, regardless of the jurisdiction in which they live or the occupation they choose.

Tailor VET programmes. Some students might feel discouraged or do not even consider pursuing a vocational programme as they might struggle with learning or do not have enough time to put in the effort needed to complete a programme. Adapting programmes to learners' needs can help improve their study experience and increase their motivation. VET programmes can be tailored to different students by providing different programme durations and intensities, flexible time arrangements, hybrid or online training modules, part-time programmes, or additional courses for students to catch up on basic skills, for instance.

Support vulnerable students at school and at the workplace. Students in vulnerable or disadvantaged situations are more likely to drop out of a vocational programme than the average apprentice. To support students with learning difficulties, schools can provide remedial after-school classes or offer more flexible conditions. Mentors or coaches can help struggling students with planning and completing their coursework, provide support in solving or at least advising students in disadvantaged situations on everyday problems, and act as mediators if issues between the apprentices and their employers or schools arise. In Australia, like in countries with large migrant populations or First Nations peoples communities, an additional source of vulnerability comes from cultural diversity. Creating a culturally safe learning environment for young First Nations peoples students can entail ensuring that peers as well as teachers, trainers, and other personnel engaging with these young people take part in a cultural competency training.

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Notes

[1] Key notes about the data. The VET in Schools collection only captures students whose VET is credited to their Senior Secondary Certificate of Education – this is different to the number of students doing apprenticeships in other datasets. The dataset does not distinguish between apprenticeships and traineeships. The collection is released annually so 2021 is the latest data available.

[2] The following 11 pathways can be chosen at one or several of 16 secondary schools offering the P-TECH Program: Advanced Manufacturing, Aviation, Business, Computer Science, Cybersecurity, Digital Media and Technology, Food Science and Technology, Healthcare, Maritime-Based Careers, Mechanical Engineering, and Networking Technology.

[3] Outcomes for students: P-TECH has improved student understanding of the workplace; enhanced student engagement with STEM; encouraged student engagement with school and learning; the potential to enhance students' sense of belonging; broadened student perceptions and attitudes towards their career paths and future; improved students' self-esteem; improved students' workplace (soft) skills; improved students' technical skills; and improved access to resources for student learning.

Outcomes for schools: P-TECH has enhanced teacher engagement in schools; encouraged innovation in teaching; improved schools' engagement with the community; improved schools' reputations; improved parent and family engagement; and enhanced schools' understanding of the needs and opportunities of their region.

Outcomes for industry partners: P-TECH has enhanced job satisfaction for industry partner employees; the potential to enhance future workplace diversity; in some cases, resulted in recruitment from school to

industry; enhanced industry partners' profile within the community; and provided networking opportunities for industry partner employees.

[4] The other persons questioned indicated being in employment or following another training or education programme.

5 Embedding interventions into a strengthened monitoring and evaluation system

This chapter discusses the importance of monitoring and evaluation in guiding policy making. The chapter reviews four aspects that are considered crucial for the implementation of a rigorous Monitoring and Evaluation (M&E) system: data infrastructure, ethical oversight and data privacy considerations, data quality and dissemination. For each of these topics, the chapter provides examples of good practices in OECD countries and ends with some reflections about how Australia could strengthen its M&E system in the youth domain.

The implementation of rigorous Monitoring and Evaluation (M&E) systems is key for the improvement of policy making (Lonean, 2020[1]). All decisions and implementation processes throughout the policy making cycle may be informed by and benefit from policies implemented earlier or elsewhere that have been proven to lead to the desired results and objectives (or, alternatively, where reasons for their failure are understood) thanks to careful monitoring and evaluation processes. Besides supporting learning and the development of better policies, the M&E of public policies also contributes to accountability, as it provides detailed information on how policies are planned and implemented and can help promote specific results to all relevant stakeholders.

Strengthening accountability through M&E is particularly important for the youth policy arena, given the cross-sectional nature of youth policy and the numerous interactions established with other sectoral policies (i.e. education, employment, social inclusion, health, etc.). However, the interconnectedness of the sectors and the intersectionality of risk factors and needs make it more difficult to monitor policies. In addition, the monitoring and evaluation of interventions that are meant to have a preventive impact in the medium and long term require longitudinal data collection across a variety of areas, including labour market and education outcomes. While this is true for all preventive interventions and not just in the youth policy area, the latter faces additional constraints related to: (i) obtaining consent for data collection from minors and their parents; (ii) the fact that young people tend to be more geographically mobile than the general population and so may be more difficult to track and convince to participate; and (iii) the practical and potential ethical difficulties in varying access to interventions that are thought to be beneficial.

This section reviews four axes to strengthen M&E systems and their impact on youth policy making, focusing on: (1) strengthening the data infrastructure, including to capture intersectionality; (2) putting in place a robust ethical oversight and data privacy considerations; (3) promoting the use of high-quality data for M&E; and (4) disseminating M&E results.

5.1. Generating and maintaining a strong data infrastructure

The quality and availability of data (survey data, administrative data, programme implementation data, etc.) is a key factor for how easily a policy can be monitored and evaluated and how rigorous the resulting evaluation can be (OECD, 2019[2]). Indeed, evidence-informed policy making can be hindered by a lack of adequate information and by capacity gaps among government departments and agencies to generate such information in a format that is suitable for evaluation purposes. It is key for policy analysis and evaluators to understand what evidence currently exist across institutions, what information such resources cover, and how it can be accessed.

Australia benefits from a strong commitment to evidence-based policy making and investments in strong data infrastructure. The country scores highly on the OECD OURdata Index, which rates countries according to data availability, data accessibility, and government support for data re-use. Australia ranks sixth in the 2019 index, with above average scores on all three indicators. Australia is one of the leaders in terms of promoting government data re-use both within and outside the public sector and the country made one of the most noticeable improvements in data availability among OECD countries since 2017 (OECD, 2020[3]).

The availability of timely and comprehensive longitudinal data can support the monitoring and evaluating of “what works” in preventing that young people end up not in education, employment or training (NEET). The relevance of the availability of longitudinal data for this sort of research is shown by a review commissioned by England’s Department of Education to collate and synthesise available evidence on how interventions targeting young people at key transition points (mainly aged between 14 and 16) can lead to future improvements in education and employment attainment (Learning and Work Institute, 2020[4]). Out of the 58 studies analysed in the review, some of which are cited in the previous chapters of this report,

almost two-thirds made use of longitudinal data to evaluate the effects of the intervention on the outcomes of interest.

The fact that Australia is further improving the generation of high-quality longitudinal datasets is demonstrated by the Multi-Agency Data Integration Project (MADIP), which through the integration of data from multiple sources makes it possible to identify outcomes for young people across a variety of dimensions (allowing for the identification of intersectionality) and follow them over time (Box 5.1).

Box 5.1. Australia's Multi-Agency Data Integration Project (MADIP)

MADIP was first established in 2015, and further developed between 2017 and 2020. MADIP is a longitudinal dataset that combines individual-level information on demographics (including the Census), health, education, government payments, income and taxation, and employment over time.

The Australian Bureau of Statistics (ABS) is the accredited Integrating Authority for MADIP, and they are responsible for collecting and preparing the data, as well as providing access to authorised researchers. To undertake its role, the ABS collaborates with a wide range of agencies, including the Australian Taxation Office, the Department of Education, Skills and Employment, the Department of Health, and the Department of Social Services, among others.

Source: Australian Bureau of Statistics (2022[5]), Multi-Agency Data Integration Project (MADIP), https://www.abs.gov.au/about/data-services/data-integration/integrated-data/multi-agency-data-integration-project-madip

As of today, a considerable number of projects make use of the MADIP data for evaluation purposes. A key example is the VET National Data Asset project "Measuring the outcomes of VET students", which integrates data from MADIP and the Business Longitudinal Analysis Data Environment (BLADE) to enhance the evidence base around employment and social outcomes of VET students in Australia. Similarly, the Post-School Destinations Project leverages the data from MADIP and combines it with assessments from the National Assessment Program – Literacy and Numeracy (NAPLAN) to investigate the post-school destinations and outcomes for students at the national and state/territory level, especially those from disadvantaged backgrounds.

In addition to administrative data, cohort studies covering children and young people, including the multiple cohorts of the Longitudinal Surveys of Australian Youth (since 2003 recruited from schools taking part in PISA), are also available and provide complementary information that cannot be found in administrative records.

Despite the advances made in this arena, however, cohort specific research is still lacking for the assessment of the influence of interventions focused on the "middle years" (i.e. from 8 to 15) on NEET prevention.

A leading example of integrated national administrative data is New Zealand's Integrated Data Infrastructure (IDI), established and maintained by Stats NZ. Data in the IDI form an "ever-resident" Aotearoa New Zealand population of around 9 million people and their households (Jones et al., 2022[6]). The aim of the IDI, which was established in 2011, is to provide a research tool to understand complex social and economic issues in more depth, to inform policy, to help with the targeting of resources, and to undertake impact evaluations. The IDI links data from different government agencies, statistical surveys, and non-government organisations, and enables researchers to compare population outcomes across a wide range of variables, including education, income, benefits, migration, justice and health, and allows for the adoption of an intersectionality lens in the design of policies.

As set out in Jones et al. (2022[6]), New Zealand has unique characteristics that may not be easily transferable to other contexts but their data integration process can provide interesting lessons for other

countries wanting to implement a similar approach.[1] The split accountability between federal and state governments in Australia may make such integration more difficult and may require additional policy or legislative structures to give data suppliers confidence that information will not be used to the detriment of the people they serve. Key elements in the NZ data integration process have been solid infrastructure design, political support, a strong regulatory environment, good data quality, close collaboration with analysts, and last, but not least trust.

5.2. Putting in place robust ethical oversight and data privacy considerations

Generating and maintaining a high-quality data infrastructure relies on strong ethical oversight that guarantees privacy and delivers value. Individuals' trust in the collection and use of their data is intrinsically dependent on the level of data security and the extent to which data are used for their benefit and the development of effective policy making.

The success of New Zealand's IDI is entirely dependent on the safe and ethical use of the data it contains. Two frameworks guide decision making about access to the IDI: Five Safes and *Ngā Tikanga Paihere* (a collection of Māori customary behaviours). Both frameworks are intended to ensure data are treated in responsible and culturally appropriate ways (Jones et al., 2022[6]). All applicants and their proposed research must meet the Five Safes conditions (safe people, projects, settings, data and output) and demonstrate they have appropriate cultural safeguards in place to conduct research in a way that will be beneficial to Māori and other priority populations (e.g. people with disabilities).More generally, any use of data or information about people, families and communities (whether it can identify people or not) must be done in a safe, transparent, and trustworthy way. Not only will this approach help to increase public trust and confidence in governments' legitimate role in the collection, processing and use of data, it will contribute to the design and delivery of more effective, user-centred policies and services. Data use, including the decisions and actions that derive from it, should prevent, avoid, or at the very least limit intentional harm. It should not lead to or perpetuate discrimination. It should instead promote inclusion, respect diversity, and ensure that individuals and communities are treated and benefit equally from the outcomes a data-driven public sector aims to deliver (OECD, 2020[7]).

For instance, the New Zealand Government undertook an extensive public engagement process in 2019 to create the Data Protection and Use Policy (DPUP) (Social Wellbeing Agency, 2021[8]). The engagement process revealed a complex landscape of privacy legislation, regulation and rules that people struggled to navigate. The DPUP provides clear and practical guidance (principles, guidelines and a toolkit) on how personal information can and cannot be used in the social sector to provide confidence to those collecting and using the data, and to those to whom the data belongs.

There are many examples of good practice guidance for governing and managing data ethics and privacy including for example, the OECD's The Path to Becoming a Data-Driven Public Sector (OECD, 2019[2]). Australia has its own best practice examples to draw on like, for example, the public consultation on the proposed data sharing and release legislation in 2019 (Australian Government Department of the Prime Minister and Cabinet, 2019[9]) and how the results of that engagement shaped the final legislation, the Data Availability and Transparency Act 2022. This Act establishes a new, best practice scheme for sharing Australian Government data, underpinned by strong safeguards and consistent, efficient practices.

The approach chosen to identify and address any risks associated with use of personal information for M&E purposes – whether it be guidelines, a framework and/or processes – must comply with relevant legislation, policies and guidance and be able to accommodate a range of data uses including new and emerging uses, for example using data to identify and target young people in greatest need of intervention, i.e. predictive risk modelling. A framework (and/or guidelines) that steps a decision maker through relevant technical, ethical, privacy, public interest (and other) considerations at different stages of a project would

support an assessment of whether any risks outweigh the benefits or can be sufficiently and safely mitigated. A decision might be to refer the project to a relevant ethics committee.

5.3. Promoting the use of high-quality data for M&E purposes

The existence of a strong data system can make the creation of a sustainable M&E system much easier, but it alone is not a sufficient condition. Among other factors, government departments, agencies, and programme providers need to either have the capabilities themselves to use the existing data to undertake M&E tasks, or to outsource this task – but they would still need to understand the results and ensure that they are reflected in evidence-based policy making.

In principle, Australia benefits from a long-embedded M&E culture. The country's evaluation strategy driven by the Department of Finance that was in place from 1987 to 1997 and was complemented by more attention to monitoring from 1995 onwards is a well-known example of evidence-based decision making (Mackay, 2011[10]). More recently, the Public Governance, Performance and Accountability Act 2013 emphasised the importance of performance reporting.

Despite this legal framework, different institutions make the criticism that current M&E efforts are neither frequent enough nor of sufficient quality (Bray and Gray, 2019[11]). In particular, for policies that concern young people, the scope of M&E activities in Australia appears to be mixed. On the one hand, evaluations exist of a number of different youth-related programmes, including three evaluations of the 2009 National Partnership on Youth Attainment and Transitions, and of the National Support for Child and Youth Mental Health Programme. On the other hand, the Australian Government's new Youth Engagement Model, which will establish an Office for Youth and ensure young people from diverse and at-risk cohorts are represented in consultations and engagement with government, does not make any explicit reference to the development of an M&E strategy.

Different strategies are being used to encourage the uptake of M&E practices to inform policy making across OECD countries. For example, in the United States, the federal government sought to increase the use of evidence in policy making across all federal agencies, acknowledging that some agencies were already excellent at using evidence while others lacked the skills or capacity necessary. As a result, the Foundations for Evidence-Based Policy making Act was approved in 2019. The law pushes agencies to adopt stronger evaluation practices in order to generate more evidence about what works and what needs improvement and establishes that any data collected should be made accessible across agencies and to external groups for research purposes.

Other countries have opted for creating a dedicated team or agency to evaluate policies across the board. A key example is the UK Cabinet Office's "What Works Network", which is aimed at improving the generation, sharing and use of high-quality evidence within the government (Box 5.2). In the same line, the US Office of Management and Budget's Evidence Team acts as a central hub of expertise on setting research priorities and selecting appropriate evaluation methodologies in federal evaluations, and in Korea, the government Performance Evaluation Committee is responsible for evaluating the policies of central government agencies on an annual basis (OECD, 2022[12]). Other relevant examples include Mexico's National Council for the Evaluation for Social Development Policy, which is a decentralised public body responsible for generating objective information and undertaking evaluations across a wide range of social policies.

Box 5.2. UK Cabinet Office's "What Works Network"

The "What Works Network" was created in 2013 to ensure that high-quality and updated evidence on "what works" across different policy areas is available and used by key decision makers (UK Government, 2022[13]). The main objective of the initiative was to embed robust evidence at the heart of policy making in the United Kingdom, supporting more effective and efficient services across the public sector at both national and local levels.

The network currently consists of 10 independent "What Works" centres, three affiliate members and one associate member. Each centre is committed to increasing both the supply of and demand for evidence in their policy area, and their responsibilities include, among others: i) collating and synthesising existing evidence on the effectiveness of programmes and practices; ii) identifying areas where evidence is lacking and commissioning new evaluations to fill in the information gaps; and iii) supporting and encouraging policy makers to use the existing evidence to inform their decisions. A report summarising the achievements made by the network during its first five years of activity shows that between 2013 and 2018, the network produced more than 280 evidence reviews, and commissioned for supported over 160 new evaluations (What Works Network, 2018[14]).

5.4. Facilitating the dissemination of M&E findings

A robust M&E function cannot be complete without the results of M&E activities being made available to their intended users. M&E results need to be communicated and disseminated to key stakeholders, as making evaluation results public is an important element in ensuring their impact and increasing the use of findings for evidence-based policy making (OECD, 2020[15]).

An increasing number of OECD countries make evaluation results public, encouraging openness and transparency in the public sector. For example, all evaluations commissioned in Poland, including those concerning the implementation of EU funds, must now be made accessible to the public. For this purpose, a national database of evaluations has been created, and their findings are published on a dedicated website. This repository currently shares the results of more than a thousand studies conducted since 2004, as well as a series of methodological tools and other resources aimed at evaluators. A similar approach has been taken by Norway, which has created a dedicated, public website to gather all the findings of evaluations carried out by the central government. The portal, operated by the Directorate for Financial Management and the National Library of Norway, contains evaluations carried out on behalf of government agencies since 2005, as well as a selection of central evaluations conducted between 1994 and 2004. The website also provides knowledge-sharing resources, such as evaluation guidelines, a calendar of key activities in the evaluation area, and external links to professional papers and other resources of interest. In the same manner, the Institute of Education Science (IES), the research arm of the United States Department of Education, has set up a web portal called the What Works Clearinghouse (WWC), whose main objective is to facilitate policy makers, researchers and other education practitioners learn about policies and interventions that have a proven impact on improving students' outcomes. The WWC collects evidence through a rigorous systematic review methodology, and results are presented through an interactive portal where users can sort by type of intervention, desired outcomes and effectiveness of the intervention.

Concerning child rather than youth outcomes, the European Platform for Investing in Children (EPIC) is an evidence-based online platform that consolidates information on policies for children and their families in Europe. The main objective of the platform is to serve as a tool to monitor activities implemented across member states triggered by the Recommendation for Investing in Children, whose main objective is to

encourage member states to implement multidimensional policies to tackle child poverty and social exclusion in Europe. It also helps as a repository for sharing the best of policy making for children and families and to foster co-operation and mutual learning in the field (Box 5.3).

Box 5.3. The European Platform for Investing in Children (EPIC)

The European Platform for Investing in Children (EPIC) is an evidence-based online platform which was launched in 2013 by the European Commission. The platform's main objective is to disseminate evidence-based information about policies, programmes and practices on children and their families in Europe.

The platform is a key tool for member states to monitor activities designed and implemented under the framework of the European Commission Recommendation "Investing in Children: breaking the cycle of disadvantage". Furthermore, EPIC also collects and disseminates innovative and evidence-based practices that have been demonstrated to have an impact on children and their families. This cross-regional learning capacity is enabled through three separate platform features: i) a collection of evidence-based practices which are being implemented across the EU; ii) the Social Innovation Repository, which features innovative practices sustained by a clear theory of change but that may not have sufficient evidence of their effectiveness given their recent implementation; and iii) the User Registry, which provides an overview of practices being implemented across Europe in the spirit of collaboration.

Source: European Commission (2022[16]), European Platform for Investing in Children (EPIC), https://ec.europa.eu/social/main.jsp?catId=1246&langId=en

Key policy lessons for a strengthened M&E system

Rigorous Monitoring and Evaluation (M&E) systems can improve policy making by informing decisions and implementation processes throughout the policy making cycle. M&E may also contribute to the accountability and transparency of public policies by providing detailed information on how policies are planned and implemented.

Strengthening accountability through M&E is particularly important for the youth domain, given the cross-sectional nature of youth policy and the numerous interactions across sectors. However, monitoring and evaluation of preventive interventions require longitudinal data collection across a variety of areas, including labour market, education, social and health outcomes. Such data collection might be particularly problematic for young people due to a range of factors, including: (i) data collection consent is required for both minors and their parents; (ii) young people tend to be more geographically mobile than the general population and thus more difficult to track; and (iii) there are both practical and potential ethical difficulties in varying access to interventions that are thought to be beneficial.

Continue investing in data infrastructure. Overall, Australia benefits from a strong data infrastructure, and the country has made relevant advances with respect to the generation of high-quality longitudinal datasets which allow to track individual-level outcomes over time. Nevertheless, cohort specific research is still lacking for the assessment of the influence of interventions focused on the "middle years" (i.e. from 8 to 15) on NEET prevention. Continued investment in the existing efforts to create comprehensive longitudinal datasets would allow further monitoring and evaluation of the outcomes of interest for younger target populations.

Develop a fit-for-purpose approach to ensuring ethical oversight and data privacy. M&E should always include an approach to identifying and addressing any risks associated with the use of personal information for M&E purposes that complies with relevant legislation, policies and guidance, and accommodates a range of uses including new and emerging uses. A framework (and/or guidelines) that steps a decision-maker through relevant technical, ethical, privacy, public interest (and other) considerations at different stages of a project would support an assessment of whether any risks outweigh the benefits or can be sufficiently and safely mitigated.

Promote the use of high-quality data for M&E purposes. Despite a legal framework that encourages a M&E culture, the scope of these sorts of activities on youth policy interventions in Australia is mixed. Other OECD countries use a range of strategies to encourage the uptake of M&E practices to inform policy making, including the creation of a dedicated team or agency responsible for the monitoring and evaluation of policies across different sectors like in the United Kingdom, Korea or Mexico; or a legal framework like in the United States that pushes agencies to adopt stronger evaluation practices in order to generate more evidence about what works and what needs improvement.

Facilitate the dissemination of M&E findings. An increasing number of OECD countries make evaluation results public, encouraging openness and transparency in the public sector, for instance through the creation of a unique platform/repository for dissemination of M&E findings. Publicly available M&E results can contribute to the accountability of public policies, as it provides detailed information on how policies are planned and implemented and can help promote specific results to all relevant stakeholders.

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Notes

[1] The article by Jones et al. (2022[6]) provides a brief history to the development of the IDI and shares some lessons learned along the way for the benefit of others starting down this integrated data journey.

Adolescent Education and Pre-Employment Interventions in Australia

KEEPING YOUNG PEOPLE IN EDUCATION, EMPLOYMENT AND TRAINING

About one in ten young people in Australia are neither in employment, education or training (NEET), a factor that may lower their long-term economic prospects and threaten their well-being. Individuals who did not graduate from upper secondary education, who have health limitations, or who are Indigenous are over-represented in this group. Preventative policies and interventions targeted at adolescents in their early- to mid-teens can reduce the share of young people out of employment, education and training. This report explores what is known about the potential preventative impact of educational and pre-employment interventions on later NEET status and presents a range of policies and initiatives from across the OECD that can reduce the NEET probability among key at-risk populations. The report covers interventions to prevent early school leaving and to promote student engagement and motivation; to strengthen career education, career guidance and employer engagement; and to improve the perception of the vocational education and training (VET) system and the learning of VET students. The report also provides recommendations on improving the monitoring and evaluation of youth policies in general and policies to keep young people in employment, education and training in particular.

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